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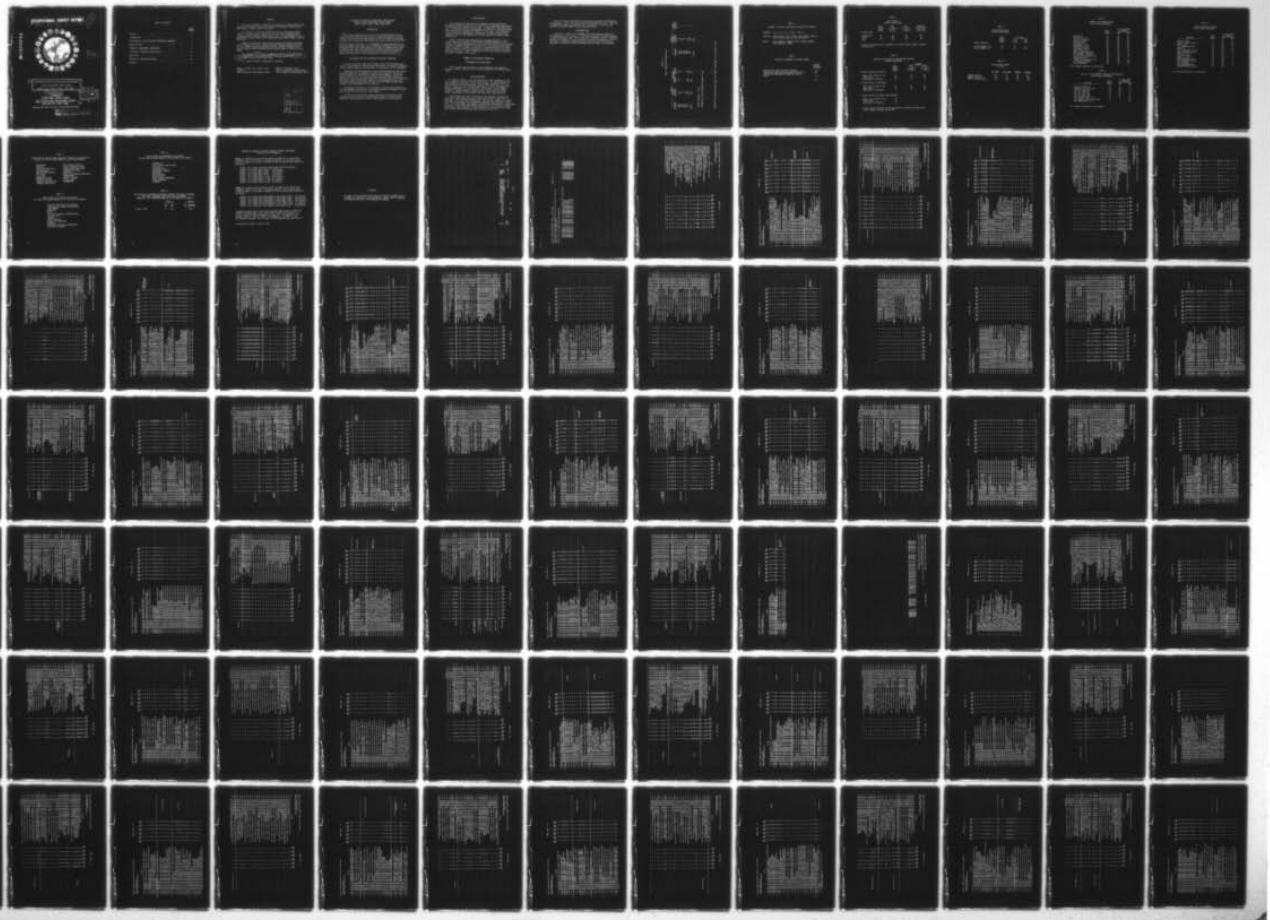

(9) # OCCUPATIONAL SURVEY REPORT.

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(6) ELECTRONICS PRINCIPLES OCCUPATIONAL SURVEY REPORT

MISSILE MAINTENANCE CAREER LADDER

AFSCs 31631L, 31651L, 31671L, AND 31790.

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OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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PREFACE

This report presents a summary of the results of a detailed Air Force Electronics Principles survey of the Missile Maintenance career ladder, AFSCs 31631L, 31651L, 31671L, and 31790.

The Electronics Principles Inventory (EPI) was developed by Major Thomas J. O'Connor and Mr. Hendrick W. Ruck and the survey data were analyzed by Major O'Connor and Mr. Guy B. Cole. All are members of the Occupational Survey Branch, USAF Occupational Measurement Center, Lackland AFB, Texas.

Computer programs for analyzing the occupational data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Distribution of this report is made upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Lackland AFB, Texas 78236.

This report has been reviewed and is approved.

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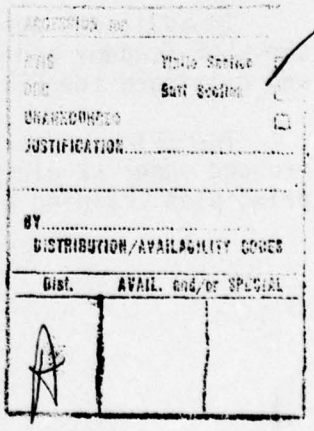

ELECTRONICS PRINCIPLES OCCUPATIONAL SURVEY REPORT
MISSILE SYSTEMS MAINTENANCE CAREER LADDER
AFSCs 31631L, 31651L, 31671L AND 31790

INTRODUCTION

This report summarizes the results of the administration of the Electronics Principles survey to Missile Systems Maintenance personnel in the L shred who perform maintenance on air-to-air and air-to-ground missiles. This survey was administered during May, June, and July 1976.

This report describes: (1) development and administration of the survey instrument; (2) summaries of background information which reflect the population of the survey sample, the kinds of equipment maintained or used in their work, and some general attitudes and/or observations about their job; and (3) electronics principles used by personnel at various points in their career progression or time in service.

DEVELOPMENT OF THE ELECTRONICS PRINCIPLES INVENTORY

Creation of the EPI required a lengthy process of development and review. A chronological description of the process will not be undertaken in this report; however, the highlights of the process will be presented.

Personnel from the Occupational Survey Branch working on the project were well qualified in theoretical physics and electronics as well as having expertise in task analysis and survey development. Electronics experts from the five ATC training centers, who averaged 12 years of maintenance experience and four years of electronics principles instruction experience, spent several weeks working on the development of the EPI. Over 300 maintenance personnel from SAC, TAC, ADC, MAC, and AFCS participated in the development of the inventory.

In addition, personnel at the Electrical Engineering Department of the USAF Academy and at the Air Force Human Resources Laboratory reviewed and critiqued the EPI during its development.

The EPI used in the 316X1L survey contained 1,257 specific items grouped under 62 electronics subject areas, covering all electronics principles training given at the five ATC technical training centers.

ADMINISTRATION

The inventory was administered by members of the Occupational Measurement Center during visits to the missile maintenance organizations at seven bases during May and June 1976. In addition, inventories were sent to the NCOIC of Missile Maintenance at Tyndall AFB, who administered the inventory and returned the booklets in July 1976. After supplying identification and biographical information, incumbents answered the questions "Yes" or "No" depending on how the question related to their present job.

Table 1 reflects the distribution of assigned personnel in the career ladder as of 30 April 1976 and the percentage sampled in this survey. The sample represented 16 percent of the total Air Force assigned strength of 316X1L personnel and was selected from representative CONUS bases to provide, as nearly as possible, a representation of the career ladder in terms of missiles maintained and types of aircraft associated with these missiles. Table 2 contains a list of the aircraft, missiles, and bases included in this survey.

SUMMARY OF BACKGROUND INFORMATION

Assignment To Career Ladder

Table 3 shows that 85 percent of the respondents had completed resident technical training prior to being assigned to the 316X1L career ladder.

Job Satisfaction

As shown in Table 4, less than one third of the respondents to the survey reported that their job was interesting. This was extremely low when compared to responses from 35 career ladders surveyed in 1975 in which 69 percent of the respondents reported that their jobs were interesting. Comparison of first enlistment groups from the two commands represented showed little difference in job interest, with a larger percent of the ADC personnel reporting their job as so-so while the largest percentage of TAC personnel felt that their jobs were dull.

Table 5 shows that over 60 percent of the personnel surveyed felt that their talents and training were used very little or not at all in their job. This feeling correlates well with the small number of items of electronics principles which respondents reported that they used in their jobs. The large number of personnel reporting low utilization of talents and training is significant when compared to the 1975 survey results in which an average of only 26 percent of the respondents to 35 surveys felt that their talents and training were used little or not at all.

Table 6 reflects reenlistment intentions as projected by respondents to the survey. Table 7 reflects actual reenlistments for FY 76. Note that although the average reenlistments for all groups was 47 percent, the rate for first term airmen was less than 28 percent.

Equipment Used

Tables 8, 9, and 10 list equipment used by 20 percent or more of the respondents to the survey. It should be noted that although responses to these background items indicate only that incumbents use this equipment, neither the frequency of use or purpose for which the equipment is used is specified. Therefore, interpretation of these data must be carefully evaluated in conjunction with performance data as shown in the Appendix.

TABLE 1

316X1L COMMAND REPRESENTATION

CONUS			
	NUMBER	SURVEYED	
COMMAND	ASSIGNED*	NUMBER	PERCENT
ADC	115	41	36
ATC	75	1	1
LOG	6	-	-
SAC	3	-	-
SYS	23	-	-
TAC	586	160	27
TOTAL	808	202	25

OVERSEAS		
	NUMBER	NUMBER
COMMAND	ASSIGNED*	SURVEYED
AAC	26	-
ADO	7	-
AFE	254	-
ATO	6	-
HQN	2	-
PAF	78	-
PAS	83	-
TOTAL	456	-

TOTAL ASSIGNED = 1,264

PERCENT OF TOTAL ASSIGNED SURVEYED = 16%

* Based on Airmen Manning Document (AF 316X1L PMC-P657) as of 30 April 1976

TABLE 2

AIRCRAFT, MISSILES, AND BASES INCLUDED IN THE SURVEY

AIRCRAFT - F-15, F-4, F-111, F-106, F-105, A-7

MISSILES - AIM 4 SERIES, AIM 7 SERIES, AIM 9 SERIES, AGM 45, AGM 65 SERIES, AGM 78, TGM, KMU SERIES

BASES - LUKE, MACDILL, CANNON, NELLIS, CASTLE, GEORGE, DAVIS-MONTHAN, TYNDALL

TABLE 3

METHOD OF ASSIGNMENT TO CAREER LADDER

	PERCENT ASSIGNED
COMPLETED RESIDENT TECHNICAL TRAINING	85
RETRAINED OR CONVERTED FROM ANOTHER SPECIALTY	10
REENLISTING FROM ANOTHER BRANCH OR SERVICE	4
OTHER	1
	100

TABLE 4

JOB INTEREST
(PERCENT RESPONDING)

I FIND MY JOB:	TOTAL SAMPLE N=202	TAC 1ST ENLIST N=132	ADC 1ST ENLIST N=30	OTHER AF SPECIALTIES* N=21,107
INTERESTING	32	23	27	69
SO-SO	27	29	40	15
DULL	41	48	33	16

* Based on responses from incumbents in 35 other career ladders surveyed during 1975

TABLE 5

PERCEIVED UTILIZATION OF TALENTS AND TRAINING
(PERCENT RESPONDING)

	TOTAL SAMPLE N=202	COMMAND	
		TAC 1ST ENLIST N=132	ADC 1ST ENLIST N=30
MY JOB UTILIZES MY TALENTS:			
VERY LITTLE OR NOT AT ALL	63	73	63
FAIRLY WELL	27	23	30
QUITE WELL TO PERFECTLY	10	4	7
MY JOB UTILIZES MY TRAINING:			
VERY LITTLE OR NOT AT ALL	61	64	67
FAIRLY WELL	30	29	23
QUITE WELL TO PERFECTLY	9	7	10
MY JOB UTILIZES MY TALENTS AND TRAINING:*			
VERY LITTLE OR NOT AT ALL	26		
FAIRLY WELL	26		
QUITE WELL TO PERFECTLY	48		

* These figures represent an average percent from data collected on 35 career ladders surveyed during 1975

TABLE 6

REENLISTMENT PLANS
(PERCENT RESPONDING)

	TOTAL SAMPLE N=202	1ST TERM TAC N=134	1ST TERM ADC N=30
I PLAN TO REENLIST:			
YES OR PROBABLY YES	39	37	17
NO OR PROBABLY NO	61	63	83

TABLE 7

ACTUAL REENLISTMENTS
FY 1976

	1ST TERM	2ND TERM	CAREER	OVERALL
NUMBER ELIGIBLE	169	26	65	270
NUMBER REENLISTED	47	20	59	126
RATE OF REENLISTMENT	28 %	56 %	91 %	47 %

TABLE 8

COMMON TEST EQUIPMENT USED*
(20% OR MORE PERFORMING)

	TOTAL SAMPLE	1ST ENLISTMENT 1-48 MONTHS TAC	ADC
MULTIMETER	74	74	67
IGNITER TEST SET	72	78	50
DIGITAL VOLTMETER	56	59	33
FREQUENCY METER	54	58	33
OSCILLOSCOPE	51	42	80
ALIGNMENT FIXTURE	48	56	20
POWER SUPPLY (DC)	45	50	27
ELECTRONIC COUNTER	45	51	17
POWER SUPPLY (AC)	44	52	30
AUDIO SIGNAL GENERATOR	40	47	3
DIFFERENTIAL VOLTMETER	39	37	23
VACUUM TUBE VOLTMETER (AC)	36	33	17
DECADE RESISTOR	35	42	7
VACUUM TUBE VOLTMETER (DC)	33	34	17
RF SIGNAL GENERATOR	26	27	33
PULSE GENERATOR	20	17	67

* All numbers expressed as percentages

TABLE 9

SPECIFIC TEST EQUIPMENT OPERATED OR MAINTAINED*
(20% OR MORE PERFORMING)

EQUIPMENT	TOTAL SAMPLE	1ST ENLISTMENT 1-48 MONTHS TAC	ADC
TEST SET (DPM-14A)	33	44	3
GUIDANCE SYSTEM TEST SET	21	27	3
TEST SET (DSM 68A)	18	26	3
TEST SET (DSM 99)	16	21	3
TEST SET (DSM 100)	17	22	3
TEST SET (DSM 129)	19	24	3
TEST CONSOLE-AIM-4 F/G	8	-	50
TEST CONSOLE-AIM-4 A,D/26-A/B	5	-	27
TEST BENCH-AIM-4 F/G	4	-	20

* All numbers expressed as percentages

TABLE 10

GROUND EQUIPMENT OPERATED*
(20% OR MORE PERFORMING)

EQUIPMENT	TOTAL SAMPLE	1ST ENLISTMENT 1-48 MONTHS	
		TAC	ADC
TRACTOR (FARM)	77	82	80
MISSILE TRAILER (MHV-12)	73	87	37
HOIST FIXED	70	77	57
AIR COMPRESSOR (MCIA)	63	78	10
FORKLIFT	62	65	77
TEST STAND (MHV 32 E/U)	59	77	10
POWER GENERATOR (MD-2)	41	52	3
BOMB LIFT (MJ-4)	40	53	3
LIGHTALL (NF-2)	38	48	3
BOMB LIFT (MJ-1)	37	48	3
POWER GENERATOR (MD-1)	22	30	-
AIR COMPRESSOR (MC-2)	22	28	3
HOIST PORTABLE	21	25	13
AIR COMPRESSOR (MB-1)	20	24	7
POWER GENERATOR (MD-3)	19	26	3

* All numbers expressed as percentages

ELECTRONICS PRINCIPLES APPLICATION

Airmen in this career ladder employ few electronics principles in their job. Of the 1,257 items in the inventory, only 39 items were answered "Yes" by 30 percent or more of the respondents. Of the 62 specific subject areas, 38 had no questions answered "Yes" by more than 10 percent of the respondents. These subject areas are listed in Table 11.

Thirteen subject areas had "Yes" responses to one or more of the inventory items by from 11 to 29 percent of the respondents. These are listed in Table 12. In only 11 areas were "Yes" responses marked by 30 percent or more of the group surveyed. These are shown in Table 13. Even in these subject areas where 30 percent or more indicated their use of electronics principles, the responses often indicated use of electronics equipment but little application of electronics principles or knowledge concerning that equipment. For example, of 29 questions concerning power supplies, only two questions were marked "Yes" by 30 percent or more of the total sample. These were H483, "In your present job, do you work with power supplies?" (answered "Yes" by 42 percent), and H484, "Do you inspect power supplies?" (answered "Yes" by 31 percent). Such questions as, "Do you troubleshoot to power supply circuit level?" received "Yes" answers from only 15 percent of the total sample and only 26 percent said that they "referred to input voltage," item H495.

During survey administration, ADC personnel contended that their jobs were more electronics oriented than were the jobs performed by TAC personnel, due to both the design and the age of the AIM 4-F and G missiles maintained in ADC units. Comparison of responses by 5-skill level personnel from TAC and ADC appear to support this contention. Table 14 shows the number of "Yes" responses by 30 percent or more of these two groups. When 316X1L personnel are compared with 324X0 (PMEL) personnel on the field utilization of electronics principles, a highly significant difference is found. Two hundred and thirty-six electronics principles items received "Yes" responses from the 324X0 group surveyed, compared with a high of 89 items responded "Yes" to by 316X1L personnel. Although Table 14 presents the results for 5-skill levels only, similar results were obtained for the other skill levels.

Several computer products showing results of the survey are included in the Appendix to this report. Group Summary One (GPSUM1) shows performance data for the total sample and each Duty Air Force Specialty Code (DAFSC). In addition, performance data for the 5- and 7-skill levels working in TAC and ADC are included to reflect specific differences in performance by personnel based on command assignment. Group Summary 2A (GPSM2A) shows performance data for personnel groups based on their time in military service.

It must be stressed that the survey items used in this report do not necessarily represent the items taught in any one ATC basic course, but instead represent all the possible items that might be taught. It is hoped that a careful review of each item will determine its applicability to job utilization for each AFSC in the Air Force. In addition to the identification of overtraining in certain electronics areas, it may be found for some AFSCs that undertraining exists. That is, the data may show a relatively large percent of members using or referring to certain electronics items, when in fact the ATC school may give little or no emphasis in that area.

The data presented in this report can be used for designing course charts, outlines, objectives, tests and various other elements associated with the training process.

CONCLUSION

Overall, the electronics principles field utilization by 316X1L personnel appears to be extremely limited. In light of this result, the present length and content of the ATC electronics principles course for 316X1L personnel should be reviewed.

TABLE 11

REPRESENTATIVE SUBJECT AREAS WHICH HAD VIRTUALLY NO UTILIZATION
(10% OR LESS OF THE SAMPLE MARKED AT LEAST ONE RESPONSE)

MICROPHONES
SPEAKERS
TRANSISTOR AMPLIFIERS
MULTIVIBRATORS
LIMITERS AND CLAMPERS
AM SYSTEMS
FM SYSTEMS
NUMBERING SYSTEMS
BOOLEAN EQUATIONS
SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
WAVE SHAPING CIRCUITS
SINGLE SIDEBAND SYSTEMS
PULSE MODULATION SYSTEMS
TRANSMISSION LINES
REGISTERS
DIGITAL AND ANALOG CONVERTERS
PHANTASTRONS
SCHMITT TRIGGERS
DISPLAY TUBES
PROGRAMMING

TABLE 12

SUBJECT AREAS WITH LIMITED UTILIZATION
(AT LEAST ONE RESPONSE MARKED BY 11% TO 29% OF THE SAMPLE)

INDUCTORS AND INDUCTIVE REACTANCE
CAPACITORS AND CAPACITIVE REACTANCE
TRANSFORMERS
MAGNETISM
RELAYS
SOLID-STATE SPECIAL PURPOSE DEVICES
ELECTRON TUBES
COUNTERS
TIMING CIRCUITS
MOTORS AND GENERATORS
ANTENNAS
WAVEGUIDES AND CAVITY REASONATORS
INPUT/OUTPUT DEVICES

TABLE 13

SUBJECT AREAS WITH REASONABLE UTILIZATION
(AT LEAST ONE RESPONSE MARKED BY 30% OR MORE OF THE SAMPLE)

MATHEMATICS
DIRECT CURRENT AND VOLTAGE
RESISTANCE
MULTIMETER USES
ALTERNATING CURRENT
SOLDERING
OSCILLOSCOPES
POWER SUPPLIES
USE OF SIGNAL GENERATORS
METER MOVEMENTS
INFRARED

TABLE 14

UTILIZATION OF ELECTRONICS PRINCIPLES ITEMS BY TAC 316X1L PERSONNEL, ADC 316X1L PERSONNEL, AND 324X0 (PMEL) PERSONNEL
(NUMBER OF "YES" RESPONSES MARKED BY 30% OR MORE OF THE SAMPLE)

	316X1L		324X0
	TAC	ADC	ALL COMMANDS
5-SKILL LEVEL	27	89	536

READING THE COMPUTER PRINTOUTS (GPSUM1, GPSM2A, AND JOBINV) WHICH ARE IN THE APPENDIX

GPSUM1 is a summary which gives the percent of members of a group which responded "Yes" to the items in the survey booklet. At the top of each column of numbers on any page of GPSUM1 are the following Group Identifiers and Groups:

SPL027 - All airmen in Career Ladder 316X1/31790 (202 persons)
SPL028 - All airmen DAFSC 31631L (30 persons)
SPL029 - All airmen DAFSC 31651L (136 persons)
SPL030 - All airmen DAFSC 31671L (29 persons)
SPL031 - All airmen DAFSC 31790* (5 persons)
SPL041 - All airmen 31651L in TAC (107 persons)
SPL042 - All airmen 31651L in ADC (27 persons)
SPL043 - All airmen 31671L in TAC (20 persons)
SPL044 - All airmen 31671L in ADC (8 persons)

GPSM2A is a summary which gives the percent of members of a group which responded "Yes" to the items in the survey booklet. At the top of each column of numbers on any page of GPSM2A are the following Group Identifiers and Groups:

SPL032 - All airmen with 6-24 months in the career field (115 persons)
SPL033 - All airmen with 25-48 months in the career field (40 persons)
SPL034 - All airmen with 1-48 months in the career field (164 persons)
SPL035 - All airmen with 49-96 months in the career field (13 persons)
SPL036 - All airmen with 97-144 months in the career field (11 persons)
SPL037 - All airmen with 145+ months in the career field (14 persons)

To conserve space, some of the items have been abbreviated in GPSUM1 and GPSM2A in the Appendix. Each item has been listed in its entirety in the Job Inventory (JOBINV) beginning on page 92 of the Appendix. For example, Task A-1, page 4, GPSUM1, is incomplete. In order to find the complete statement, turn to page 92 of the Appendix and read item A-1.

* Converted to 31693 on 30 April 1976

APPENDIX

SEE PAGE 1 OF THE APPENDIX WHICH GIVES THE TABLE OF CONTENTS WHICH *INCLUDES THE APPROPRIATE PAGES FOR GPSUM1, GPSM2A, AND THE* COMPLETE ELECTRONICS PRINCIPLES ITEMS CONTAINED IN JOBINV.

APPENDIX

TABLE OF CONTENTS TOC PAGE 1

TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUP
IN THE 316X1L/31790 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	SPL027	ALL AIRMEN IN CAREER FIELD 316X1L/31790	CONTAINING	202 MEMBERS.
GROUP IDENTITY =	SPL028	ALL AIRMEN DAFSC 31631L	CONTAINING	30 MEMBERS.
GROUP IDENTITY =	SPL029	ALL AIRMEN DAFSC 31651L	CONTAINING	136 MEMBERS.
GROUP IDENTITY =	SPL030	ALL AIRMEN DAFSC 31671L	CONTAINING	29 MEMBERS.
GROUP IDENTITY =	SPL031	ALL AIRMEN DAFSC 31790	CONTAINING	6 MEMBERS.
GROUP IDENTITY =	SPL091	ALL AIRMEN 31651L IN TAC	CONYAINING	107 MEMBERS.
GROUP IDENTITY =	SPL092	ALL AIRMEN 31651L IN ADC	CONTAINING	27 MEMBERS.
GROUP IDENTITY =	SPL093	ALL AIRMEN 31671L IN TAC	CONYAINING	20 MEMBERS.
GROUP IDENTITY =	SPL094	ALL AIRMEN 31671L IN ADC	CONTAINING	8 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DUTY	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	85	93	83	90	60	84	78	85	100
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	85	97	85	79	20	87	78	75	88
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	90	97	38	91	20	36	52	35	50
D	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	10	10	10	19	0	7	22	5	25
E	COUPLING, SOLDERING, AND RELAYS	91	23	90	66	20	32	74	55	88
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	95	93	95	98	20	34	81	30	88
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	11	3	10	29	20	6	26	20	25
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	99	60	99	95	20	99	98	95	38
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	13	17	12	21	0	3	94	5	50
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	13	17	13	19	0	6	91	0	38
K	AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	7	13	7	7	0	5	15	0	25
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	19	17	21	19	20	23	11	20	0
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	98	33	54	38	20	53	56	40	25
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	53	63	54	95	20	53	59	95	38
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	29	20	37	10	0	37	33	5	25
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	21	23	21	29	0	20	30	20	25
Q	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	10	3	13	7	0	15	7	5	13
R	PHANTASTRONS, SCHMITT TRIGGERS, AND CABLE FABRICATION	13	3	10	31	20	8	19	25	38
S	INPUT\OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	23	13	26	29	0	27	19	20	38
T	INFRARED, LASERS, AND DISPLAY TUBES	96	97	99	39	20	95	63	25	50
U	PROGRAMMING, DB AND POWER RATIOS	12	7	9	28	90	6	22	15	50

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
A	1	A1-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO	40	47	42	28	20	39	52	25	25	
A	2	A1-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU	26	23	27	21	20	31	11	10	38	MATHEMATICS
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	7	3	7	7	0	8	4	5	13	
A	4	A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	3	0	4	3	0	5	0	0	13	
A	5	A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	10	10	10	10	0	11	7	10	13	
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	1	0	1	0	0	2	0	0	0	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	0	0	1	0	0	1	0	0	0	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	1	0	1	0	0	2	0	0	0	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	0	0	1	0	0	1	0	0	0	
A	10	A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	1	0	1	3	0	2	0	0	13	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	1	0	1	0	0	2	0	0	0	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	1	0	2	0	0	3	0	0	0	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	2	0	3	0	0	3	0	0	0	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	3	0	4	3	0	3	7	0	13	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	73	80	71	86	90	68	78	85	88	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	13	17	13	17	0	11	19	5	50	
A	17	A2-03 DO YOU USE THE TERM OHM.	70	83	68	76	90	66	74	75	75	DIRECT CURRENT AND VOLTAGE
A	18	A2-04 DO YOU USE THE TERM ION.	2	3	2	0	0	2	4	0	0	
A	19	A2-05 DO YOU USE THE TERM DYNE.	1	0	1	0	0	0	7	0	0	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	59	70	56	66	90	55	59	60	75	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	2	3	3	0	0	3	4	0	0	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	3	7	2	3	0	3	0	0	13	
A	23	A2-09 DO YOU USE THE TERM PROTON.	2	3	3	0	0	3	4	0	0	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	44	60	41	41	20	37	59	35	50	
A	25	A3-02 DO YOU INSPECT RESISTORS.	27	30	26	31	20	21	48	25	38	
A	26	A3-03 DO YOU CLEAN RESISTORS.	15	10	15	21	0	8	44	10	38	
A	27	A3-04 DO YOU ADJUST RESISTORS.	38	47	37	31	20	35	48	25	38	RESISTANCE
A	28	A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.	33	40	31	31	20	27	48	25	38	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	23	17	22	31	20	16	48	25	38	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	4	3	5	3	0	3	15	0	13	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	25	20	24	31	90	21	33	30	25	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR	22	27	20	28	20	16	37	25	38	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	22	23	18	31	90	13	41	25	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	17	17	14	28	20	9	33	20	50	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	4	7	4	0	0	3	11	0	0	
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	7	7	6	7	20	2	22	0	25	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	32	30	30	38	40	29	37	30	50	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	10	7	11	10	0	7	30	5	25	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	9	7	10	7	0	7	26	5	13	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	9	7	9	10	0	5	26	5	25	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	7	7	7	7	0	4	19	5	13	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	8	7	8	10	0	6	19	5	25	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	8	7	8	7	0	6	19	5	13	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	7	7	10	0	4	19	5	25	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	7	7	7	0	4	19	5	13	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	6	7	6	7	0	4	15	5	13	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	7	7	7	10	0	5	19	5	25	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	6	3	7	7	0	4	19	5	13	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	6	3	6	10	0	3	19	5	25	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	6	3	6	10	0	3	19	5	25	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	5	3	6	7	0	4	15	5	13	
B	52	B1-01 DO YOU MEASURE RESISTANCE.	75	87	76	69	20	76	74	65	75	
B	53	B1-02 DO YOU REPAIR OHMMETERS.	3	3	3	3	0	2	7	5	0	
B	54	B1-03 DO YOU MEASURE VOLTAGE.	73	77	74	69	20	74	74	65	75	
B	55	B1-04 DO YOU REPAIR VOLTMETERS.	3	0	3	7	0	2	7	5	13	MULTIMETER USES
B	56	B1-05 DO YOU REPAIR AMMETERS.	2	0	2	3	0	0	11	5	0	
B	57	B1-06 DO YOU MEASURE CURRENT.	48	50	50	45	0	50	52	40	50	
B	58	B1-07 DO YOU USE MULTIMETERS.	74	87	75	66	20	78	63	65	75	
B	59	B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	3	3	3	7	0	3	4	10	0	
B	60	B1-09 DO YOU READ SCHEMATICS.	55	47	55	69	20	53	67	65	75	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
B	61	B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	28	30	24	48	0	25	22	45	50	ALTERNATING CURRENT
B	62	B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	34	30	32	52	0	28	48	60	50	
B	63	B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	27	30	24	45	0	21	37	40	50	
B	64	B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	29	27	38	28	0	25	52	20	38	
B	65	B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.	60	77	60	55	20	59	67	55	50	
B	66	B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	12	7	11	28	0	9	19	25	38	
B	67	B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	12	13	13	10	0	7	33	0	25	
B	68	B3-02 DO YOU INSPECT INDUCTORS.	7	3	6	14	0	2	22	5	25	
B	69	B3-03 DO YOU CLEAN INDUCTORS.	5	0	4	14	0	1	19	5	25	
B	70	B3-04 DO YOU ADJUST INDUCTORS.	7	3	7	10	0	4	19	0	25	INDUCTORS AND INDUCTIVE REACTANCE
B	71	B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	5	0	4	10	0	1	19	0	25	
B	72	B3-06 DO YOU USE OR REFER TO INDUCTANCE.	6	3	7	3	0	4	19	0	13	
B	73	B3-07 DO YOU USE OR REFER TO HENRIES.	5	3	6	3	0	3	19	0	13	
B	74	B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	5	3	5	3	0	3	15	0	13	
B	75	B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	0	0	1	0	0	0	4	0	0	
B	76	B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	1	0	1	0	0	0	7	0	0	
B	77	B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS	1	0	1	0	0	0	7	0	0	
B	78	B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF	1	0	1	3	0	1	0	0	0	
B	79	B3-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE CROSS	1	0	1	3	0	1	0	0	0	
B	80	B3-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS	0	0	1	0	0	1	0	0	0	
B	81	B3-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	0	0	1	0	0	1	0	0	0	
B	82	B3-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	0	0	1	0	0	0	4	0	0	
B	83	B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	1	0	1	3	0	1	4	5	0	
B	84	B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	1	0	1	3	0	1	4	5	0	
B	85	B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	1	0	1	3	0	1	4	5	0	
B	86	B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	4	3	3	10	0	1	11	5	13	
B	87	B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	1	0	1	0	0	1	4	0	0	
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	2	3	1	7	0	1	4	5	13	
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	4	7	4	3	0	1	19	0	13	
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	2	3	2	3	0	2	4	0	13	
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	4	7	4	3	0	1	19	0	13	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	26	27	29	17	20	26	41	10	38	
C	93	C1-02 DO YOU INSPECT CAPACITORS.	16	10	16	21	20	13	30	10	38	CAPACITORS AND CAPACITIVE REACTANCE
C	94	C1-03 DO YOU CLEAN CAPACITORS.	8	7	8	14	0	5	22	5	25	
C	95	C1-04 DO YOU ADJUST CAPACITORS.	12	7	13	10	20	9	26	5	25	
C	96	C1-05 DO YOU TEST CAPACITORS.	13	10	13	14	20	9	26	5	25	
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	12	7	13	10	20	12	19	0	25	
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	12	3	12	17	20	7	30	10	25	
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	1	0	1	7	0	0	4	5	13	
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	0	0	1	0	0	0	4	0	0	
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	11	7	10	17	20	6	30	10	25	
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	15	10	16	14	20	13	30	10	13	
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT	4	3	5	0	0	3	15	0	0	
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS	7	3	6	14	20	3	19	5	25	
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE	4	3	4	7	0	1	15	0	13	
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES	7	3	7	14	0	6	15	5	25	
C	107	C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	21	23	20	21	20	17	33	10	38	
C	108	C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	23	27	23	17	20	21	33	5	38	
C	109	C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC	19	13	20	17	20	17	33	5	38	
C	110	C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	8	7	10	3	0	7	19	0	0	
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	0	0	1	0	0	0	4	0	0	
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE	0	3	0	0	0	0	0	0	0	
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO	0	3	0	0	0	0	0	0	0	
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	2	0	1	7	0	1	4	5	13	
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	2	0	1	7	0	1	4	5	13	
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	2	0	1	7	0	1	4	5	13	
C	117	C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY APPEARS TO DO SO	3	3	1	10	0	0	7	5	13	
C	118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS	2	3	1	7	0	0	7	0	13	
C	119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	2	3	1	7	0	0	4	0	13	
C	120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE	1	0	1	3	0	0	4	0	13	

TASK GROUP SUMMARY
*ERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
C	121	C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	9	3	10	17	0	7	22	10	25	
C	122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	7	3	7	14	0	5	19	5	25	
C	123	C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	15	17	13	17	20	10	26	10	38	
C	124	C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS	11	10	9	21	20	6	22	10	38	
C	125	C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS	13	10	11	21	20	8	22	10	38	
C	126	C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	13	13	11	21	20	8	22	10	38	
C	127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	9	7	13	0	0	11	19	0	0	
C	128	C2-01 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	13	13	12	17	0	9	22	15	25	
C	129	C2-02 DO YOU INSPECT TRANSFORMERS	9	7	7	17	20	4	19	10	25	
C	130	C2-03 DO YOU CLEAN TRANSFORMERS	7	3	6	14	20	3	19	5	25	
C	131	C2-04 DO YOU ADJUST TRANSFORMERS	7	3	7	7	0	5	19	5	13	TRANSFORMERS
C	132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS	7	7	5	17	0	2	19	10	25	
C	133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	8	0	7	21	20	3	22	15	25	
C	134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	0	0	0	0	0	0	0	0	0	
C	135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	0	0	1	0	0	1	0	0	0	
C	136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	0	0	1	0	0	1	0	0	0	
C	137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	2	0	3	0	0	1	11	0	0	
C	138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	1	0	1	0	0	0	7	0	0	
C	139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	1	0	1	0	0	0	7	0	0	
C	140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	1	0	1	0	0	0	7	0	0	
C	141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS	2	0	2	3	0	3	0	0	13	
C	142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS	8	7	5	17	20	4	11	10	25	
C	143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS	2	3	1	7	0	1	4	5	13	
C	144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	2	3	1	3	0	0	7	0	13	
C	145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	4	0	5	3	0	3	15	5	0	
C	146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	7	7	6	14	0	3	19	10	25	
C	147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	6	7	5	10	0	2	19	6	25	
C	148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	7	7	7	10	0	3	22	5	25	
C	149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	3	0	4	0	0	2	15	0	0	
C	150	C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	4	3	5	0	0	3	15	0	0	
C	151	C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	7	7	6	14	20	4	15	5	25	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
C 152	C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	3	4	7	0	2	11	0	25	
C 153	C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	7	7	6	14	0	4	15	10	25	
C 154	C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	7	7	6	17	0	4	15	15	25	
C 155	C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	3	4	7	0	3	11	5	13	
C 156	C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	5	7	5	7	0	4	11	5	13	
C 157	C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	6	3	7	10	0	4	19	5	13	
C 158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	3	0	4	0	0	2	15	0	0	
C 159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	3	3	3	3	0	1	11	0	13	
C 160	C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO	2	3	1	3	0	1	4	0	13	
C 161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	4	3	5	3	0	3	15	0	13	
C 162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	0	0	1	0	0	0	4	0	0	
C 163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	0	0	1	0	0	0	4	0	0	
C 164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	6	3	7	7	0	4	19	5	13	
C 165	C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS	5	3	5	7	0	2	19	5	13	
C 166	C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	4	0	4	7	0	1	19	5	13	
C 167	C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS	4	3	5	0	0	3	15	0	0	
C 168	C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	3	0	4	3	0	1	19	0	13	
C 169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	3	0	4	7	0	0	19	5	13	
C 170	C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	1	0	1	0	0	0	7	0	0	
C 171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS	13	17	12	17	0	7	33	15	25	
C 172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS	9	10	10	10	0	7	22	15	0	
C 173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	2	0	2	3	0	2	4	5	0	MAGNETISM
C 174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	3	3	3	3	0	3	4	5	0	
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	3	0	4	3	0	4	4	5	0	
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM	2	0	3	0	0	2	7	0	0	
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX	9	3	10	14	0	7	19	15	13	
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	1	0	2	0	0	1	7	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
C	179	C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	1	0	2	0	0	1	7	0	0	
C	180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	5	0	6	7	0	4	15	5	13	
C	181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY	2	0	4	0	0	2	11	0	0	
C	182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	11	13	11	14	0	9	19	10	13	
C	183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	4	0	6	3	0	5	11	5	0	
C	184	C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	4	3	5	3	0	4	11	5	0	
D	185	D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	4	0	5	7	0	2	19	0	25	
D	186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	0	0	1	0	0	0	4	0	0	RCL CIRCUITS
D	187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	0	0	0	0	0	0	0	0	0	
D	188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	1	4	0	0	
D	189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	0	0	1	0	0	0	4	0	0	
D	190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	1	4	0	0	
D	191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	4	0	4	10	0	2	11	0	25	
D	192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	0	7	0	0	
D	193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	2	0	3	0	0	1	11	0	0	
D	194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	2	0	3	0	0	1	11	0	0	
D	195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	0	7	0	0	
D	196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	1	0	2	0	0	1	7	0	0	
D	197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	3	0	2	10	0	0	11	0	25	
D	198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	4	0	4	10	0	3	11	0	25	
D	199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	3	0	4	7	0	2	11	0	25	
D	200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	4	0	4	10	0	2	11	0	25	
D	201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	2	0	1	7	0	0	7	0	25	
D	202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	2	0	3	0	0	1	11	0	0	
D	203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	0	0	1	0	0	0	4	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	3	0	4	7	0	1	15	0	13
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	0	0	1	0	0	1	0	0	0
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	0	0	0	0	0	0	0	0	0
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	0	0	0	0	0	0	0	0	0
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	0	0	0	0	0	0	0	0	0
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	0	0	1	0	0	0	4	0	0
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	0	0	1	0	0	0	4	0	0
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	1	0	1	0	0	0	7	0	0
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	4	0	4	10	0	2	15	0	25
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	4	0	4	10	0	2	11	0	25
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	4	0	4	10	0	2	15	0	25
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	3	0	3	10	0	1	11	0	25
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	0	0	0	0	0	0	0	0	0
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	0	0	0	0	0	0	0	0	0
D 224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT	1	0	1	3	0	1	4	0	13
D 225	D1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT	1	0	1	3	0	0	4	0	13
D 226	D1-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE	1	0	1	3	0	0	4	0	13
D 227	D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q	0	0	0	0	0	0	0	0	0
D 228	D1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE , CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE	1	0	1	3	0	0	4	0	13

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099	
D 229	D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS	3	0	5	0	0	4	11	0	0	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)
D 230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	2	3	3	0	0	2	7	0	0	
D 231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	2	3	2	0	0	1	7	0	0	
D 232	D3-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	1	3	1	0	0	0	4	0	0	
D 233	D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE (5)	2	3	1	3	0	1	4	0	0	
D 234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	2	7	1	0	0	1	4	0	0	
D 235	D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC	1	0	1	0	0	1	4	0	0	
D 236	D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO	0	0	1	0	0	0	4	0	0	
D 237	D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	1	0	1	0	0	0	7	0	0	
D 238	D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR ZERO) AFTER	1	3	1	0	0	0	4	0	0	
D 239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	6	7	6	10	0	3	19	5	25	FILTERS
D 240	D3-02 DO YOU INSPECT FILTER CIRCUITS	6	7	5	10	0	3	15	0	25	
D 241	D3-03 DO YOU CLEAN FILTER CIRCUITS	5	3	4	10	0	2	15	0	25	
D 242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	5	7	4	10	0	2	15	0	25	
D 243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	4	3	4	10	0	1	15	0	25	
D 244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	5	7	4	10	0	1	19	0	25	
D 245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	4	3	4	7	0	1	19	0	13	
D 246	D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	5	3	4	14	0	1	19	5	25	
D 247	D3-09 DO YOU WORK WITH LOW PASS FILTERS	3	3	3	3	0	1	11	0	13	
D 248	D3-10 DO YOU WORK WITH HIGH PASS FILTERS	3	3	3	3	0	1	11	0	13	
D 249	D3-11 DO YOU WORK WITH BANDPASS FILTERS	3	3	3	7	0	1	11	0	25	
D 250	D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	3	3	2	7	0	0	11	0	25	
D 251	D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	3	0	3	7	0	1	11	5	0	
D 252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	1	3	1	3	0	0	4	0	13	
D 253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	2	3	1	7	0	0	4	5	13	
D 254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	2	3	1	7	0	0	4	5	13	
D 255	D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	3	0	4	3	0	1	15	0	0	
D 256	D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	4	3	4	7	0	2	11	0	25	
D 257	D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	3	3	3	7	0	1	11	0	25	
D 258	D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	3	3	3	7	0	1	11	0	25	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
D	259	D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	3	0	4	7	0	2	11	5	0	
D	260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	1	0	1	0	0	0	7	0	0	
E	261	E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	4	3	5	3	0	2	19	0	13	
E	262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC	4	3	4	3	0	1	19	0	13	
E	263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	4	3	5	3	0	2	19	0	13	COUPLING
E	264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	4	3	5	3	0	2	19	0	13	
E	265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	3	3	4	3	0	1	15	0	13	
E	266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	4	3	4	3	0	2	15	0	13	
E	267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	4	3	4	3	0	2	15	0	13	
E	268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	3	3	4	3	0	1	15	0	13	
E	269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	3	3	4	3	0	1	15	0	13	
E	270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	3	0	4	3	0	1	15	0	13	
E	271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	3	0	4	3	0	1	15	0	13	
E	272	E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	1	0	2	0	0	1	7	0	0	
E	273	E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	36	20	34	66	20	26	67	55	88	
E	274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	28	20	24	55	20	21	37	45	75	
E	275	E2-03 DO YOU ADD FLUX TO CONNECTIONS	30	23	27	52	20	21	56	45	75	
E	276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	29	23	24	55	20	20	44	45	75	SOLDERING
E	277	E2-05 DO YOU STRIP INSULATION FROM WIRES	36	23	35	55	20	27	67	50	75	
E	278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	30	20	27	52	20	21	52	40	75	
E	279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	36	23	34	59	20	26	67	50	75	
E	280	E2-08 DO YOU CUT WIRES	35	23	34	55	20	26	67	50	75	
E	281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	31	23	29	52	20	21	59	45	63	
E	282	E2-10 DO YOU TIN SOLDERING IRON TIPS	33	23	31	52	20	23	63	45	75	
E	283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS	36	23	35	59	20	28	63	50	75	
E	284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	29	23	28	38	20	20	63	25	63	
E	285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	29	23	24	55	20	17	56	45	75	
E	286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	36	23	32	66	20	27	56	55	88	
E	287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	22	13	22	31	20	17	44	30	38	
E	288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS	11	10	10	17	0	7	22	15	25	
E	289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	20	10	20	31	20	15	41	20	63	
E	290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	8	7	10	7	0	9	11	0	25	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
E	291	E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	27	17	26	45	20	21	44	40	50	
E	292	E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	19	17	15	34	20	11	33	20	63	
E	293	E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS	14	10	15	28	20	9	37	10	63	
E	294	E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS	15	10	14	24	20	9	33	10	50	
E	295	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	18	13	18	28	20	11	44	30	25	
E	296	E3-02 DO YOU ADJUST RELAYS	13	13	11	24	20	6	33	20	25	
E	297	E3-03 DO YOU CLEAN RELAYS	9	10	7	21	0	3	26	15	25	
E	298	E3-04 DO YOU INSPECT RELAYS	17	17	16	24	20	10	41	20	25	RELAYS
E	299	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	19	13	18	31	20	10	48	30	25	
E	300	E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	3	3	4	0	0	2	15	0	0	
E	301	E3-07 DO YOU TROUBLESHOOT RELAYS	15	13	14	24	20	7	41	20	25	
E	302	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	11	13	11	10	0	7	26	5	13	
E	303	E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	8	13	7	7	0	4	22	0	25	
E	304	E3-10 DO YOU PERFORM TASKS ON RELAY CORES	3	10	2	0	0	1	7	0	0	
E	305	E3-11 DO YOU PERFORM TASKS ON RELAY COILS	4	10	3	3	0	1	11	0	13	
E	306	E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	4	10	3	3	0	1	11	0	13	
E	307	E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	4	10	3	7	0	1	11	10	0	
E	308	E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS	15	13	13	24	20	7	33	20	25	
E	309	E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS	15	13	13	24	20	7	33	20	25	
E	310	E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS	15	13	13	24	20	7	33	20	25	
E	311	E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS	14	13	12	24	20	7	33	20	25	
E	312	E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS	12	10	11	21	20	7	30	15	25	
E	313	E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE	9	10	9	10	20	4	30	0	25	
F	314	F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES	2	0	3	3	0	2	7	0	13	
F	315	F1-02 DO YOU INSPECT MICROPHONES	1	0	1	0	0	1	4	0	0	
F	316	F1-03 DO YOU CLEAN MICROPHONES	0	0	0	0	0	0	0	0	0	MICROPHONES
F	317	F1-04 DO YOU OPERATE MICROPHONES	2	0	2	3	0	1	7	0	13	
F	318	F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	0	0	0	0	0	0	0	0	0	
F	319	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	0	0	0	0	0	0	0	0	0	
F	320	F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	1	0	1	0	0	0	7	0	0	
F	321	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	0	0	0	0	0	0	0	0	0	
F	322	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	0	0	0	0	0	0	0	0	0	
F	323	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	0	0	0	0	0	0	0	0	0	
F	324	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	0	0	0	0	0	0	0	0	0	
F	325	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	0	0	1	0	0	0	4	0	0	
F	326	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
F	327	F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	1	3	0	3	0	0	0	5	0	
F	328	F2-02 DO YOU INSPECT SPEAKERS	0	0	0	3	0	0	0	5	0	SPEAKERS
F	329	F2-03 DO YOU CLEAN SPEAKERS	0	0	0	0	0	0	0	0	0	
F	330	F2-04 DO YOU OPERATE SPEAKERS	1	7	0	0	0	0	0	0	0	
F	331	F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	0	0	0	3	0	0	0	5	0	
F	332	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	0	0	0	0	0	0	0	0	0	
F	333	F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	0	0	0	3	0	0	0	5	0	
F	334	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS	0	0	0	0	0	0	0	0	0	
F	335	F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES	0	0	0	0	0	0	0	0	0	
F	336	F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	0	0	0	0	0	0	0	0	0	
F	337	F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	0	0	0	0	0	0	0	0	0	
F	338	F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	0	0	0	0	0	0	0	0	0	
F	339	F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	0	0	0	0	0	0	0	0	0	
F	340	F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	0	0	0	0	0	0	0	0	0	
F	341	F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	0	0	0	0	0	0	0	0	0	
F	342	F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	91	37	91	95	20	39	74	30	75	
F	343	F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	31	30	30	38	20	21	70	25	63	
F	344	F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	33	27	33	38	20	24	70	30	50	OSCILLOSCOPES
F	345	F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	26	23	25	31	20	21	44	20	50	
F	346	F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	34	37	34	34	20	28	59	25	50	
F	347	F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME	32	30	32	45	0	23	67	30	75	
F	348	F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	6	13	6	0	0	3	19	0	0	
F	349	F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	18	13	16	31	0	15	22	20	50	
F	350	F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	25	23	24	34	0	16	56	15	75	
F	351	F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	28	17	30	31	20	26	48	20	50	
F	352	F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROLS	16	10	15	21	20	12	30	15	38	
F	353	F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	24	10	26	31	20	23	37	20	50	
G	354	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	10	3	8	21	20	5	22	15	26	
G	355	G1-02 DO YOU INSPECT DIODES	9	3	7	21	0	4	22	15	25	
G	356	G1-03 DO YOU REMOVE OR REPLACE DIODES	9	0	7	21	20	5	22	15	25	SEMICONDUCTOR
G	357	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT	8	3	7	19	20	4	22	5	25	DIODES
G	358	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	0	0	0	3	0	0	0	5	0	
G	359	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE,	1	0	1	3	0	1	0	5	0	
G	360	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	2	0	2	3	0	1	7	5	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 091	SPL 092	SPL 093	SPL 099
G 361	61-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	7	3	5	14	20	2	19	10	13
G 362	61-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON	7	3	5	14	20	2	19	10	26
G 363	61-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	1	3	1	0	0	0	4	0	0
G 364	61-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	5	3	5	7	0	3	15	5	13
G 365	61-12 DO YOU USE OR REFER TO DIODE COLOR CODING	6	3	6	7	0	3	19	5	13
G 366	61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	0	0	0	0	0	0	0	0	0
G 367	61-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	0	0	0	0	0	0	0	0	0
G 368	61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	5	3	4	7	20	2	15	5	13
G 369	61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	0	0	1	0	0	1	0	0	0
G 370	61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	0	0	0	0	0	0	0	0	0
G 371	61-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	4	3	4	7	0	2	11	5	13
G 372	61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	0	0	0	0	0	0	0	0	0
G 373	61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	0	0	0	0	0	0	0	0	0
G 374	61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	0	0	0	0	0	0	0	0	0
G 375	61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	0	0	1	0	0	1	0	0	0
G 376	61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	0	0	0	0	0	0	0	0	0
G 377	61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	8	3	7	14	20	3	22	10	13
G 378	61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	2	0	4	0	0	2	11	0	0
G 379	61-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE	6	3	4	10	20	1	19	5	13
G 380	61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT	0	3	0	0	0	0	0	0	0
G 381	61-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	4	3	2	7	20	1	7	5	13
G 382	61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099	
G 383	61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	0	0	0	
G 384	61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	0	0	0	
G 385	61-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	0	0	0	
G 386	61-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	0	0	0	0	0	0	0	0	0	
G 387	61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	0	0	0	0	0	0	0	0	0	
G 388	61-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTO	0	0	1	0	0	1	0	0	0	
G 389	61-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	0	0	1	0	0	1	0	0	0	
G 390	61-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	1	0	1	0	0	1	4	0	0	
G 391	61-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	1	0	1	0	0	1	4	0	0	
G 392	61-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	0	0	1	0	0	1	0	0	0	
G 393	61-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	0	0	1	0	0	1	0	0	0	
G 394	61-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	0	0	1	0	0	1	0	0	0	
G 395	61-42 DO YOU USE REFER TO DEPLETION REGION IN SEMICONDUCTORS	0	0	1	0	0	1	0	0	0	
G 396	61-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	0	0	0	0	0	0	0	0	0	
G 397	61-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	3	3	1	14	20	0	4	10	25	
G 398	61-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	0	0	0	0	0	0	0	0	0	
G 399	61-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	4	3	2	10	20	0	11	5	13	
G 400	61-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	2	3	1	10	0	1	0	10	13	
G 401	61-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	2	3	0	10	0	0	0	10	13	
G 402	61-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	2	3	0	10	0	0	0	10	13	
G 403	61-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	2	3	1	10	0	1	0	10	13	
G 404	62-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	6	3	4	10	20	4	7	10	0	
G 405	62-02 DO YOU INSPECT TRANSISTORS	5	3	4	7	20	4	7	10	0	
G 406	62-03 DO YOU REMOVE OR REPLACE TRANSISTORS	4	0	4	7	20	3	7	10	0	
G 407	62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	5	3	4	7	20	4	4	10	0	TRANSISTORS
G 408	62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	3	3	2	3	20	2	4	5	0	
G 409	62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	3	3	2	3	20	2	4	5	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
G 410	62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	3	3	2	3	20	2	4	5	0	
G 411	62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	1	3	1	0	0	1	0	0	0	
G 412	62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	1	3	1	0	0	1	0	0	0	
G 413	62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	1	3	1	0	0	0	4	0	0	
G 414	62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	1	3	0	0	20	0	0	0	0	
G 415	62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	5	3	4	7	20	3	7	10	0	
G 416	62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	4	3	3	7	20	2	7	10	0	
G 417	62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	3	3	1	7	20	0	4	10	0	
G 418	62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT I_B IS NORMALLY SIGNIFICANTLY	0	3	0	0	0	0	0	0	0	
G 419	62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR	1	0	1	3	0	1	0	5	0	
G 420	62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	0	0	0	0	0	0	0	0	0	
G 421	62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	1	3	1	0	0	1	0	0	0	
G 422	62-19 DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	0	3	0	0	0	0	0	0	0	
G 423	62-20 DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	0	3	0	0	0	0	0	0	0	
G 424	62-21 DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	0	3	0	0	0	0	0	0	0	
G 425	62-22 DO YOU CALCULATE BETA TRANSISTOR GAINS	0	0	0	0	0	0	0	0	0	
G 426	62-23 DO YOU CALCULATE ALPHA TRANSISTOR GAINS	0	0	0	0	0	0	0	0	0	
G 427	62-24 DO YOU CALCULATE GAMMA TRANSISTOR GAINS	0	0	0	0	0	0	0	0	0	
G 428	63-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	1	3	1	0	0	2	0	0	0	
G 429	63-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS	1	3	1	0	0	2	0	0	0	TRANSISTOR AMPLIFIERS
G 430	63-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	1	3	1	0	0	1	0	0	0	
G 431	63-04 DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	1	3	1	0	0	1	0	0	0	
G 432	63-05 DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	1	3	1	0	0	2	0	0	0	
G 433	63-06 DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	1	0	1	0	0	2	0	0	0	
G 434	63-07 DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	0	0	0	0	0	0	0	0	0	
G 435	63-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE I COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE	1	3	1	0	0	1	0	0	0	
G 436	63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	3	1	0	0	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099
G 437	63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN BASE	1	3	1	0	0	1	0	0	0
G 438	63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	3	1	0	0	1	0	0	0
G 439	63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	1	3	1	0	0	1	0	0	0
G 440	63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	0	3	0	0	0	0	0	0	0
G 441	63-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A	0	0	0	0	0	0	0	0	0
G 442	63-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	0	3	0	0	0	0	0	0	0
G 443	63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	0	0	0	0	0	0	0	0	0
G 444	63-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	1	3	1	0	0	1	0	0	0
G 445	63-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	0	3	0	0	0	0	0	0	0
G 446	63-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	0	3	0	0	0	0	0	0	0
G 447	63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE	0	0	0	0	0	0	0	0	0
G 448	63-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE	0	0	0	0	0	0	0	0	0
G 449	63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE	0	0	0	0	0	0	0	0	0
G 450	63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE	0	0	0	0	0	0	0	0	0
G 451	63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES	0	0	0	0	0	0	0	0	0
G 452	63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	3	0	0	0	0	0	0	0
G 453	63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-	0	3	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044
G	454	63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	3	0	0	0	0	0	0	0
G	455	63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	3	0	0	0	0	0	0	0
G	456	63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	3	0	0	0	0	0	0	0
G	457	63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	3	0	0	0	0	0	0	0
G	458	63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	0	3	0	0	0	0	0	0	0
G	459	63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	0	3	0	0	0	0	0	0	0
G	460	63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	0	3	0	0	0	0	0	0	0
G	461	63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	0	3	0	0	0	0	0	0	0
G	462	63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	0	3	0	0	0	0	0	0	0
G	463	63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	0	3	0	0	0	0	0	0	0
G	464	63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	0	3	0	0	0	0	0	0	0
G	465	63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	0	0	0	0	0	0	0	0	0
G	466	63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	0	3	0	0	0	0	0	0	0
G	467	63-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	0	3	0	0	0	0	0	0	0
G	468	63-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	0	0	0	0	0	0	0	0	0
G	469	63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	0	0	0	0	0	0	0	0	0
G	470	63-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR	0	3	0	0	0	0	0	0	0
G	471	63-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	0	3	0	0	0	0	0	0	0
G	472	63-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	0	3	0	0	0	0	0	0	0
G	473	63-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	1	3	1	0	0	2	0	0	0
G	474	63-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	0	3	0	0	0	0	0	0	0
G	475	63-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	0	3	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
G	476	G3-49 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	0	3	0	0	0	0	0	0	0	
H	477	H1-01 DO YOU USE OR REFER TO VARACTORS	2	3	2	0	0	3	0	0	0	
H	478	H1-02 DO YOU USE OR REFER TO TUNNEL DIODES	1	3	1	0	0	1	4	0	0	SOLID-STATE SPECIAL PURPOSE DEVICES
H	479	H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	2	3	3	0	0	3	4	0	0	
H	480	H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	3	3	3	3	0	3	4	0	13	
H	481	H1-05 DO YOU USE OR REFER TO ZENER DIODES	12	7	13	14	20	14	11	10	13	
H	482	H1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS	15	10	18	10	0	21	7	5	13	
H	483	H2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	42	53	41	38	20	40	44	35	38	
H	484	H2-02 DO YOU INSPECT POWER SUPPLIES	31	37	30	34	20	28	41	30	38	
H	485	H2-03 DO YOU CLEAN POWER SUPPLIES	26	27	26	28	20	24	37	20	38	
H	486	H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES	26	27	24	34	20	21	37	30	38	POWER SUPPLIES
H	487	H2-05 DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	15	10	14	24	20	10	30	15	38	
H	488	H2-06 DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	14	7	15	21	20	9	37	15	25	
H	489	H2-07 DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	22	13	23	28	20	18	44	20	38	
H	490	H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	12	6	13	21	20	6	41	15	25	
H	491	H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS	9	7	8	17	20	4	26	15	25	
H	492	H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	9	10	7	17	20	3	26	10	25	
H	493	H2-11 DO YOU WORK WITH BRIDGE RECTIFIERS	12	10	12	14	20	8	26	5	25	
H	494	H2-12 DO YOU WORK WITH THREE-PHASE RECTIFIERS	6	10	7	3	0	4	19	0	13	
H	495	H2-13 DO YOU USE OR REFER TO INPUT VOLTAGE	26	33	24	31	20	24	22	25	38	
H	496	H2-14 DO YOU USE OR REFER TO INPUT FREQUENCY	22	27	21	24	20	21	22	15	38	
H	497	H2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	15	20	13	28	0	11	19	20	38	
H	498	H2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	14	20	10	28	0	7	22	20	38	
H	499	H2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE	8	10	6	17	20	4	15	5	38	
H	500	H2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY	8	10	6	17	20	4	15	5	38	
H	501	H2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	6	7	7	3	0	4	19	0	13	
H	502	H2-20 DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	11	13	8	21	20	6	19	10	38	
H	503	H2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	13	17	9	28	20	6	22	20	38	
H	504	H2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS	6	3	6	10	20	4	15	5	25	
H	505	H2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS	6	3	6	7	20	4	15	0	25	
H	506	H2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	4	3	5	3	0	3	15	0	13	
H	507	H2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	4	3	5	3	0	3	15	0	13	
H	508	H2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	4	3	4	3	0	3	11	0	13	
H	509	H2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	4	3	5	3	0	4	11	0	13	
H	510	H2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER	11	10	11	14	0	12	7	10	13	
H	511	H2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	2	3	3	0	0	1	11	0	0	
H	512	H3-01 DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	8	10	6	14	20	2	22	0	38	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
M 513	M3-02 DO YOU INSPECT OSCILLATORS	7	10	5	14	20	2	19	0	38	
M 514	M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	6	10	4	10	20	0	22	0	25	
M 515	M3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	6	7	4	14	20	0	19	0	38	
M 516	M3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	3	3	1	10	20	0	4	0	25	OSCILLATORS
M 517	M3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	4	3	2	14	20	0	11	0	38	
M 518	M3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	3	3	1	10	20	0	4	0	25	
M 519	M3-08 DO YOU USE OR REFER TO FEEDBACK	5	10	3	7	20	1	11	0	25	
M 520	M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)	2	7	1	3	0	0	7	0	13	
M 521	M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	4	10	1	7	20	1	4	0	25	
M 522	M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	4	10	1	10	20	1	4	0	38	
M 523	M3-12 DO YOU USE OR REFER TO DAMPING	4	10	2	3	20	0	11	0	13	
M 524	M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	2	7	1	7	0	0	4	0	25	
M 525	M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	2	3	1	7	0	0	4	0	25	
M 526	M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	1	3	1	0	0	0	4	0	0	
M 527	M3-16 DO YOU USE OR REFER TO UNDER DAMPING	1	3	1	0	0	0	4	0	0	
M 528	M3-17 DO YOU USE OR REFER TO OVER DAMPING	1	3	1	0	0	0	4	0	0	
M 529	M3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD	2	0	3	3	0	1	11	0	13	
M 530	M3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD	2	0	3	3	0	1	11	0	13	
M 531	M3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD	3	0	3	10	0	1	11	0	25	
M 532	M3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD	2	7	1	3	20	0	4	0	13	
M 533	M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS	0	0	1	0	0	0	4	0	0	
M 534	M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	0	0	1	0	0	0	4	0	0	
M 535	M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	0	0	1	0	0	0	4	0	0	
M 536	M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	0	0	1	0	0	0	4	0	0	
M 537	M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	0	0	1	0	0	0	4	0	0	
M 538	M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS	4	3	2	14	20	0	11	0	38	
I 539	I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	2	3	1	7	0	0	7	0	25	
I 540	I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS	2	3	1	7	0	0	7	0	25	
I 541	I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS	2	3	1	7	0	0	7	0	25	
I 542	I1-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS	2	3	1	7	0	0	7	0	25	MULTIVIBRATORS
I 543	I1-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS	2	3	1	7	0	0	7	0	25	
I 544	I1-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS	2	3	1	7	0	0	7	0	25	
I 545	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS	1	0	1	3	0	0	7	0	13	
I 546	I1-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS	2	0	1	7	0	0	7	0	25	
I 547	I1-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS	1	0	1	7	0	0	4	0	25	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 091	SPL 092	SPL 093	SPL 099	
I 548	11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	1	0	1	7	0	0	4	0	25	
I 549	11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	1	0	1	7	0	0	4	0	25	
I 550	11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD	1	3	1	0	0	0	4	0	0	
I 551	11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	0	3	0	0	0	0	0	0	0	
I 552	11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	1	3	1	3	0	0	4	0	13	
I 553	11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	1	3	1	3	0	0	4	0	13	
I 554	11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS	1	3	1	3	0	0	4	0	13	
I 555	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	2	0	2	3	0	0	11	0	13	
I 556	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS	1	0	1	3	0	0	4	0	13	LIMITERS AND CLAMPERS
I 557	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	1	0	1	3	0	0	4	0	13	
I 558	12-04 DO YOU WORK WITH LIMITERS WITH BIAS	1	0	1	3	0	0	4	0	13	
I 559	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS	1	0	1	3	0	0	4	0	13	
I 560	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS	0	0	0	0	0	0	0	0	0	
I 561	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	1	0	1	0	0	0	7	0	0	
I 562	12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	1	0	1	3	0	0	4	0	13	
I 563	12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	1	0	1	3	0	0	4	0	13	
I 564	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT	1	0	1	3	0	0	7	0	13	
I 565	13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	12	13	11	21	0	2	44	5	50	
I 566	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	6	7	4	21	0	0	19	5	50	
I 567	13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	7	10	4	21	0	0	22	5	50	ELECTRON TUBES
I 568	13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	6	10	4	10	0	0	22	0	38	
I 569	13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	5	7	4	10	0	0	19	0	25	
I 570	13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	7	7	5	17	0	0	26	5	38	
I 571	13-07 DO YOU USE OR REFER TO CUTOFF	3	7	3	3	0	0	15	0	13	
I 572	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	2	7	2	0	0	0	11	0	0	
I 573	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	2	7	2	0	0	0	11	0	0	
I 574	13-10 DO YOU USE OR REFER TO TRANSIT TIME	2	7	2	0	0	0	11	0	0	
I 575	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	2	7	2	0	0	0	11	0	0	
I 576	13-12 DO YOU USE OR REFER TO SATURATION	3	7	2	3	0	0	11	0	0	
I 577	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	3	7	2	3	0	0	11	0	13	
I 578	13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	2	3	2	0	0	0	11	0	0	
I 579	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE	6	10	5	10	0	0	26	0	25	
I 580	13-16 DO YOU USE OR REFER TO PLATE CURRENT	6	7	5	10	0	0	26	0	25	
I 581	13-17 DO YOU USE OR REFER TO GRID VOLTAGE	6	10	5	7	0	0	26	0	13	
I 582	13-18 DO YOU USE OR REFER TO GRID CURRENT	5	7	5	7	0	0	26	0	13	
I 583	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	6	10	5	10	0	0	26	0	25	
I 584	13-20 DO YOU USE OR REFER TO CATHODE CURRENT	5	7	5	7	0	0	26	0	13	
I 585	13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS	2	3	1	3	0	0	7	0	13	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
I	586	I3-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	1	0	1	0	0	0	7	0	0	
I	587	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	2	3	1	3	0	0	7	0	13	
I	588	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	1	3	1	0	0	0	4	0	0	
I	589	I3-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	0	0	1	0	0	0	4	0	0	
I	590	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	1	3	1	0	0	0	7	0	0	
I	591	I3-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	1	0	1	0	0	0	7	0	0	
I	592	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	2	3	1	3	0	0	7	0	13	
I	593	I3-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	2	3	1	3	0	0	7	0	13	
I	594	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	0	0	1	0	0	0	4	0	0	
I	595	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	0	0	1	0	0	0	4	0	0	
I	596	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	0	0	1	0	0	0	4	0	0	
I	597	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	0	0	1	0	0	0	4	0	0	
I	598	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	4	7	3	7	0	0	15	0	25	
I	599	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	3	7	2	3	0	0	11	0	13	
I	600	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	4	3	3	14	0	0	15	5	38	
I	601	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	3	3	3	7	0	0	15	0	25	
I	602	I3-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	4	7	3	7	0	1	11	0	25	
I	603	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	2	3	1	3	0	0	7	0	13	
I	604	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	1	0	1	3	0	0	4	0	13	
I	605	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	6	7	4	17	0	0	22	5	38	
I	606	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	7	7	5	21	0	0	26	5	50	
I	607	I3-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN THE	2	3	1	3	0	0	7	0	13	
I	608	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	5	7	2	21	0	0	11	5	50	
J	609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB	4	3	3	10	0	0	15	0	25	
J	610	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER	3	0	3	7	0	0	15	0	13	ELECTRON TUBE AMPLIFIERS AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
J 611	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	2	0	2	7	0	0	11	0	13	
J 612	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	3	0	2	10	0	0	11	0	25	
J 613	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	1	0	1	7	0	0	4	0	25	
J 614	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	1	0	1	7	0	0	4	0	26	
J 615	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	1	3	1	0	0	0	7	0	0	
J 616	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE)	6	3	6	10	0	2	22	0	25	
J 617	J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	7	10	7	7	0	2	30	0	25	SPECIAL PURPOSE ELECTRON TUBES
J 618	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	2	3	1	3	0	0	7	0	13	
J 619	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	2	0	2	3	0	0	11	0	13	
J 620	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS	2	3	2	3	0	0	11	0	13	
J 621	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	2	0	3	3	0	0	15	0	13	
J 622	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	4	7	4	3	0	1	15	0	13	
J 623	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	3	7	2	3	0	0	11	0	13	
J 624	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	3	7	3	3	0	0	15	0	13	
J 625	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	3	3	2	7	0	0	11	0	13	
J 626	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	2	3	2	3	0	0	11	0	13	
J 627	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	1	3	1	0	0	0	7	0	0	
J 628	J2-13 DO YOU USE OR REFER TO PERSISTENCE	2	3	1	3	0	0	7	0	13	
J 629	J2-14 DO YOU USE OR REFER TO DECAY TIMES	2	3	1	3	0	0	7	0	13	
J 630	J2-15 DO YOU USE OR REFER TO FLUORESCENCE	2	7	1	3	0	0	4	0	13	
J 631	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	2	7	1	3	0	0	7	0	13	
J 632	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	7	0	9	7	0	4	26	0	25	
J 633	J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	4	0	5	7	0	0	26	0	25	HETERODYNING, MODULATION, AND DEMODULATION
J 634	J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	4	0	4	7	0	0	22	0	25	
J 635	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	2	0	3	3	0	0	15	0	13	
J 636	J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	2	0	2	3	0	0	11	0	13	
J 637	J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	3	0	4	3	0	0	19	0	13	
K 638	K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOU PRESENT JOB	1	0	1	7	0	0	4	0	25	
K 639	K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	3	0	0	7	0	13	AM SYSTEMS
K 640	K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	3	0	0	4	0	13	
K 641	K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	7	0	0	4	0	25	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
K 642	K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	3	0	0	4	0	13	
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	0	0	1	0	0	0	4	0	0	
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	2	0	1	7	0	0	7	0	25	
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	0	0	1	0	0	0	4	0	0	
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	1	0	1	7	0	0	4	0	25	
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	1	0	1	7	0	0	4	0	25	
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	1	0	0	7	0	0	0	0	25	
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	1	0	1	7	0	0	4	0	25	
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	1	0	1	7	0	0	4	0	25	
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	1	0	1	7	0	0	4	0	25	
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	1	0	1	7	0	0	4	0	25	
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	0	0	0	0	0	0	0	0	0	
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	0	0	0	3	0	0	0	0	13	
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	0	0	0	3	0	0	0	0	13	
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	2	0	1	7	0	0	7	0	25	
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	1	0	1	7	0	0	4	0	25	
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	1	0	1	3	0	0	4	0	13	
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	0	0	0	3	0	0	0	0	13	
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	0	0	0	0	0	0	0	0	0	
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	0	0	0	0	0	0	0	0	0	
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	0	0	0	0	0	0	0	0	0	
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	0	0	0	0	0	0	0	0	0	
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	1	0	1	7	0	0	4	0	25	
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	1	0	1	3	0	0	4	0	13	
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	1	0	2	0	0	1	7	0	0	
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	1	0	2	0	0	1	7	0	0	FM SYSTEMS
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	1	0	2	0	0	1	7	0	0	
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	0	0	1	4	0	0	
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	1	0	2	0	0	1	7	0	0	
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	1	0	1	0	0	1	4	0	0	
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	1	0	2	0	0	1	7	0	0	
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	1	0	1	0	0	1	4	0	0	
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	0	0	0	0	0	0	0	0	0	
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 091	SPL 092	SPL 093	SPL 094	
K	676	K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	0	0	1	0	0	0	4	0	0	
K	677	K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	0	0	1	0	0	0	4	0	0	
K	678	K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	0	0	1	0	0	0	4	0	0	
K	679	K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	0	0	1	0	0	0	4	0	0	
K	680	K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	0	0	1	0	0	0	4	0	0	
K	681	K2-16 DO YOU PERFORM TASKS ON LIMITERS	0	0	1	0	0	0	4	0	0	
K	682	K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	0	0	1	0	0	0	4	0	0	
K	683	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	1	0	2	0	0	1	7	0	0	
K	684	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	0	0	1	0	0	0	4	0	0	
K	685	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	1	10	0	0	0	0	0	0	0	
K	686	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	1	10	0	0	0	0	0	0	0	NUMBERING SYSTEMS
K	687	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	0	3	0	0	0	0	0	0	0	
K	688	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	0	3	0	0	0	0	0	0	0	
K	689	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	1	7	1	0	0	1	0	0	0	
K	690	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	0	3	0	0	0	0	0	0	0	
K	691	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	2	7	2	0	0	3	0	0	0	
K	692	K3-08 DO YOU SUBRRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD	1	3	1	0	0	1	0	0	0	
K	693	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	2	7	2	0	0	3	0	0	0	
K	694	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	1	3	1	0	0	1	0	0	0	
L	695	L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	4	3	4	7	0	6	0	10	0	
L	696	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	3	3	3	3	0	4	0	5	0	
L	697	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	2	3	2	3	0	3	0	5	0	LOGIC FUNCTIONS
L	698	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	2	3	2	3	0	3	0	5	0	
L	699	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	2	3	2	3	0	3	0	5	0	
L	700	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	4	3	4	7	0	5	0	10	0	
L	701	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	4	3	4	7	0	5	0	10	0	
L	702	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	4	3	4	7	0	5	0	10	0	
L	703	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	3	3	3	7	0	4	0	10	0	
L	704	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	4	3	4	7	0	6	0	10	0	
L	705	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	4	3	4	7	0	6	0	10	0	
L	706	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	4	3	4	7	0	6	0	10	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
L 707	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	4	3	4	7	0	5	0	10	0	
L 708	L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC	2	7	1	0	0	2	0	0	0	
L 709	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	1	3	1	0	0	1	0	0	0	BOOLEAN EQUATIONS
L 710	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	1	3	1	0	0	2	0	0	0	
L 711	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	1	3	1	0	0	1	0	0	0	
L 712	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	1	3	1	0	0	2	0	0	0	
L 713	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	0	0	0	0	0	0	0	0	0	
L 714	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	0	3	0	0	0	0	0	0	0	
L 715	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	0	3	0	0	0	0	0	0	0	
L 716	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	0	3	0	0	0	0	0	0	0	
L 717	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	1	3	1	0	0	1	0	0	0	
L 718	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	0	0	0	0	0	0	0	0	0	
L 719	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	0	0	0	0	0	0	0	0	0	
L 720	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	0	3	0	0	0	0	0	0	0	
L 721	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	0	3	0	0	0	0	0	0	0	
L 722	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	0	3	0	0	0	0	0	0	0	
L 723	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	0	3	0	0	0	0	0	0	0	
L 724	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	0	3	0	0	0	0	0	0	0	
L 725	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	1	3	1	0	0	1	0	0	0	
L 726	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	1	3	1	0	0	1	0	0	0	
L 727	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	1	3	1	0	0	1	0	0	0	
L 728	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	0	3	0	0	0	0	0	0	0	
L 729	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	0	0	0	0	0	0	0	0	0	
L 730	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	0	0	0	0	0	0	0	0	0	
L 731	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	0	0	0	0	0	0	0	0	0	
L 732	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	1	3	1	0	0	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 091	SPL 092	SPL 093	SPL 099	
L 733	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	14	13	16	7	20	17	11	10	0	
L 734	L3-02 DO YOU USE OR REFER TO UP-COUNTERS	2	7	1	0	0	0	7	0	0	
L 735	L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS	1	3	1	0	0	0	4	0	0	COUNTERS
L 736	L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS	3	3	4	0	0	4	4	0	0	
L 737	L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS	1	3	1	0	0	2	0	0	0	
L 738	L3-06 DO YOU USE OR REFER TO RING COUNTERS	0	3	0	0	0	0	0	0	0	
L 739	L3-07 DO YOU USE OR REFER TO DECADE COUNTERS	6	7	7	0	20	7	4	0	0	
L 740	L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	1	3	1	0	0	1	0	0	0	
L 741	L3-09 DO YOU USE OR REFER TO DOWN CLOCKS	1	3	1	0	0	0	4	0	0	
L 742	L3-10 DO YOU USE OR REFER TO UP CLOCKS	1	3	1	0	0	1	4	0	0	
L 743	L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	0	0	0	0	0	0	0	0	0	
L 744	L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-	0	0	0	0	0	0	0	0	0	
L 745	L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	2	3	3	0	0	3	4	0	0	
L 746	L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	0	0	0	0	0	0	0	0	0	
L 747	L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	0	0	0	0	0	0	0	0	0	
L 748	L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	0	0	1	0	0	1	0	0	0	
L 749	L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	0	0	1	0	0	1	0	0	0	
L 750	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	0	0	1	0	0	0	4	0	0	
L 751	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENT-	0	0	0	0	0	0	0	0	0	
L 752	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE	0	0	0	0	0	0	0	0	0	
L 753	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	0	0	1	0	0	1	0	0	0	
L 754	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	0	0	0	0	0	0	0	0	0	
L 755	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	0	0	0	0	0	0	0	0	0	
L 756	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	0	0	0	0	0	0	0	0	0	
M 757	M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	5	10	4	3	0	4	7	0	13	
M 758	M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	1	3	1	0	0	1	0	0	0	
M 759	M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	4	10	3	7	0	2	7	0	26	TIMING CIRCUITS
M 760	M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	3	10	1	3	0	1	4	0	13	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
M 761	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS	4	10	3	7	0	2	7	0	25	
M 762	M1-06 DO YOU USE OR REFER TO RISE TIME	4	3	4	7	0	5	4	0	25	
M 763	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME	4	3	4	7	0	4	4	0	25	
M 764	M1-08 DO YOU USE OR REFER TO SWEEP TIME	13	10	15	10	0	12	30	5	25	
M 765	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	6	10	7	3	0	5	15	0	13	
M 766	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	4	7	4	7	0	1	15	5	13	
M 767	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	3	7	3	3	0	1	11	0	13	
M 768	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	5	10	4	3	0	4	7	0	13	
M 769	M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	36	23	40	34	20	41	37	40	25	
M 770	M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	25	17	27	21	20	27	30	20	25	USE OF SIGNAL GENERATORS
M 771	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL	27	20	29	24	20	31	26	25	25	
M 772	M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	16	17	15	17	20	15	19	15	25	
M 773	M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	7	7	6	10	20	4	15	0	25	
M 774	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS	20	17	18	28	20	23	0	30	25	
M 775	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	3	7	2	7	0	2	4	5	13	
M 776	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH	8	7	9	10	0	10	4	10	13	
M 777	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	11	7	13	10	0	10	22	10	13	
M 778	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS	9	3	10	10	0	9	15	5	25	
M 779	M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	14	13	19	10	0	18	22	5	25	
M 780	M3-02 DO YOU INSPECT MOTORS	10	7	12	10	0	10	19	0	25	MOTORS AND GENERATORS
M 781	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS	10	7	11	10	0	8	22	5	25	
M 782	M3-04 DO YOU OPERATE MOTORS	15	10	18	10	0	17	22	0	25	
M 783	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS	6	3	5	14	0	3	15	5	25	
M 784	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS	5	3	5	10	0	3	15	0	25	
M 785	M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	7	3	7	14	0	4	19	5	25	
M 786	M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	3	3	4	3	0	2	11	0	13	
M 787	M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS	1	3	1	3	0	1	0	0	13	
M 788	M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES	1	3	1	3	0	1	0	0	13	
M 789	M3-11 DO YOU PERFORM ANY TASKS ON ROTORS	1	3	0	3	0	0	0	0	13	
M 790	M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES	2	3	1	7	0	1	0	0	25	
M 791	M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS	0	3	0	0	0	0	0	0	0	
M 792	M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS	0	3	0	0	0	0	0	0	0	
M 793	M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES	0	3	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
M 794	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	0	0	0	0	0	0	0	0	0	
M 795	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	0	0	0	3	0	0	0	0	13	
M 796	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	0	0	0	0	0	0	0	0	0	
M 797	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	2	0	1	7	0	1	4	0	25	
M 798	M3-20 DO YOU WORK WITH INDUCTION MOTORS	3	0	3	7	0	3	4	0	25	
M 799	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	2	0	2	3	0	1	7	0	13	
M 800	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	3	0	4	7	0	3	7	0	13	
M 801	M3-23 DO YOU INSPECT GENERATORS	14	13	16	7	0	17	11	6	13	
M 802	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	6	7	7	3	0	6	11	0	13	
M 803	M3-25 DO YOU OPERATE GENERATORS	15	13	18	10	0	19	11	5	13	
M 804	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	3	3	4	3	0	3	7	0	13	
M 805	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	2	3	2	0	0	1	7	0	0	
M 806	M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS	3	3	4	3	0	2	7	0	13	
M 807	M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	2	3	2	0	0	0	11	0	0	
N 808	N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	51	57	53	91	20	51	59	45	38	
N 809	N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	11	20	10	7	0	12	0	0	13	
N 810	N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	11	20	10	3	0	13	0	0	13	METER MOVEMENTS
N 811	N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	11	23	10	3	0	12	0	0	13	
N 812	N1-05 DO YOU READ METER SCALES	50	63	50	91	20	49	56	45	38	
N 813	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	14	20	15	7	0	15	15	10	0	
N 814	N1-07 DO YOU ZERO OHMMETERS	50	60	51	91	20	49	59	45	38	
N 815	N1-08 DO YOU ZERO AMMETERS	24	33	25	14	0	24	26	10	25	
N 816	N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	22	17	26	7	0	25	30	5	13	
N 817	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	15	20	13	21	20	10	19	10	38	
N 818	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	0	0	1	0	0	1	0	0	0	
N 819	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 820	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N 821	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N 822	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N 823	N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N 824	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMART
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
N	825	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	0	0	0	0	0	0	0	0	0	
N	826	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF	0	0	0	0	0	0	0	0	0	
N	827	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE	0	0	0	0	0	0	0	0	0	
N	828	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	0	0	0	0	0	0	0	0	0	
N	829	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N	830	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N	831	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N	832	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	0	0	0	0	0	0	0	0	0	
N	833	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	0	0	0	0	0	0	0	0	0	
N	834	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	2	0	1	7	0	0	7	0	25	
N	835	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	1	0	1	3	0	0	4	0	13	
N	836	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	2	0	1	7	0	0	7	0	25	WAVESHAPING
N	837	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	1	0	1	7	0	0	4	0	25	CIRCUITS
N	838	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	1	0	1	7	0	0	4	0	25	
N	839	N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	1	0	1	3	0	0	4	0	13	
N	840	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	0	0	0	3	0	0	0	0	13	
N	841	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	1	0	1	3	0	0	4	0	13	
N	842	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT	0	0	0	3	0	0	0	0	13	
N	843	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	0	0	0	0	0	0	0	0	0	
N	844	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	0	0	0	0	0	0	0	0	0	
O	845	01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	0	0	1	0	0	0	4	0	0	
O	846	01-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	1	0	0	0	4	0	0	
O	847	01-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	0	SINGLE SIDEBAND
O	848	01-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	0	SYSTEMS
O	849	01-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	0	
O	850	01-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	0	0	0	0	0	0	0	0	0	
O	851	01-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	1	0	0	0	4	0	0	
O	852	01-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
0	853	01-09 DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS	0	0	0	0	0	0	0	0	0	
0	854	01-10 DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS	0	0	0	0	0	0	0	0	0	
0	855	01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	0	0	0	0	0	0	0	0	0	
0	856	01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS	0	0	0	0	0	0	0	0	0	
0	857	01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	0	0	0	0	0	0	0	0	0	
0	858	01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	0	0	0	0	0	0	0	0	0	
0	859	01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS	0	0	0	0	0	0	0	0	0	
0	860	01-16 DO YOU PERFORM TASKS ON SSB MIXERS	0	0	0	0	0	0	0	0	0	
0	861	01-17 DO YOU PERFORM TASKS ON SSB DRIVERS	0	0	0	0	0	0	0	0	0	
0	862	01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	0	0	0	0	0	0	0	0	0	
0	863	01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	0	0	0	0	0	0	0	0	0	
0	864	01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	0	0	0	0	0	0	0	0	0	
0	865	01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	0	0	0	0	0	0	0	0	0	
0	866	01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS	0	0	0	0	0	0	0	0	0	
0	867	01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES	0	0	0	0	0	0	0	0	0	
0	868	01-24 DO YOU USE OR REFER TO SELECTIVE FADING	0	0	0	0	0	0	0	0	0	
0	869	01-25 DO YOU USE OR REFER TO PEAK POWER	0	0	0	0	0	0	0	0	0	
0	870	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY	0	0	0	0	0	0	0	0	0	
0	871	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	0	0	0	0	0	0	0	0	0	
0	872	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS	0	0	0	0	0	0	0	0	0	
0	873	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	0	0	0	
0	874	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	0	0	0	
0	875	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	1	0	1	7	0	0	4	0	25	
0	876	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS	1	0	0	7	0	0	0	0	25	PULSE MODULATION SYSTEMS
0	877	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	0	0	0	3	0	0	0	0	13	
0	878	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS	1	0	1	3	0	0	4	0	13	
0	879	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	1	0	0	7	0	0	0	0	25	
0	880	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	1	0	0	7	0	0	0	0	25	
0	881	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	1	0	1	3	0	0	4	0	13	
0	882	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	1	0	0	7	0	0	0	0	25	
0	883	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	0	0	0	3	0	0	0	0	13	
0	884	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	0	0	0	0	0	0	0	0	0	
0	885	02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	0	0	0	0	0	0	0	0	0	
0	886	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	0	0	0	0	0	0	0	0	0	
0	887	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	0	0	0	0	0	0	0	0	0	
0	888	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044
0 889	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	1	0	1	3	0	0	7	0	13
0 890	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	0	0	0	3	0	0	0	0	13
0 891	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	0	0	0	3	0	0	0	0	13
0 892	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	0	0	0	0	0	0	0	0	0
0 893	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	1	0	0	7	0	0	0	0	25
0 894	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	1	0	0	7	0	0	0	0	25
0 895	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	0	0	0	3	0	0	0	0	13
0 896	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	1	0	0	7	0	0	0	0	25
0 897	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	1	0	0	7	0	0	0	0	25
0 898	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	1	0	0	7	0	0	0	0	25
0 899	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	1	0	0	7	0	0	0	0	25
0 900	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	1	0	0	7	0	0	0	0	25
0 901	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	0	0	0	3	0	0	0	0	13
0 902	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES	0	0	0	0	0	0	0	0	0
0 903	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	1	0	0	7	0	0	0	0	25
0 904	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	0	0	0	3	0	0	0	0	13
0 905	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	1	0	0	7	0	0	0	0	25
0 906	02-32 DO YOU USE OR REFER TO PULSE SHAPE	1	0	0	7	0	0	0	0	25
0 907	02-33 DO YOU USE OR REFER TO PEAK POWER	1	0	1	7	0	0	4	0	25
0 908	02-34 DO YOU USE OR REFER TO AVERAGE POWER	1	0	0	7	0	0	0	0	25
0 909	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	0	0	0	3	0	0	0	0	13
0 910	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	0	0	0	3	0	0	0	0	13
0 911	02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	0	0	0	0	0	0	0	0	0
0 912	02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	1	0	0	7	0	0	0	0	25
0 913	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	1	0	0	7	0	0	0	0	25
0 914	03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	27	20	33	10	0	36	22	5	25
0 915	03-02 DO YOU INSPECT ANTENNAS	29	20	29	7	0	33	15	5	13

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044
0 916	03-03 DO YOU CLEAN ANTENNAS	25	20	32	7	0	36	15	5	13
0 917	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS	13	10	17	3	0	20	7	0	13
0 918	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS	7	0	10	3	0	8	15	0	13
0 919	03-06 DO YOU TROUBLESHOOT TO ANTENNAS	11	0	15	3	0	14	19	0	13
0 920	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS	5	0	7	0	0	5	15	0	0
0 921	03-08 DO YOU REMOVE OR INSTALL ANTENNAS	23	20	29	7	0	31	19	5	13
0 922	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS	4	3	5	0	0	6	4	0	0
0 923	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES	0	0	0	0	0	0	0	0	0
0 924	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES	0	0	0	0	0	0	0	0	0
0 925	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS	0	0	0	0	0	0	0	0	0
0 926	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	0	0	0	0	0	0	0	0	0
0 927	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS INDUCTIVE LOADS	0	0	0	0	0	0	0	0	0
0 928	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS CAPACITIVE LOADS	0	0	0	0	0	0	0	0	0
0 929	03-16 DO YOU WORK WITH HERTZ ANTENNAS	2	3	2	0	0	2	4	0	0
0 930	03-17 DO YOU WORK WITH MARCONI ANTENNAS	0	0	1	0	0	1	0	0	0
0 931	03-18 DO YOU WORK WITH BROADSIDE ARRAYS	0	0	0	0	0	0	0	0	0
0 932	03-19 DO YOU WORK WITH END-FIRE ARRAYS	0	0	0	0	0	0	0	0	0
0 933	03-20 DO YOU WORK WITH CARDIOID ARRAYS	0	0	0	0	0	0	0	0	0
0 934	03-21 DO YOU WORK WITH COLLINEAR ARRAYS	0	0	1	0	0	0	4	0	0
0 935	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS	0	0	0	0	0	0	0	0	0
0 936	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	0	0	0	0	0	0	0	0	0
0 937	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS	0	0	0	3	0	0	0	0	13
0 938	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS	0	0	0	0	0	0	0	0	0
0 939	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION	0	0	0	0	0	0	0	0	0
0 940	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD	0	0	0	0	0	0	0	0	0
0 941	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED	1	0	2	0	0	3	0	0	0
0 942	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED	1	0	1	7	0	1	0	5	13
0 943	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON	0	0	0	3	0	0	0	0	13
0 944	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	0	0	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099	
O	945	03-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	1	3	0	3	0	0	0	0	13	
O	946	03-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	0	0	0	0	0	0	0	0	0	
O	947	03-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	0	0	0	3	0	0	0	0	13	
O	948	03-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	11	7	15	0	0	17	7	0	0	
O	949	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	7	7	8	3	0	7	11	0	13	
O	850	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	1	0	2	0	0	2	4	0	0	
O	851	03-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	8	7	10	0	0	11	7	0	0	
O	852	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS	0	0	1	0	0	1	0	0	0	
P	953	P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES (TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS	2	0	4	0	0	4	4	0	0	
P	954	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	TRANSMISSION LINES
P	955	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P	956	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P	957	P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	0	0	1	0	0	1	0	0	0	
P	958	P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	0	0	1	0	0	1	0	0	0	
P	959	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	0	0	1	0	0	1	0	0	0	
P	960	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	0	0	1	0	0	1	0	0	0	
P	961	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	0	0	1	0	0	1	0	0	0	
P	962	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	2	0	3	0	0	3	4	0	0	
P	963	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	0	0	1	0	0	1	0	0	0	
P	964	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	1	0	1	0	0	2	0	0	0	
P	965	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	0	0	0	0	0	0	0	0	0	
P	966	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	0	0	0	0	0	0	0	0	0	
P	967	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	0	0	0	0	0	0	0	0	0	
P	968	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P	969	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P	970	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
P 971	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	0	0	0	0	0	0	0	0	0	
P 972	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	0	0	0	0	0	0	0	0	0	
P 973	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	0	0	0	
P 974	P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P 975	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P 976	P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P 977	P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P 978	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES	0	0	0	0	0	0	0	0	0	
P 979	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES	0	0	0	0	0	0	0	0	0	
P 980	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF	0	0	0	0	0	0	0	0	0	
P 981	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P 982	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	0	0	0	0	0	0	0	0	0	
P 983	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	0	0	0	0	0	0	0	0	0	
P 984	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	18	20	17	24	0	17	19	20	25	
P 985	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS	16	20	15	24	0	16	15	20	25	
P 986	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS	15	20	14	21	0	16	7	20	25	WAVEGUIDES AND CAVITY RESONATORS
P 987	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS	4	3	4	3	0	5	4	5	0	
P 988	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS	2	0	2	3	0	2	4	5	0	
P 989	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS	0	0	1	0	0	0	4	0	0	
P 990	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS	9	10	9	10	0	10	4	15	0	
P 991	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS	3	3	4	3	0	4	4	0	13	
P 992	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES	14	20	14	14	0	14	15	10	13	
P 993	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS	5	3	4	14	0	5	4	10	25	
P 994	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS	4	7	4	3	0	4	7	0	13	
P 995	P2-12 DO YOU REMOVE OR INSTALL E BENDS	0	0	1	0	0	0	4	0	0	
P 996	P2-13 DO YOU REMOVE OR INSTALL H BENDS	0	0	1	0	0	0	4	0	0	
P 997	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS	0	0	1	0	0	0	4	0	0	
P 998	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS	0	0	1	0	0	0	4	0	0	
P 999	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS	0	0	1	0	0	0	4	0	0	
P1000	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS	0	0	1	0	0	0	4	0	0	
P1001	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS	0	0	1	0	0	0	4	0	0	
P1002	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK		SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099
P1003	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1004	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1005	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1006	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1007	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0	0	0	0
P1008	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0	0	0	0
P1009	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0	0	0	0
P1010	P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7 WAVELENGTHS	0	0	0	0	0	0	0	0	0
P1011	P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH .35	0	0	0	0	0	0	0	0	0
P1012	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF	0	0	0	0	0	0	0	0	0
P1013	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION	0	0	0	0	0	0	0	0	0
P1014	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	0	0	0	0	0	0	0	0	0
P1015	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1016	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1017	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0	0
P1018	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	0
P1019	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	0
P1020	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	0
P1021	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	5	3	3	17	0	3	9	10	25
P1022	P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	2	0	3	0	0	9	0	0	0
P1023	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	0	0	0	0	0
P1024	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
P1025	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	0	0	0	0	0	
P1026	P2-43 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	3	0	0	0	5	0	
P1027	P2-44 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	0	
P1028	P2-45 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	4	3	4	7	0	3	7	0	13	
P1029	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING	0	0	0	0	0	0	0	0	0	
P1030	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING	0	0	0	0	0	0	0	0	0	
P1031	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING	0	0	0	3	0	0	0	0	13	
P1032	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER THE METHOD OF TUNING	2	0	2	3	0	2	4	0	13	
P1033	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS	1	0	1	7	0	0	4	0	13	
P1034	P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	3	7	3	3	0	1	11	0	13	
P1035	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	0	0	0	0	0	0	0	0	0	MICROWAVE AMPLIFIERS AND OSCILLATORS
P1036	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	0	0	0	0	0	0	0	0	0	
P1037	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE	0	0	0	0	0	0	0	0	0	
P1038	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY	1	3	1	3	0	0	4	0	13	
P1039	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION	1	3	1	0	0	0	4	0	0	
P1040	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING	1	3	1	3	0	0	4	0	0	
P1041	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS	0	0	0	0	0	0	0	0	0	
P1042	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS	0	0	0	0	0	0	0	0	0	
P1043	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS	3	3	2	7	0	0	11	0	13	
P1044	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)	0	0	0	0	0	0	0	0	0	
P1045	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0	
P1046	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0	
P1047	P3-14 DO YOU WORK WITH MAGNETRONS	0	0	0	0	0	0	0	0	0	
P1048	P3-15 DO YOU INSPECT KLYSTRONS OR TWT	2	3	1	7	0	0	7	0	13	
P1049	P3-16 DO YOU CLEAN KLYSTRONS OR TWT	2	3	1	3	0	0	7	0	0	
P1050	P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY	4	7	3	7	0	1	11	0	13	
P1051	P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY	3	3	2	7	0	1	7	0	13	
P1052	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT	3	7	3	3	0	1	11	0	13	
P1053	P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT	2	7	1	3	0	0	7	0	0	
P1054	P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT	3	3	2	7	0	0	11	0	13	
P1055	P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS	2	7	1	3	0	0	4	0	0	
P1056	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0	
P1057	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0	
P1058	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044
P1059	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0
P1060	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0
P1061	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	0
P1062	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER	0	0	0	0	0	0	0	0	0
P1063	P3-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS	0	0	0	0	0	0	0	0	0
P1064	P3-31 DO YOU INSPECT MAGNETRONS	0	0	0	0	0	0	0	0	0
P1065	P3-32 DO YOU CLEAN MAGNETRONS	0	0	0	0	0	0	0	0	0
P1066	P3-33 DO YOU ADJUST MAGNETRONS	0	0	0	0	0	0	0	0	0
P1067	P3-34 DO YOU TUNE MAGNETRONS	0	0	0	0	0	0	0	0	0
P1068	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS	0	0	0	0	0	0	0	0	0
P1069	P3-36 DO YOU TROUBLESHOOT MAGNETRONS	0	0	0	0	0	0	0	0	0
P1070	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON	0	0	0	0	0	0	0	0	0
P1071	P3-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS	0	0	0	0	0	0	0	0	0
P1072	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES	0	0	0	0	0	0	0	0	0
P1073	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES	0	0	0	0	0	0	0	0	0
P1074	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS	0	0	0	0	0	0	0	0	0
P1075	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS	0	0	0	0	0	0	0	0	0
P1076	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES	0	0	0	0	0	0	0	0	0
P1077	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS	0	0	0	0	0	0	0	0	0
P1078	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES	0	0	0	0	0	0	0	0	0
P1079	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS	0	0	0	0	0	0	0	0	0
P1080	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES	0	0	0	0	0	0	0	0	0
P1081	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES	1	0	1	7	0	0	4	0	13
P1082	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS	1	0	1	3	0	0	4	0	0
P1083	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS	1	0	1	3	0	0	4	0	0
P1084	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES	1	0	1	7	0	0	4	0	13
P1085	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS	0	0	1	0	0	0	4	0	0
P1086	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS	1	0	1	3	0	0	4	0	0
P1087	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES	1	0	1	3	0	0	4	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	Dy-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
P1088	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS	2	3	1	3	0	0	7	0	0	
P1089	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS	0	0	1	0	0	0	4	0	0	
P1090	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	0	0	1	0	0	0	4	0	0	
P1091	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	0	0	1	0	0	0	4	0	0	
P1092	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	0	0	1	0	0	0	4	0	0	
P1093	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES	0	0	1	0	0	0	4	0	0	
P1094	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS	0	0	1	0	0	0	4	0	0	
P1095	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS	0	0	0	0	0	0	0	0	0	
P1096	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS	0	0	1	0	0	0	4	0	0	
P1097	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS	0	0	0	0	0	0	0	0	0	
P1098	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES	0	0	0	0	0	0	0	0	0	
P1099	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES	0	0	0	0	0	0	0	0	0	
P1100	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES	0	0	0	0	0	0	0	0	0	
P1101	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS	0	0	0	0	0	0	0	0	0	
P1102	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES	0	0	0	0	0	0	0	0	0	
P1103	P3-70 DO YOU PERFORM TASKS ON ANODES	0	0	0	0	0	0	0	0	0	
P1104	P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS	0	0	0	0	0	0	0	0	0	
P1105	P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS	0	0	0	0	0	0	0	0	0	
P1106	P3-73 DO YOU PERFORM TASKS ON HEATER LEADS	0	0	0	0	0	0	0	0	0	
P1107	P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES	0	0	0	0	0	0	0	0	0	
P1108	P3-75 DO YOU PERFORM TASKS ON CATHODES	0	0	0	0	0	0	0	0	0	
P1109	P3-76 DO YOU PERFORM TASKS ON MAGNETS	0	0	0	0	0	0	0	0	0	
Q1110	Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS	0	3	0	0	0	0	0	0	0	
Q1111	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	0	3	0	0	0	0	0	0	0	
Q1112	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	0	3	0	0	0	0	0	0	0	REGISTERS
Q1113	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	0	3	0	0	0	0	0	0	0	
Q1114	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	0	0	0	0	0	0	0	0	0	
Q1115	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	1	0	1	0	0	2	0	0	0	

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	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
Q1116	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	2	3	3	0	0	4	0	0	0	
Q1117	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB	8	3	10	3	0	11	7	5	0	
Q1118	Q2-02 DO YOU USE OR REFER TO DELAY LINES	1	3	0	3	0	0	0	0	13	
Q1119	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	0	3	0	0	0	0	0	0	0	
Q1120	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	0	3	0	0	0	0	0	0	0	STORAGE DEVICES
Q1121	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	0	3	0	0	0	0	0	0	0	
Q1122	Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OF MEMORY SYSTEMS	0	3	0	0	0	0	0	0	0	
Q1123	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS	0	3	0	0	0	0	0	0	0	
Q1124	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS	0	3	0	0	0	0	0	0	0	
Q1125	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	0	3	0	0	0	0	0	0	0	
Q1126	Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO-ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D)	0	0	1	0	0	1	0	0	0	
Q1127	Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT	0	0	0	0	0	0	0	0	0	
Q1128	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A)	0	0	0	0	0	0	0	0	0	DIGITAL TO ANALOG CONVERTERS
Q1129	Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	0	0	0	0	0	0	0	0	0	
Q1130	Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	0	0	0	
Q1131	Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	0	0	0	
Q1132	Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	0	0	0	
Q1133	Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	0	0	0	
Q1134	Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER	0	0	0	0	0	0	0	0	0	
Q1135	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	0	0	0	
Q1136	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	0	0	0	
Q1137	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	0	0	0	
Q1138	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	0	0	0	
Q1139	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A/D) CONVERTERS	0	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099	
R1190	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	1	0	1	7	0	0	4	0	13	PHANTASTRONS
R1191	R2-01 IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	1	3	1	3	0	1	0	0	13	
R1192	R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	0	0	0	SCHMITT TRIGGERS
R1193	R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	0	3	0	0	0	0	0	0	0	
R1194	R3-01 IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	8	3	6	24	20	6	7	20	38	CABLE FABRICATION
R1195	R3-02 DO YOU FABRICATE COAXIAL CABLES	9	3	7	24	20	5	15	20	38	
S1196	S1-01 IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	21	13	23	21	0	24	15	15	38	
S1197	S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	4	3	3	10	0	2	7	0	38	INPUT/OUTPUT DEVICES
S1198	S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	0	0	0	0	0	0	0	0	0	
S1199	S2-01 DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	3	3	3	3	0	3	4	5	0	PHOTO SENSITIVE DEVICES
S1150	S3-01 IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	1	0	1	3	0	1	0	0	13	
S1151	S3-02 DO YOU MEASURE EXCITATION FREQUENCIES	0	0	0	3	0	0	0	0	13	
S1152	S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	0	0	0	3	0	0	0	0	13	
S1153	S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCIES	0	0	0	3	0	0	0	0	13	SYNCHRONOUS VIBRATION (CHOPPER CIRCUITS)
S1154	S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	0	0	0	3	0	0	0	0	13	
S1155	S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	3	0	1	0	0	13	
S1156	S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	3	0	1	0	0	13	
S1157	S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	3	0	1	0	0	13	
S1158	S3-09 DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	3	0	1	0	0	13	
T1159	T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	42	40	44	34	20	42	52	25	50	
T1160	T1-02 DO YOU INSPECT INFRARED SYSTEMS	35	33	36	31	20	33	48	25	38	
T1161	T1-03 DO YOU CLEAN INFRARED SYSTEMS	27	30	29	17	20	24	44	15	25	
T1162	T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS	27	23	31	10	20	25	52	5	25	INFRARED
T1163	T1-05 DO YOU OPERATE INFRARED SYSTEMS	33	27	37	24	20	31	59	15	38	
T1164	T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS	17	10	18	24	20	11	41	15	38	
T1165	T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS	22	10	26	21	0	19	52	10	38	
T1166	T1-08 DO YOU TROUBLESHOOT DOWN TO INFRARED SYSTEM COMPONENT PARTS	9	3	10	10	20	7	19	0	25	
T1167	T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS	22	23	24	14	20	20	37	5	38	
T1168	T1-10 DO YOU REMOVE OR REPLACE INFRARED SYSTEM COMPONENT PARTS	11	7	13	7	20	12	15	0	25	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 044	
T1169	T1-11 DO YOU USE OR REFER TO FAR REGION	4	10	4	0	0	3	11	0	0	
T1170	T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION	5	13	4	3	0	3	11	5	0	
T1171	T1-13 DO YOU USE OR REFER TO NEAR REGION	4	10	4	0	0	3	11	0	0	
T1172	T1-14 DO YOU USE OR REFER TO MICRON	7	13	6	7	0	4	15	10	0	
T1173	T1-15 DO YOU USE OR REFER TO GRAY BODIES	6	13	7	0	0	4	19	0	0	
T1174	T1-16 DO YOU USE OR REFER TO BLACK BODIES	8	13	7	10	0	5	19	5	25	
T1175	T1-17 DO YOU USE OR REFER TO ABSORPTION	7	17	7	3	0	5	15	0	13	
T1176	T1-18 DO YOU USE OR REFER TO SCATTERING	7	17	7	0	0	5	15	0	0	
T1177	T1-19 DO YOU USE OR REFER TO ABSOLUTE ZERO	5	13	4	3	0	3	7	0	13	
T1178	T1-20 DO YOU PERFORM TASKS ON BLITZ	0	0	0	0	0	0	0	0	0	
T1179	T1-21 DO YOU PERFORM TASKS ON TARGET BUTTONS	0	0	0	0	0	0	0	0	0	
T1180	T1-22 DO YOU PERFORM TASKS ON ERECTOR LENSES	0	0	0	0	0	0	0	0	0	
T1181	T1-23 DO YOU PERFORM TASKS ON OCULAR LENSES	0	0	1	0	0	0	4	0	0	
T1182	T1-24 DO YOU PERFORM TASKS ON CORRECTION LENSES	1	0	1	0	0	1	4	0	0	
T1183	T1-25 DO YOU PERFORM TASKS ON FILTERS	1	0	1	3	0	0	7	0	13	
T1184	T1-26 DO YOU PERFORM TASKS ON SPHERICAL MIRRORS	1	0	1	3	0	0	4	0	13	
T1185	T1-27 DO YOU PERFORM TASKS ON PLANE MIRRORS	0	0	0	0	0	0	0	0	0	
T1186	T2-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS	4	0	6	0	0	7	0	0	0	
T1187	T2-02 DO YOU INSPECT LASER SYSTEMS	4	0	6	0	0	7	0	0	0	
T1188	T2-03 DO YOU CLEAN LASER SYSTEMS	2	0	3	0	0	3	0	0	0	LASERS
T1189	T2-04 DO YOU OPERATE LASER SYSTEMS	3	0	4	0	0	5	0	0	0	
T1190	T2-05 DO YOU OPERATE LASER SYSTEMS	3	0	4	0	0	5	0	0	0	
T1191	T2-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASER SYSTEMS	2	0	2	0	0	2	0	0	0	
T1192	T2-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASER SYSTEMS	2	0	2	0	0	2	0	0	0	
T1193	T2-08 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF LASER SYSTEMS	2	0	2	0	0	2	0	0	0	
T1194	T2-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASER SYSTEMS	2	0	2	0	0	2	0	0	0	
T1195	T2-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASER SYSTEMS	0	0	1	0	0	0	0	0	0	
T1196	T2-11 DO YOU USE OR REFER TO ANGSTROMS (A)	0	0	1	0	0	1	0	0	0	
T1197	T2-12 DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS	0	0	0	0	0	0	0	0	0	
T1198	T2-13 DO YOU USE OR REFER TO GROUND STATE	0	0	0	0	0	0	0	0	0	
T1199	T2-14 DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0	0	0	0	0	
T1200	T2-15 DO YOU USE OR REFER TO PACKET OF RADIATION	0	0	0	0	0	0	0	0	0	
T1201	T2-16 DO YOU USE OR REFER TO PHOTONS	0	0	0	0	0	0	0	0	0	
T1202	T2-17 DO YOU USE OR REFER TO SPONTANEOUS EMISSION	0	0	0	0	0	0	0	0	0	
T1203	T2-18 DO YOU USE OR REFER TO STIMULATED EMISSION	0	0	0	0	0	0	0	0	0	
T1204	T2-19 DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE	0	0	0	0	0	0	0	0	0	
T1205	T2-20 DO YOU USE OR REFER TO INVERSION LEVEL	0	0	0	0	0	0	0	0	0	
T1206	T2-21 DO YOU USE OR REFER TO MONOCHROMATIC	0	0	1	0	0	1	0	0	0	
T1207	T2-22 DO YOU WORK WITH ACTIVE MATERIALS	0	0	1	0	0	1	0	0	0	
T1208	T2-23 DO YOU WORK WITH PUMPING SOURCES	0	0	1	0	0	1	0	0	0	
T1209	T2-24 DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS	0	0	1	0	0	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 049	
T1210	T2-25	DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS	0	0	1	0	0	1	0	0	0	
T1211	T2-26	DO YOU WORK WITH HELICAL FLASHTUBES	0	0	1	0	0	1	0	0	0	
T1212	T2-27	DO YOU WORK WITH RUBY	0	0	0	0	0	0	0	0	0	
T1213	T2-28	DO YOU WORK WITH HELIUM-NEON	0	0	1	0	0	1	0	0	0	
T1214	T2-29	DO YOU WORK WITH HELIUM-XENON	0	0	0	0	0	0	0	0	0	
T1215	T2-30	DO YOU WORK WITH XENON	0	0	0	0	0	0	0	0	0	
T1216	T2-31	DO YOU WORK WITH CESIUM-HELIUM	0	0	0	0	0	0	0	0	0	
T1217	T2-32	DO YOU WORK WITH ARGON	1	0	1	0	0	2	0	0	0	
T1218	T2-33	DO YOU WORK WITH NEODYMIUM IN GLASS	0	0	0	0	0	0	0	0	0	
T1219	T2-34	DO YOU WORK WITH GALLIUM ARSENIDE	0	0	0	0	0	0	0	0	0	
T1220	T3-01	IN YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE MODE	0	0	1	0	0	0	4	0	0	
T1221	T3-02	DO YOU INSPECT DVST OR MMST	0	0	1	0	0	0	4	0	0	
T1222	T3-03	DO YOU CLEAN DVST OR MMST	0	0	1	0	0	0	4	0	0	
T1223	T3-04	DO YOU ADJUST OR CALIBRATE DVST OR MMST	0	0	1	0	0	0	4	0	0	DISPLAY TUBES
T1224	T3-05	DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	0	0	1	0	0	0	4	0	0	
T1225	T3-06	DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS	0	0	1	0	0	0	4	0	0	
T1226	T3-07	DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	0	0	1	0	0	0	4	0	0	
T1227	T3-08	DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF DVST	0	0	0	0	0	0	0	0	0	
T1228	T3-09	DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MMST	0	0	0	0	0	0	0	0	0	
T1229	T3-10	DO YOU PERFORM TASKS ON FLOOD GUNS	0	0	0	0	0	0	0	0	0	
T1230	T3-11	DO YOU PERFORM TASKS ON WRITE GUNS	0	0	0	0	0	0	0	0	0	
T1231	T3-12	DO YOU PERFORM TASKS ON ATTACK GUNS	0	0	0	0	0	0	0	0	0	
T1232	T3-13	DO YOU PERFORM TASKS ON ERASE GUNS	0	0	0	0	0	0	0	0	0	
T1233	T3-14	DO YOU PERFORM TASKS ON STORAGE GRIDS	0	0	1	0	0	0	4	0	0	
U1234	U1-01	IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS	0	0	0	0	0	0	0	0	0	
U1235	U1-02	DO YOU USE OR REFER TO DECIMAL SYSTEMS	0	0	0	0	0	0	0	0	0	
U1236	U1-03	DO YOU USE OR REFER TO PROGRAMS	0	0	0	0	0	0	0	0	0	
U1237	U1-04	DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS	0	0	0	0	0	0	0	0	0	PROGRAMMING
U1238	U1-05	DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	0	0	0	0	0	0	0	0	0	
U1239	U1-06	DO YOU USE OR REFER TO FOUR SYSTEMS	0	0	0	0	0	0	0	0	0	
U1240	U1-07	DO YOU USE OR REFER TO BINARY SYSTEMS	0	0	0	0	0	0	0	0	0	
U1241	U1-08	DO YOU USE OR REFER TO TIME-SHARING	0	0	0	0	0	0	0	0	0	
U1242	U1-09	DO YOU USE OR REFER TO DATA WORDS	0	0	0	0	0	0	0	0	0	
U1243	U1-10	DO YOU USE OR REFER TO ADDRESS WORDS	0	0	0	0	0	0	0	0	0	
U1244	U1-11	DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	0	0	0	0	0	0	0	0	0	
U1245	U1-12	DO YOU USE OR REFER TO STEERING/INFORMATION	0	0	0	0	0	0	0	0	0	
U1246	U1-13	DO YOU USE OR REFER TO INFORMATION WORDS	0	0	0	0	0	0	0	0	0	
U1247	U1-14	DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	0	0	0	0	0	0	0	0	0	
U1248	U1-15	DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	0	0	0	0	0	0	0	0	0	

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 027	SPL 028	SPL 029	SPL 030	SPL 031	SPL 041	SPL 042	SPL 043	SPL 099	
U1249	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES	0	0	0	0	0	0	0	0	0	
U1250	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	0	0	0	0	0	0	0	0	0	
U1251	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	0	0	0	0	0	0	0	0	0	
U1252	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	0	0	0	0	0	0	0	0	0	
U1253	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	0	0	0	0	0	0	0	0	0	
U1254	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	0	0	0	0	0	0	0	0	0	
U1255	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	4	3	1	17	0	0	7	0	50	
U1256	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	0	0	0	3	0	0	0	0	13	DB AND POWER RATIOS
U1257	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	0	0	0	3	0	0	0	0	13	
U1258	U2-04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	8	3	7	10	40	6	15	15	0	

TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY AFMS GROUPS IN THE 316X1L/31790 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	SPL032	ALL AMN WITH 6-24 MOS TIME IN CAREER FIELD	CONTAINING	115 MEMBERS.
GROUP IDENTITY =	SPL033	ALL AMN WITH 25-48 MOS TIME IN CAREER FIELD	CONTAINING	40 MEMBERS.
GROUP IDENTITY =	SPL034	ALL AMN WITH 1-48 MOS TIME IN CAREER FIELD	CONTAINING	164 MEMBERS.
GROUP IDENTITY =	SPL035	ALL AMN WITH 49-96 MOS TIME IN CAREER FIELD	CONTAINING	13 MEMBERS.
GROUP IDENTITY =	SPL036	ALL AMN WITH 97-144 MOS TIME IN CAREER FIELD	CONTAINING	11 MEMBERS.
GROUP IDENTITY =	SPL037	ALL AMN WITH 145 OR MORE MOS TIME IN CAR FLD	CONTAINING	14 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DUTY	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	80	90	84	92	91	93
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	82	92	85	92	82	71
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	35	40	38	46	45	50
D	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	9	7	9	15	9	21
E	COUPLING, SOLDERING, AND RELAYS	31	47	35	69	73	57
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	38	55	43	54	64	43
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	5	10	7	46	18	29
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	45	52	48	62	55	36
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	10	10	11	23	9	36
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	13	13	13	8	18	14
K	AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	8	5	8	0	9	7
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	20	20	20	23	18	14
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	46	55	47	77	45	29
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	56	52	55	31	64	43
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	29	42	32	15	18	14
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	18	30	21	31	18	21
Q	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	10	10	10	15	9	7
R	PHANTASTRONS, SCHMITT TRIGGERS, AND CABLE FABRICATION	9	5	8	31	36	36
S	INPUT\OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	24	17	23	31	36	14
T	INFRARED, LASERS, AND DISPLAY TUBES	46	50	47	31	45	43
U	PROGRAMMING, DB AND POWER RATIOS	12	2	9	15	27	29

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
A	1	A1-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO	35	47	40	54	27	29	
A	2	A1-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU	23	30	26	31	27	21	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	7	7	7	8	9	7	MATHEMATICS
A	4	A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	3	2	3	0	0	7	
A	5	A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	8	10	9	31	0	7	
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	1	2	1	0	0	0	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	0	2	1	0	0	0	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	1	2	1	0	0	0	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	0	2	1	0	0	0	
A	10	A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	1	2	1	0	0	7	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	1	2	1	0	0	0	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	2	2	2	0	0	0	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	2	2	2	8	0	0	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	3	2	3	8	0	7	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	69	70	71	85	91	79	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	10	13	12	15	18	21	
A	17	A2-03 DO YOU USE THE TERM OHM.	65	72	68	85	82	71	
A	18	A2-04 DO YOU USE THE TERM ION.	2	2	2	8	0	0	
A	19	A2-05 DO YOU USE THE TERM DYNE.	0	5	1	0	0	0	DIRECT CURRENT AND VOLTAGE
A	20	A2-06 DO YOU USE THE TERM AMPERE.	52	57	56	77	73	64	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	3	5	3	0	0	0	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	3	2	3	0	0	7	
A	23	A2-09 DO YOU USE THE TERM PROTON.	3	5	3	0	0	0	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	41	45	42	54	36	57	
A	25	A3-02 DO YOU INSPECT RESISTORS.	24	25	24	46	36	36	
A	26	A3-03 DO YOU CLEAN RESISTORS.	10	20	13	38	9	21	
A	27	A3-04 DO YOU ADJUST RESISTORS.	37	35	36	62	36	36	
A	28	A3-05 DO YOU CHECK OHMIC VALUE OR RESISTORS.	30	30	30	54	36	36	RESISTANCE
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	17	25	19	38	36	43	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	3	7	4	8	9	0	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	20	25	21	46	27	43	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR	17	25	20	38	27	29	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	17	15	17	46	36	43	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	12	13	13	31	36	36	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	5	2	4	8	0	0	
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	3	7	5	15	9	21	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	23	38	27	69	36	50	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	9	15	10	15	9	14	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	9	13	9	15	9	7	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	8	10	8	15	9	14	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	7	5	6	15	9	7	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	10	7	15	9	14	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	10	7	15	9	7	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	5	6	15	9	14	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	6	7	6	15	9	7	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	5	7	5	15	9	7	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	8	5	7	15	9	7	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	6	5	5	15	9	0	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	5	5	5	15	9	7	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	5	5	5	15	9	7	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	5	5	5	15	9	0	
B	52	B1-01 DO YOU MEASURE RESISTANCE.	71	82	74	85	64	71	
B	53	B1-02 DO YOU REPAIR OHMMETERS.	3	2	3	0	0	7	
B	54	B1-03 DO YOU MEASURE VOLTAGE.	70	75	73	85	64	71	
B	55	B1-04 DO YOU REPAIR VOLTMETERS.	3	0	2	8	9	7	MULTIMETER USES
B	56	B1-05 DO YOU REPAIR AMMETERS.	1	2	1	8	0	7	
B	57	B1-06 DO YOU MEASURE CURRENT.	43	50	47	69	45	43	
B	58	B1-07 DO YOU USE MULTIMETERS.	70	82	75	85	64	64	
B	59	B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	4	0	3	8	0	7	
B	60	B1-09 DO YOU READ SCHEMATICS.	44	70	51	92	64	64	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
B	61	B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	20	27	24	62	45	36	ALTERNATING CURRENT
B	62	B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	22	45	29	69	64	36	
B	63	B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	19	30	24	54	27	43	
B	64	B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	24	40	29	38	9	36	
B	65	B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.	55	67	60	77	55	57	
B	66	B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	10	10	10	31	18	21	
B	67	B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	11	7	10	23	18	21	INDUCTORS AND INDUCTIVE REACTANCE
B	68	B3-02 DO YOU INSPECT INDUCTORS.	4	2	4	23	9	21	
B	69	B3-03 DO YOU CLEAN INDUCTORS.	3	2	3	15	9	14	
B	70	B3-04 DO YOU ADJUST INDUCTORS.	5	5	5	8	9	21	
B	71	B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	3	2	3	8	9	21	
B	72	B3-06 DO YOU USE OR REFER TO INDUCTANCE.	5	5	5	8	9	7	
B	73	B3-07 DO YOU USE OR REFER TO HENRIES.	5	2	5	8	9	0	
B	74	B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	4	2	4	8	9	7	
B	75	B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	0	2	1	0	0	0	
B	76	B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	1	2	1	0	0	0	
B	77	B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS	1	2	1	0	0	0	
B	78	B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF	1	0	1	0	0	7	
B	79	B2-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE CROSS	1	0	1	0	0	7	
B	80	B2-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS	1	0	1	0	0	0	
B	81	B2-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	1	0	1	0	0	0	
B	82	B2-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	1	0	1	0	0	0	
B	83	B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	2	0	1	8	0	0	
B	84	B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	2	0	1	8	0	0	
B	85	B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	2	0	1	8	0	0	
B	86	B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	3	0	3	8	9	7	
B	87	B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	2	0	1	0	0	0	
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	2	0	2	8	9	0	
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	3	2	4	15	9	0	
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	3	0	2	0	9	0	
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	4	2	4	8	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	25	27	26	31	36	14	
C	93	C1-02 DO YOU INSPECT CAPACITORS.	13	17	14	23	27	29	CAPACITORS AND CAPACITIVE REACTANC
C	94	C1-03 DO YOU CLEAN CAPACITORS.	6	13	7	15	9	14	
C	95	C1-04 DO YOU ADJUST CAPACITORS.	10	15	11	15	9	21	
C	96	C1-05 DO YOU TEST CAPACITORS.	10	15	12	8	18	29	
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	10	15	12	8	9	21	
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	7	17	9	23	18	29	
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	0	2	1	8	9	0	
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	0	2	1	0	0	0	
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	7	13	9	23	27	14	
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	13	17	14	23	18	14	
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT	3	7	4	8	0	0	
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS	3	7	4	15	18	21	
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE	3	2	3	8	9	7	
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES	6	7	6	8	18	14	
C	107	C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	17	20	19	23	36	29	
C	108	C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	22	20	22	15	36	29	
C	109	C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC	17	22	18	8	36	29	
C	110	C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	8	13	9	8	0	14	
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	1	0	1	0	0	0	
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE	0	0	1	0	0	0	
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO	0	0	1	0	0	0	
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	2	0	1	8	9	0	
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	2	0	1	8	9	0	
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	2	0	1	8	9	0	
C	117	C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY APPEARS TO DO SO	1	0	1	8	18	7	
C	118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS	2	0	2	0	9	7	
C	119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	1	0	1	0	9	7	
C	120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE	1	0	1	0	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	6	13	8	15	18	14	
C 122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	3	13	6	8	18	14	
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	12	17	13	15	27	21	
C 124	C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS	6	15	9	15	27	29	
C 125	C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS	8	17	10	15	27	29	
C 126	C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	9	17	11	15	27	29	
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	8	15	10	15	9	0	
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	9	13	10	23	36	14	
C 129	C2-02 DO YOU INSPECT TRANSFORMERS	5	7	6	15	18	29	
C 130	C2-03 DO YOU CLEAN TRANSFORMERS	4	7	5	15	9	29	
C 131	C2-04 DO YOU ADJUST TRANSFORMERS	4	7	5	23	9	7	
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS	5	2	5	15	18	14	TRANSFORMERS
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	4	5	4	23	27	29	
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	0	0	0	0	0	0	
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	1	0	1	0	0	0	
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	1	0	1	0	0	0	
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	3	0	2	8	0	0	
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	1	0	1	8	0	0	
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	1	0	1	8	0	0	
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	1	0	1	8	0	0	
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS	2	2	2	0	9	0	
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS	3	10	5	8	18	29	
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS	2	0	2	0	18	0	
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	2	0	2	0	0	7	
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	1	7	2	15	18	0	
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	5	5	5	8	27	7	
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	4	5	5	8	18	7	
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	5	5	5	15	18	7	
C 149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	3	5	3	8	0	0	
C 150	C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	4	5	4	8	0	0	
C 151	C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	7	5	8	18	21	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
C 152	C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	3	5	4	0	9	7	
C 153	C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	7	5	15	18	7	
C 154	C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	7	5	15	27	7	
C 155	C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	3	7	4	0	18	0	
C 156	C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	7	5	0	18	0	
C 157	C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	3	10	5	8	18	7	
C 158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	3	5	3	8	0	0	
C 159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	3	0	2	8	9	0	
C 160	C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO	2	0	2	0	9	0	
C 161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	3	5	4	8	9	0	
C 162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	1	0	1	0	0	0	
C 163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	1	0	1	0	0	0	
C 164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	4	7	5	8	18	0	
C 165	C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS	4	2	4	8	18	0	
C 166	C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	3	2	3	8	18	0	
C 167	C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS	3	5	4	8	0	0	
C 168	C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	3	2	3	8	9	0	
C 169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	3	2	2	8	18	0	
C 170	C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	1	2	1	0	0	0	
C 171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS	12	7	12	23	9	14	
C 172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS	10	7	9	15	0	14	
C 173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	3	0	2	0	0	7	
C 174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	4	0	3	0	0	7	MAGNETISM
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	4	0	3	0	0	7	
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM	3	0	2	8	0	0	
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX	9	7	8	15	18	7	
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	2	0	1	8	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
C	179	C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	2	0	1	8	0	0	
C	180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	5	2	4	8	9	7	
C	181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY	3	0	2	8	0	0	
C	182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	10	10	11	15	9	19	
C	183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	6	0	4	15	0	0	
C	184	C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	5	0	4	15	0	0	
D	185	D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	4	2	4	8	9	7	
D	186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	0	
D	187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	0	0	0	0	0	0	RCL CIRCUITS
D	188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	2	0	1	0	0	0	
D	189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	0	
D	190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	2	0	1	0	0	0	
D	191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	3	2	2	8	9	19	
D	192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	2	0	1	0	0	0	
D	193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	3	2	2	0	0	0	
D	194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	3	2	2	0	0	0	
D	195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	2	0	1	0	0	0	
D	196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	3	0	2	0	0	0	
D	197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	2	2	2	0	9	19	
D	198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	3	2	3	8	9	19	
D	199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	3	2	2	8	9	7	
D	200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	3	2	3	0	9	19	
D	201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	2	0	1	0	9	7	
D	202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	3	2	2	0	0	0	
D	203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	1	0	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	3	2	3	0	9	7
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	1	0	1	0	0	0
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	0	0	0	0	0	0
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	0	0	0	0	0	0
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	0	0	0	0	0	0
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	1	0	1	0	0	0
D 210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	1	0	1	0	0	0
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	1	0	1	0	0	0
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	1	0	1	0	0	0
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	1	0	1	0	0	0
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	1	0	1	0	0	0
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	1	0	1	0	0	0
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	1	0	1	0	0	0
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	2	0	1	0	0	0
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	3	2	3	8	9	14
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	3	2	2	8	9	14
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	4	2	4	0	9	14
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	3	2	2	0	9	14
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	0	0	0	0	0	0
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	0	0	0	0	0	0
D 224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT	2	0	1	0	9	0
D 225	D1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT	1	0	1	0	9	0
D 226	D1-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE	1	0	1	0	9	0
D 227	D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q	0	0	0	0	0	0
D 228	D1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE	1	0	1	0	9	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
D	229	D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS	3	7	4	0	0	0	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)
D	230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	3	2	3	0	0	0	
D	231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	2	2	2	0	0	0	
D	232	D2-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	1	0	1	0	0	0	
D	233	D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE (5)	2	0	2	0	0	7	
D	234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	3	0	2	0	0	0	
D	235	D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC	2	0	1	0	0	0	
D	236	D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO	1	0	1	0	0	0	
D	237	D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	1	2	1	0	0	0	
D	238	D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR ZERO) AFTER	1	0	1	0	0	0	
D	239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	5	5	5	8	9	14	FILTERS
D	240	D3-02 DO YOU INSPECT FILTER CIRCUITS	5	5	5	0	9	14	
D	241	D3-03 DO YOU CLEAN FILTER CIRCUITS	5	2	4	0	9	14	
D	242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	4	2	4	8	9	14	
D	243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	4	2	4	0	9	14	
D	244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	4	2	4	8	9	14	
D	245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	4	2	4	8	9	7	
D	246	D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	4	2	4	8	9	21	
D	247	D3-09 DO YOU WORK WITH LOW PASS FILTERS	2	5	3	0	9	0	
D	248	D3-10 DO YOU WORK WITH HIGH PASS FILTERS	2	5	3	0	9	0	
D	249	D3-11 DO YOU WORK WITH BANDPASS FILTERS	2	5	3	0	9	7	
D	250	D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	2	2	2	0	9	7	
D	251	D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	2	2	2	8	0	14	
D	252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	1	0	1	0	9	0	
D	253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	1	0	1	0	9	7	
D	254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	1	0	1	0	9	7	
D	255	D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	3	2	2	8	0	7	
D	256	D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	3	2	4	0	9	7	
D	257	D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	3	2	3	0	9	7	
D	258	D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	3	2	3	0	9	7	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
D 259	D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	3	2	2	8	0	14	
D 260	D3_22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	1	2	1	0	0	0	
E 261	E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	5	5	5	0	9	0	
E 262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC	4	5	4	0	9	0	
E 263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	5	5	5	0	9	0	COUPLING
E 264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	5	5	5	0	9	0	
E 265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	3	5	4	0	9	0	
E 266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	4	5	4	0	9	0	
E 267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	4	5	4	0	9	0	
E 268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	3	5	4	0	9	0	
E 269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	3	5	4	0	9	0	
E 270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	3	5	3	0	9	0	
E 271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	3	5	3	0	9	0	
E 272	E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	2	2	2	0	0	0	
E 273	E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	27	40	30	62	73	57	
E 274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	17	35	22	54	55	57	
E 275	E2-03 DO YOU ADD FLUX TO CONNECTIONS	23	35	26	54	45	50	
E 276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	17	35	22	69	45	57	
E 277	E2-05 DO YOU STRIP INSULATION FROM WIRES	28	40	30	69	55	50	SOLDERING
E 278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	20	35	24	69	36	57	
E 279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	27	40	30	69	55	57	
E 280	E2-08 DO YOU CUT WIRES	27	40	30	69	55	50	
E 281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	24	35	27	54	45	50	
E 282	E2-10 DO YOU TIN SOLDERING IRON TIPS	24	35	28	62	45	50	
E 283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS	28	40	30	69	55	57	
E 284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	23	32	25	54	36	43	
E 285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	21	27	23	62	45	57	
E 286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	24	38	29	69	73	57	
E 287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	21	20	20	38	27	21	
E 288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS	6	20	10	15	36	0	
E 289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	14	27	17	31	27	43	
E 290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	5	17	9	8	9	7	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
E	291	E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	19	32	22	62	45	43	
E	292	E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	13	20	15	38	27	43	
E	293	E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS	10	20	12	38	18	36	
E	294	E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS	9	20	12	38	18	29	
E	295	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	15	17	15	46	27	21	
E	296	E3-02 DO YOU ADJUST RELAYS	10	7	10	38	18	29	
E	297	E3-03 DO YOU CLEAN RELAYS	7	7	7	31	9	21	
E	298	E3-04 DO YOU INSPECT RELAYS	13	20	15	46	9	29	
E	299	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	13	22	15	46	27	29	RELAYS
E	300	E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	4	2	4	8	0	0	
E	301	E3-07 DO YOU TROUBLESHOOT RELAYS	11	13	12	38	18	29	
E	302	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	10	13	11	15	9	7	
E	303	E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	8	5	8	8	9	7	
E	304	E3-10 DO YOU PERFORM TASKS ON RELAY CORES	3	0	3	8	0	0	
E	305	E3-11 DO YOU PERFORM TASKS ON RELAY COILS	3	0	4	8	9	0	
E	306	E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	4	0	4	8	9	0	
E	307	E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	4	0	4	15	0	7	
E	308	E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS	10	17	12	38	9	36	
E	309	E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS	10	17	12	38	9	36	
E	310	E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS	10	17	12	38	9	36	
E	311	E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS	9	17	11	38	9	36	
E	312	E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS	7	17	10	31	9	29	
E	313	E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE	7	13	9	8	9	21	
F	314	F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES	3	0	2	0	9	0	
F	315	F1-02 DO YOU INSPECT MICROPHONES	2	0	1	0	0	0	
F	316	F1-03 DO YOU CLEAN MICROPHONES	0	0	0	0	0	0	
F	317	F1-04 DO YOU OPERATE MICROPHONES	3	0	2	0	9	0	MICROPHONES
F	318	F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	0	0	0	0	0	0	
F	319	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	0	0	0	0	0	0	
F	320	F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	2	0	1	0	0	0	
F	321	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	0	0	0	0	0	0	
F	322	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	0	0	0	0	0	0	
F	323	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	0	0	0	0	0	0	
F	324	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	0	0	0	0	0	0	
F	325	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	1	0	1	0	0	0	
F	326	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
F	327	F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	0	0	1	0	9	0	
F	328	F2-02 DO YOU INSPECT SPEAKERS	0	0	0	0	9	0	
F	329	F2-03 DO YOU CLEAN SPEAKERS	0	0	0	0	0	0	
F	330	F2-04 DO YOU OPERATE SPEAKERS	1	0	1	0	0	0	
F	331	F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	0	0	0	0	9	0	SPEAKERS
F	332	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	0	0	0	0	0	0	
F	333	F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	0	0	0	0	9	0	
F	334	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS	0	0	0	0	0	0	
F	335	F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES	0	0	0	0	0	0	
F	336	F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	0	0	0	0	0	0	
F	337	F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	0	0	0	0	0	0	
F	338	F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	0	0	0	0	0	0	
F	339	F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	0	0	0	0	0	0	
F	340	F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	0	0	0	0	0	0	
F	341	F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	0	0	0	0	0	0	
F	342	F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	33	55	38	54	55	43	
F	343	F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	26	38	29	46	45	36	
F	344	F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	26	42	30	46	45	36	
F	345	F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	19	35	23	46	27	36	OSCILLOSCOPES
F	346	F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	30	42	33	38	45	36	
F	347	F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME	26	40	30	46	55	29	
F	348	F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	6	7	7	8	0	7	
F	349	F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	10	27	15	31	36	29	
F	350	F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	19	32	21	46	36	36	
F	351	F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	22	40	26	54	27	36	
F	352	F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROLS	10	25	13	31	27	21	
F	353	F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	18	32	21	46	27	36	
G	354	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	5	7	6	31	18	29	
G	355	G1-02 DO YOU INSPECT DIODES	5	5	5	31	18	21	
G	356	G1-03 DO YOU REMOVE OR REPLACE DIODES	4	7	5	31	18	29	
G	357	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT	5	5	5	15	18	29	SEMICONDUCTOR DIODES
G	358	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	0	0	0	8	0	0	
G	359	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE,	1	0	1	8	0	0	
G	360	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	0	5	1	15	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
G 361	G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	4	2	4	15	18	21
G 362	G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON	3	5	4	15	18	21
G 363	G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	1	0	1	0	0	0
G 364	G1-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	4	5	5	8	9	7
G 365	G1-12 DO YOU USE OR REFER TO DIODE COLOR CODING	4	5	5	15	9	7
G 366	G1-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	0	0	0	0	0	0
G 367	G1-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	0	0	0	0	0	0
G 368	G1-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	3	5	4	8	18	14
G 369	G1-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	1	0	1	0	0	0
G 370	G1-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	0	0	0	0	0	0
G 371	G1-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	3	5	4	0	18	7
G 372	G1-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	0	0	0	0	0	0
G 373	G1-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	0	0	0	0	0	0
G 374	G1-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	0	0	0	0	0	0
G 375	G1-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	1	0	1	0	0	0
G 376	G1-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	0	0	0	0	0	0
G 377	G1-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	4	5	5	23	18	21
G 378	G1-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	3	2	2	8	0	0
G 379	G1-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE	3	2	4	8	18	21
G 380	G1-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT	0	0	1	0	0	0
G 381	G1-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	2	2	2	0	18	14
G 382	G1-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
G 383	G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	
G 384	G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	
G 385	G1-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	0	0	0	0	0	0	
G 386	G1-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	0	0	0	0	0	0	
G 387	G1-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	0	0	0	0	0	7	
G 388	G1-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS	1	0	1	0	0	0	
G 389	G1-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	1	0	1	0	0	0	
G 390	G1-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	2	0	1	0	0	7	
G 391	G1-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	2	0	1	0	0	7	
G 392	G1-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	1	0	1	0	0	0	
G 393	G1-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	1	0	1	0	0	0	
G 394	G1-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	1	0	1	0	0	0	
G 395	G1-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS	1	0	1	0	0	0	
G 396	G1-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	0	0	0	0	0	0	
G 397	G1-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	0	0	1	15	18	14	
G 398	G1-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	0	0	0	0	0	0	
G 399	G1-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	2	0	2	8	18	21	
G 400	G1-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	1	0	1	8	18	0	
G 401	G1-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	0	0	1	8	18	0	
G 402	G1-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	0	0	1	8	18	0	
G 403	G1-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	1	0	1	8	18	0	
G 404	G2-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	3	5	4	15	9	21	
G 405	G2-02 DO YOU INSPECT TRANSISTORS	3	5	4	15	9	14	
G 406	G2-03 DO YOU REMOVE OR REPLACE TRANSISTORS	2	5	2	15	9	14	
G 407	G2-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	3	5	4	8	9	14	TRANSISTORS
G 408	G2-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	2	2	2	0	9	14	
G 409	G2-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	2	2	2	0	9	14	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
G 410	G2-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	2	2	2	0	9	14	
G 411	G2-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	1	0	1	0	0	0	
G 412	G2-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	1	0	1	0	0	0	
G 413	G2-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	1	0	1	0	0	7	
G 414	G2-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	0	0	1	0	0	14	
G 415	G2-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	2	5	3	15	9	14	
G 416	G2-13 DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	2	2	2	15	9	14	
G 417	G2-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	1	0	1	8	9	14	
G 418	G2-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT I_B IS NORMALLY SIGNIFICANTLY	0	0	1	0	0	0	
G 419	G2-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR	1	0	1	0	9	7	
G 420	G2-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	0	0	0	0	0	7	
G 421	G2-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	1	0	1	0	0	7	
G 422	G2-19 DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	0	0	1	0	0	0	
G 423	G2-20 DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	0	0	1	0	0	0	
G 424	G2-21 DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	0	0	1	0	0	0	
G 425	G2-22 DO YOU CALCULATE BETA TRANSISTOR GAINS	0	0	0	0	0	0	
G 426	G2-23 DO YOU CALCULATE ALPHA TRANSISTOR GAINS	0	0	0	0	0	0	
G 427	G2-24 DO YOU CALCULATE GAMMA TRANSISTOR GAINS	0	0	0	0	0	0	
G 428	G3-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	1	2	2	0	0	0	
G 429	G3-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS	1	2	2	0	0	0	
G 430	G3-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	1	0	1	0	0	0	
G 431	G3-04 DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	0	2	1	0	0	0	TRANSISTOR AMPLIFIERS
G 432	G3-05 DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	1	2	2	0	0	0	
G 433	G3-06 DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	1	2	1	0	0	0	
G 434	G3-07 DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	0	0	0	0	0	0	
G 435	G3-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE	1	0	1	0	0	0	
G 436	G3-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	0	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
G 437	G3-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN BASE	1	0	1	0	0	0
G 438	G3-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	0	1	0	0	0
G 439	G3-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	1	0	1	0	0	0
G 440	G3-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	0	0	1	0	0	0
G 441	G3-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A	0	0	0	0	0	0
G 442	G3-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	0	0	1	0	0	0
G 443	G3-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	0	0	0	0	0	0
G 444	G3-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	0	2	1	0	0	0
G 445	G3-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	0	0	1	0	0	0
G 446	G3-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	0	0	1	0	0	0
G 447	G3-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE	0	0	0	0	0	0
G 448	G3-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE	0	0	0	0	0	0
G 449	G3-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE	0	0	0	0	0	0
G 450	G3-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE	0	0	0	0	0	0
G 451	G3-24 DO YOU COMPUTE THE STATIC OPERATING POINT [Q] OF A TRANSISTOR AT DIFFERENT TEMPERATURES	0	0	0	0	0	0
G 452	G3-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	0	1	0	0	0
G 453	G3-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-	0	0	1	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		Dy-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
G	454	G3-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	0	1	0	0	0
G	455	G3-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	0	1	0	0	0
G	456	G3-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	0	1	0	0	0
G	457	G3-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	0	0	1	0	0	0
G	458	G3-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	0	0	1	0	0	0
G	459	G3-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	0	0	1	0	0	0
G	460	G3-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	0	0	1	0	0	0
G	461	G3-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	0	0	1	0	0	0
G	462	G3-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	0	0	1	0	0	0
G	463	G3-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	0	0	1	0	0	0
G	464	G3-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	0	0	1	0	0	0
G	465	G3-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	0	0	0	0	0	0
G	466	G3-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	0	0	1	0	0	0
G	467	G3-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	0	0	1	0	0	0
G	468	G3-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	0	0	0	0	0	0
G	469	G3-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	0	0	0	0	0	0
G	470	G3-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR	0	0	1	0	0	0
G	471	G3-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	0	0	1	0	0	0
G	472	G3-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	0	0	1	0	0	0
G	473	G3-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	1	2	2	0	0	0
G	474	G3-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	0	0	1	0	0	0
G	475	G3-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	0	0	1	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
G	476	G3-49	DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	0	0	1	0	0	0	
H	477	H1-01	DO YOU USE OR REFER TO VARACTORS	1	5	2	0	0	0	
H	478	H1-02	DO YOU USE OR REFER TO TUNNEL DIODES	1	2	2	0	0	0	
H	479	H1-03	DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	1	5	2	0	9	0	SOLID-STATE SPECIAL PURPOSE DEVICES
H	480	H1-04	DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	1	5	2	0	18	0	
H	481	H1-05	DO YOU USE OR REFER TO ZENER DIODES	7	22	11	15	18	21	
H	482	H1-06	DO YOU USE OR REFER TO INTEGRATED CIRCUITS	10	27	15	15	18	7	
H	483	H2-01	IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	40	45	42	46	45	29	
H	484	H2-02	DO YOU INSPECT POWER SUPPLIES	27	35	29	54	36	29	
H	485	H2-03	DO YOU CLEAN POWER SUPPLIES	23	27	29	46	27	29	
H	486	H2-04	DO YOU ALIGN OR ADJUST POWER SUPPLIES	21	30	23	54	36	29	POWER SUPPLIES
H	487	H2-05	DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	10	20	13	23	27	21	
H	488	H2-06	DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	9	20	12	38	18	21	
H	489	H2-07	DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	17	25	19	46	27	29	
H	490	H2-08	DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	7	17	9	31	18	29	
H	491	H2-09	DO YOU WORK WITH HALF-WAVE RECTIFIERS	6	7	7	23	18	21	
H	492	H2-10	DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	6	7	7	23	9	29	
H	493	H2-11	DO YOU WORK WITH BRIDGE RECTIFIERS	11	7	10	15	18	21	
H	494	H2-12	DO YOU WORK WITH THREE-PHASE RECTIFIERS	8	5	7	0	9	0	
H	495	H2-13	DO YOU USE OR REFER TO INPUT VOLTAGE	23	22	29	38	36	29	
H	496	H2-14	DO YOU USE OR REFER TO INPUT FREQUENCY	20	20	20	38	27	21	
H	497	H2-15	DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	11	17	13	31	27	21	
H	498	H2-16	DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	10	13	11	31	27	21	
H	499	H2-17	DO YOU USE OR REFER TO RIPPLE AMPLITUDE	5	7	6	15	18	21	
H	500	H2-18	DO YOU USE OR REFER TO RIPPLE FREQUENCY	5	7	6	15	18	21	
H	501	H2-19	DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	5	7	6	8	9	0	
H	502	H2-20	DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	9	5	8	31	18	21	
H	503	H2-21	DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	9	13	10	23	27	29	
H	504	H2-22	DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS	3	10	5	0	18	14	
H	505	H2-23	DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS	3	10	5	0	9	14	
H	506	H2-24	DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	3	10	5	0	9	0	
H	507	H2-25	DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	3	10	5	0	9	0	
H	508	H2-26	DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	2	10	4	0	9	0	
H	509	H2-27	DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	2	10	4	8	9	0	
H	510	H2-28	DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER	10	13	10	15	0	21	
H	511	H2-29	DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	3	5	3	0	0	0	
H	512	H3-01	DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	5	5	6	8	18	21	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
H	513	H3-02 DO YOU INSPECT OSCILLATORS	4	5	5	8	18	21	
H	514	H3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	4	2	5	6	9	21	
H	515	H3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	3	2	4	8	18	21	
H	516	H3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	2	0	1	0	9	21	OSCILLATORS
H	517	H3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	3	0	2	0	18	21	
H	518	H3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	1	0	1	0	9	21	
H	519	H3-08 DO YOU USE OR REFER TO FEEDBACK	4	0	4	0	9	14	
H	520	H3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)	2	0	2	0	9	0	
H	521	H3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	2	2	3	0	9	14	
H	522	H3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	2	2	3	0	18	14	
H	523	H3-12 DO YOU USE OR REFER TO DAMPING	3	0	4	0	9	7	
H	524	H3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	1	0	2	0	9	7	
H	525	H3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	1	0	1	0	18	0	
H	526	H3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	1	0	1	0	0	0	
H	527	H3-16 DO YOU USE OR REFER TO UNDER DAMPING	1	0	1	0	0	0	
H	528	H3-17 DO YOU USE OR REFER TO OVER DAMPING	1	0	1	0	0	0	
H	529	H3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD	3	2	2	0	9	0	
H	530	H3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD	3	2	2	0	9	0	
H	531	H3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD	3	2	2	0	9	14	
H	532	H3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD	2	0	2	0	9	7	
H	533	H3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS	0	2	1	0	0	0	
H	534	H3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	0	2	1	0	0	0	
H	535	H3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	0	2	1	0	0	0	
H	536	H3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	0	2	1	0	0	0	
H	537	H3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	0	2	1	0	0	0	
H	538	H3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS	3	0	2	0	18	21	
I	539	I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	2	0	2	0	9	7	
I	540	I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS	2	0	2	0	9	7	
I	541	I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS	2	0	2	0	9	7	
I	542	I1-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS	2	0	2	0	9	7	MULTIVIBRATORS
I	543	I1-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS	2	0	2	0	9	7	
I	544	I1-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS	2	0	2	0	9	7	
I	545	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS	2	0	1	0	9	0	
I	546	I1-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS	2	0	1	0	9	7	
I	547	I1-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS	1	0	1	0	9	7	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
1	548	11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	1	0	1	0	9	7	
1	549	11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	1	0	1	0	9	7	
1	550	11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD	2	0	1	0	0	0	
1	551	11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	0	0	1	0	0	0	
1	552	11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	1	0	1	0	9	0	
1	553	11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	1	0	1	0	9	0	
1	554	11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS	2	0	1	0	0	7	
1	555	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	3	0	2	0	9	0	
1	556	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS	1	0	1	0	9	0	
1	557	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	1	0	1	0	9	0	
1	558	12-04 DO YOU WORK WITH LIMITERS WITH BIAS	1	0	1	0	9	0	LIMITERS AND CLAMPERS
1	559	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS	1	0	1	0	9	0	
1	560	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS	0	0	0	0	0	0	
1	561	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	2	0	1	0	0	0	
1	562	12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	1	0	1	0	9	0	
1	563	12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	1	0	1	0	9	0	
1	564	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT	2	0	1	0	0	7	
1	565	13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	9	10	10	23	9	36	
1	566	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	3	5	9	8	9	36	
1	567	13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	9	5	5	8	9	36	
1	568	13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	9	2	4	15	9	14	
1	569	13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	3	2	3	15	9	14	ELECTRON TUBES
1	570	13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	3	2	9	23	9	29	
1	571	13-07 DO YOU USE OR REFER TO CUTOFF	3	2	3	8	9	0	
1	572	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	2	2	2	8	0	0	
1	573	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	2	2	2	8	0	0	
1	574	13-10 DO YOU USE OR REFER TO TRANSIT TIME	2	2	2	8	0	0	
1	575	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	2	2	2	8	0	0	
1	576	13-12 DO YOU USE OR REFER TO SATURATION	2	2	2	8	0	7	
1	577	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	2	2	2	8	9	0	
1	578	13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	2	2	2	8	0	0	
1	579	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE	9	7	5	8	9	14	
1	580	13-16 DO YOU USE OR REFER TO PLATE CURRENT	3	7	5	8	9	14	
1	581	13-17 DO YOU USE OR REFER TO GRID VOLTAGE	9	7	5	8	9	7	
1	582	13-18 DO YOU USE OR REFER TO GRID CURRENT	3	7	5	8	9	7	
1	583	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	9	7	5	8	9	14	
1	584	13-20 DO YOU USE OR REFER TO CATHODE CURRENT	3	7	5	8	9	7	
1	585	13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS	1	0	1	8	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
I	586	I3-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	1	0	1	8	0	0	
I	587	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	1	0	1	8	9	0	
I	588	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	0	0	1	8	0	0	
I	589	I3-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	0	0	0	8	0	0	
I	590	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	1	0	1	8	0	0	
I	591	I3-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	1	0	1	8	0	0	
I	592	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	1	0	1	8	9	0	
I	593	I3-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	1	0	1	8	9	0	
I	594	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	1	0	1	0	0	0	
I	595	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	1	0	1	0	0	0	
I	596	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	1	0	1	0	0	0	
I	597	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	1	0	1	0	0	0	
I	598	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	3	2	3	8	9	7	
I	599	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	3	2	3	0	0	7	
I	600	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	2	5	2	8	9	21	
I	601	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	3	2	2	8	9	7	
I	602	I3-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	3	0	3	8	9	7	
I	603	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	2	0	1	8	0	7	
I	604	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	1	0	1	0	0	7	
I	605	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	3	5	4	8	9	29	
I	606	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	3	7	5	8	9	36	
I	607	I3-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN THE	1	2	2	0	0	7	
I	608	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	3	0	2	8	9	36	
J	609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YUUR PRESENT JOB	3	2	3	0	9	14	
J	610	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER	3	2	2	0	9	7	ELECTRON TUBE AMPLIFIERS AND CIRCU

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
J 611	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	3	0	2	0	0	14	
J 612	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	3	0	2	0	9	14	
J 613	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	1	0	1	0	9	7	
J 614	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	1	0	1	0	9	7	
J 615	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	2	0	2	0	0	0	
J 616	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE)	5	7	5	0	9	14	
J 617	J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	8	7	7	8	9	7	
J 618	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	1	2	2	0	9	0	SPECIAL PURPOSE ELECTRON TUBES
J 619	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	2	2	2	0	9	0	
J 620	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS	2	2	2	0	9	0	
J 621	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	3	2	2	0	0	7	
J 622	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	5	2	5	0	9	0	
J 623	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	3	0	3	0	9	0	
J 624	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	3	2	4	0	9	0	
J 625	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	2	2	2	0	9	7	
J 626	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	2	2	2	0	9	0	
J 627	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	1	2	2	0	0	0	
J 628	J2-13 DO YOU USE OR REFER TO PERSISTENCE	1	2	2	0	9	0	
J 629	J2-14 DO YOU USE OR REFER TO DECAY TIMES	1	2	2	0	9	0	
J 630	J2-15 DO YOU USE OR REFER TO FLUORESCENCE	1	2	2	0	9	0	
J 631	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	2	2	2	0	9	0	
J 632	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	8	7	7	0	9	7	
J 633	J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	4	5	4	0	9	7	
J 634	J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	3	5	4	0	9	7	HETERODYNING, MODULATION, AND DEMODULATION
J 635	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	2	5	2	0	0	7	
J 636	J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	2	2	2	0	9	0	
J 637	J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	3	2	3	0	9	0	
K 638	K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	1	0	1	0	9	7	
K 639	K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	2	0	1	0	9	0	AM SYSTEMS
K 640	K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	0	9	0	
K 641	K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	0	9	7	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
K 642	K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS	1	0	1	0	9	0	
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	1	0	1	0	0	0	
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	2	0	1	0	9	7	
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	1	0	1	0	0	0	
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	1	0	1	0	9	7	
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	1	0	1	0	9	7	
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	0	0	0	0	9	7	
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	1	0	1	0	9	7	
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	1	0	1	0	9	7	
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	1	0	1	0	9	7	
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	1	0	1	0	9	7	
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	0	0	0	0	0	0	
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	0	0	0	0	9	0	
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	0	0	0	0	9	0	
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	2	0	1	0	9	7	
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	1	0	1	0	9	7	
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	1	0	1	0	0	7	
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	0	0	0	0	0	7	
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	0	0	0	0	0	0	
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	0	0	0	0	0	0	
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	0	0	0	0	0	0	
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	0	0	0	0	0	0	
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	1	0	1	0	9	7	
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	1	0	1	0	9	0	
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	2	2	2	0	0	0	
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	2	2	2	0	0	0	FM SYSTEMS
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	2	2	2	0	0	0	
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	2	0	1	0	0	0	
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	2	2	2	0	0	0	
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	2	0	1	0	0	0	
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	2	2	2	0	0	0	
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	2	0	1	0	0	0	
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	0	0	0	0	0	0	
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		Dy-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
K	676	K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	1	0	1	0	0	0	
K	677	K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	1	0	1	0	0	0	
K	678	K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	1	0	1	0	0	0	
K	679	K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	1	0	1	0	0	0	
K	680	K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	1	0	1	0	0	0	
K	681	K2-16 DO YOU PERFORM TASKS ON LIMITERS	1	0	1	0	0	0	
K	682	K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	1	0	1	0	0	0	
K	683	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	2	2	2	0	0	0	
K	684	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	1	0	1	0	0	0	
K	685	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	1	0	2	0	0	0	
K	686	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	1	0	2	0	0	0	
K	687	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	1	0	1	0	0	0	NUMBERING SYSTEMS
K	688	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	1	0	1	0	0	0	
K	689	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	2	0	2	0	0	0	
K	690	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	1	0	1	0	0	0	
K	691	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	4	0	3	0	0	0	
K	692	K3-08 DO YOU SUBRRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD	2	0	1	0	0	0	
K	693	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	4	0	3	0	0	0	
K	694	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	1	2	1	0	0	0	
L	695	L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	3	7	4	8	0	7	
L	696	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	2	5	3	8	0	0	
L	697	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	1	5	2	8	0	0	LOGIC FUNCTIONS
L	698	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	1	5	2	8	0	0	
L	699	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	1	5	2	8	0	0	
L	700	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	2	7	4	8	0	7	
L	701	K1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	2	7	4	8	0	7	
L	702	K1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	2	7	4	8	0	7	
L	703	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	2	5	3	8	0	7	
L	704	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	3	7	4	8	0	7	
L	705	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	3	7	4	8	0	7	
L	706	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	3	7	4	8	0	7	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
L 707	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	3	5	4	8	0	7	
L 708	L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC	2	2	2	0	0	0	
L 709	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	1	0	1	0	0	0	
L 710	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	1	2	2	0	0	0	BOOLEAN EQUATIONS
L 711	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	1	0	1	0	0	0	
L 712	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	1	2	2	0	0	0	
L 713	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	0	0	0	0	0	0	
L 714	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	0	0	1	0	0	0	
L 715	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	0	0	1	0	0	0	
L 716	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	0	0	1	0	0	0	
L 717	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	0	2	1	0	0	0	
L 718	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	0	0	0	0	0	0	
L 719	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	0	0	0	0	0	0	
L 720	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	0	0	1	0	0	0	
L 721	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	0	0	1	0	0	0	
L 722	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	0	0	1	0	0	0	
L 723	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	0	0	1	0	0	0	
L 724	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	0	0	1	0	0	0	
L 725	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	0	2	1	0	0	0	
L 726	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	0	2	1	0	0	0	
L 727	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	0	2	1	0	0	0	
L 728	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	0	0	1	0	0	0	
L 729	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	0	0	0	0	0	0	
L 730	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	0	0	0	0	0	0	
L 731	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	0	0	0	0	0	0	
L 732	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	0	2	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
L 733	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	16	13	15	15	18	7	
L 734	L3-02 DO YOU USE OR REFER TO UP-COUNTERS	2	0	2	8	0	0	
L 735	L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS	0	0	1	8	0	0	
L 736	L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS	3	5	4	0	0	0	COUNTERS
L 737	L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS	2	0	2	0	0	0	
L 738	L3-06 DO YOU USE OR REFER TO RING COUNTERS	0	0	1	0	0	0	
L 739	L3-07 DO YOU USE OR REFER TO DECADE COUNTERS	8	2	7	0	0	7	
L 740	L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	0	2	1	0	0	0	
L 741	L3-09 DO YOU USE OR REFER TO DOWN CLOCKS	1	0	1	0	0	0	
L 742	L3-10 DO YOU USE OR REFER TO UP CLOCKS	2	0	2	0	0	0	
L 743	L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	0	0	0	0	0	0	
L 744	L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-	0	0	0	0	0	0	
L 745	L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	4	0	3	0	0	0	
L 746	L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	0	0	0	0	0	0	
L 747	L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	0	0	0	0	0	0	
L 748	L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	1	0	1	0	0	0	
L 749	L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	0	2	1	0	0	0	
L 750	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	1	0	1	0	0	0	
L 751	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENT-	0	0	0	0	0	0	
L 752	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE	0	0	0	0	0	0	
L 753	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	1	0	1	0	0	0	
L 754	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	0	0	0	0	0	0	
L 755	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	0	0	0	0	0	0	
L 756	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	0	0	0	0	0	0	
M 757	M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	7	2	5	0	9	0	
M 758	M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	2	0	1	0	0	0	
M 759	M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	4	5	4	0	9	7	TIMING CIRCUITS
M 760	M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	4	0	3	0	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
M 761	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS	6	0	4	0	9	7	
M 762	M1-06 DO YOU USE OR REFER TO RISE TIME	3	2	4	8	9	7	
M 763	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME	2	5	3	8	9	7	
M 764	M1-08 DO YOU USE OR REFER TO SWEEP TIME	11	20	13	15	18	7	
M 765	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	5	10	7	8	9	0	
M 766	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	3	5	4	8	18	0	
M 767	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	2	5	3	8	9	0	
M 768	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	4	5	5	8	9	0	
M 769	M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	30	47	34	69	45	21	
M 770	M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	21	32	23	46	27	21	
M 771	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL	24	32	26	38	36	21	USE OF SIGNAL GENERATORS
M 772	M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	13	15	13	31	27	21	
M 773	M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	5	2	5	15	9	21	
M 774	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS	13	30	18	38	36	14	
M 775	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	2	2	2	8	18	0	
M 776	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH	9	10	9	15	0	7	
M 777	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	12	10	11	15	9	7	
M 778	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS	7	7	7	31	18	7	
M 779	M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	18	20	18	8	18	7	
M 780	M3-02 DO YOU INSPECT MOTORS	10	13	10	8	9	14	
M 781	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS	9	15	10	8	18	7	
M 782	M3-04 DO YOU OPERATE MOTORS	16	20	16	8	9	14	MOTORS AND GENERATORS
M 783	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS	3	10	4	8	18	14	
M 784	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS	3	7	4	8	9	14	
M 785	M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	5	7	5	8	18	14	
M 786	M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	2	7	3	8	9	0	
M 787	M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS	1	2	1	0	9	0	
M 788	M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES	1	2	1	0	9	0	
M 789	M3-11 DO YOU PERFORM ANY TASKS ON ROTORS	1	0	1	0	9	0	
M 790	M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES	1	2	1	0	9	7	
M 791	M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS	1	0	1	0	0	0	
M 792	M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS	1	0	1	0	0	0	
M 793	M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES	1	0	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
M 794	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	0	0	0	0	0	0	
M 795	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	0	0	0	0	9	0	
M 796	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	0	0	0	0	0	0	
M 797	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	0	5	1	0	9	7	
M 798	M3-20 DO YOU WORK WITH INDUCTION MOTORS	3	2	2	0	9	7	
M 799	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	2	2	2	0	0	7	
M 800	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	3	2	3	0	0	14	
M 801	M3-23 DO YOU INSPECT GENERATORS	17	15	16	0	9	7	
M 802	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	7	7	7	0	0	7	
M 803	M3-25 DO YOU OPERATE GENERATORS	17	20	17	0	9	14	
M 804	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	3	5	4	0	0	7	
M 805	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	3	0	2	0	0	0	
M 806	M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS	5	0	4	0	0	7	
M 807	M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	3	2	2	0	0	0	
N 808	N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	54	47	53	31	64	36	
N 809	N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	11	10	12	0	9	14	
N 810	N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	12	10	12	0	9	7	METER MOVEMENTS
N 811	N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	13	7	12	0	9	7	
N 812	N1-05 DO YOU READ METER SCALES	52	50	52	31	55	36	
N 813	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	16	15	16	0	9	14	
N 814	N1-07 DO YOU ZERO OHMMETERS	52	50	52	31	55	36	
N 815	N1-08 DO YOU ZERO AMMETERS	27	22	27	0	18	21	
N 816	N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	21	35	24	8	9	14	
N 817	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	12	17	14	8	27	29	
N 818	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	1	0	1	0	0	0	
N 819	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 820	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	
N 821	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	
N 822	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	
N 823	N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	0	0	
N 824	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
N	825	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	0	0	0	0	0	0	
N	826	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF	0	0	0	0	0	0	
N	827	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE	0	0	0	0	0	0	
N	828	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	0	0	0	0	0	0	
N	829	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	0	0	0	0	0	0	
N	830	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	0	0	0	0	0	0	
N	831	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	0	0	0	0	0	0	
N	832	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	0	0	0	0	0	0	
N	833	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	0	0	0	0	0	0	
N	834	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	2	0	1	0	9	7	
N	835	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	1	0	1	0	9	0	
N	836	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	2	0	1	0	9	7	
N	837	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	1	0	1	0	9	7	WAVESHAPING CIRCUITS
N	838	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	1	0	1	0	9	7	
N	839	N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	1	0	1	0	9	0	
N	840	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	0	0	0	0	9	0	
N	841	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	1	0	1	0	9	0	
N	842	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT	0	0	0	0	9	0	
N	843	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	0	0	0	0	0	0	
N	844	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	0	0	0	0	0	0	
O	845	O1-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	1	0	1	0	0	0	
O	846	O1-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	1	0	1	0	0	0	
O	847	O1-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	
O	848	O1-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	SINGLE SIDEBAND SYSTEMS
O	849	O1-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	
O	850	O1-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	0	0	0	0	0	0	
O	851	O1-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	1	0	1	0	0	0	
O	852	O1-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
0	853	01-09 DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS	0	0	0	0	0	0	
0	854	01-10 DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS	0	0	0	0	0	0	
0	855	01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	0	0	0	0	0	0	
0	856	01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS	0	0	0	0	0	0	
0	857	01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	0	0	0	0	0	0	
0	858	01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	0	0	0	0	0	0	
0	859	01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS	0	0	0	0	0	0	
0	860	01-16 DO YOU PERFORM TASKS ON SSB MIXERS	0	0	0	0	0	0	
0	861	01-17 DO YOU PERFORM TASKS ON SSB DRIVERS	0	0	0	0	0	0	
0	862	01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	0	0	0	0	0	0	
0	863	01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	0	0	0	0	0	0	
0	864	01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	0	0	0	0	0	0	
0	865	01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	0	0	0	0	0	0	
0	866	01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS	0	0	0	0	0	0	
0	867	01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES	0	0	0	0	0	0	
0	868	01-24 DO YOU USE OR REFER TO SELECTIVE FADING	0	0	0	0	0	0	
0	869	01-25 DO YOU USE OR REFER TO PEAK POWER	0	0	0	0	0	0	
0	870	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY	0	0	0	0	0	0	
0	871	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	0	0	0	0	0	0	
0	872	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS	0	0	0	0	0	0	
0	873	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	
0	874	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	
0	875	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	0	0	0	8	9	7	
0	876	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS	0	0	0	0	9	7	
0	877	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	0	0	0	0	9	0	PULSE MODULATION SYSTEMS
0	878	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS	0	0	0	8	9	0	
0	879	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	0	0	0	0	9	7	
0	880	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	0	0	0	0	9	7	
0	881	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	0	0	0	8	9	0	
0	882	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	0	0	0	0	9	7	
0	883	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	0	0	0	0	9	0	
0	884	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	0	0	0	0	0	0	
0	885	02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	0	0	0	0	0	0	
0	886	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	0	0	0	0	0	0	
0	887	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	0	0	0	0	0	0	
0	888	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	0	0	0	0	0	0	

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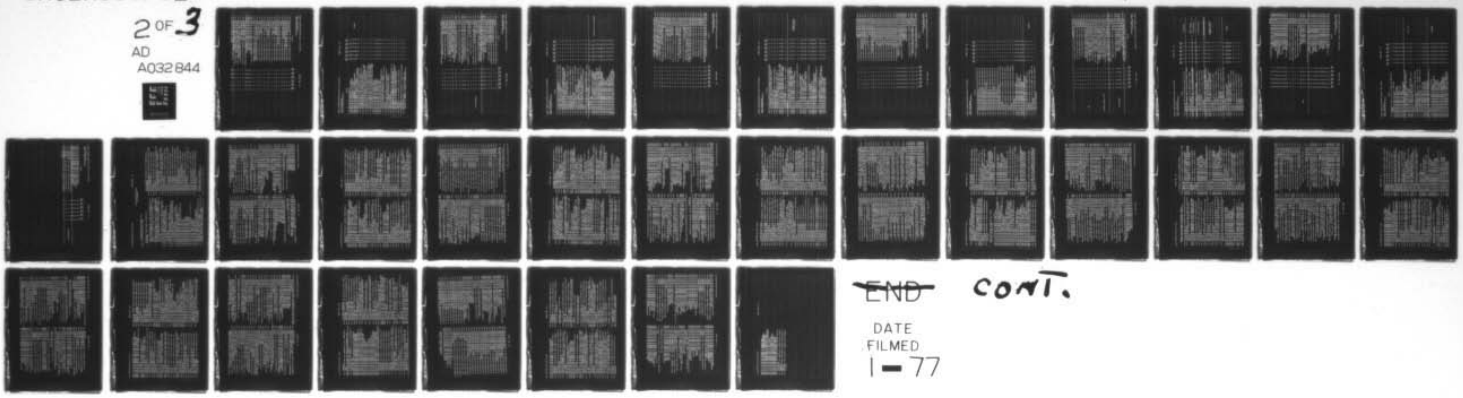

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
0	889	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	0	2	1	8	9	0
0	890	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	0	0	0	0	9	0
0	891	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	0	0	0	0	9	0
0	892	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	0	0	0	0	0	0
0	893	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	0	0	0	0	9	7
0	894	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	0	0	0	0	9	7
0	895	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	0	0	0	0	0	7
0	896	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	0	0	0	0	9	7
0	897	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	0	0	0	0	9	7
0	898	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	0	0	0	0	9	7
0	899	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	0	0	0	0	9	7
0	900	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	0	0	0	0	9	7
0	901	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	0	0	0	0	0	7
0	902	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES	0	0	0	0	0	0
0	903	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	0	0	0	0	9	7
0	904	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	0	0	0	0	0	7
0	905	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	0	0	0	0	9	7
0	906	02-32 DO YOU USE OR REFER TO PULSE SHAPE	0	0	0	0	9	7
0	907	02-33 DO YOU USE OR REFER TO PEAK POWER	0	0	0	8	9	7
0	908	02-34 DO YOU USE OR REFER TO AVERAGE POWER	0	0	0	0	9	7
0	909	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	0	0	0	0	9	0
0	910	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	0	0	0	0	9	0
0	911	02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	0	0	0	0	0	0
0	912	02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	0	0	0	0	9	7
0	913	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	0	0	0	0	9	7
0	914	03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	28	38	30	8	18	14
0	915	03-02 DO YOU INSPECT ANTENNAS	23	38	27	8	18	7

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

ANTENNAS

DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
0 916 03-03 DO YOU CLEAN ANTENNAS	25	90	29	8	18	7
0 917 03-04 DO YOU PHYSICALLY ALIGN ANTENNAS	13	20	15	0	18	0
0 918 03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS	10	5	9	0	9	0
0 919 03-06 DO YOU TROUBLESHOOT TO ANTENNAS	11	17	12	0	18	0
0 920 03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS	6	7	6	0	0	0
0 921 03-08 DO YOU REMOVE OR INSTALL ANTENNAS	29	35	27	8	9	7
0 922 03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS	3	10	5	0	0	0
0 923 03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES	0	0	0	0	0	0
0 924 03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES	0	0	0	0	0	0
0 925 03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS	0	0	0	0	0	0
0 926 03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	0	0	0	0	0	0
0 927 03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS INDUCTIVE LOADS	0	0	0	0	0	0
0 928 03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS CAPACITIVE LOADS	0	0	0	0	0	0
0 929 03-16 DO YOU WORK WITH HERTZ ANTENNAS	2	2	2	8	0	0
0 930 03-17 DO YOU WORK WITH MARCONI ANTENNAS	1	0	1	0	0	0
0 931 03-18 DO YOU WORK WITH BROADSIDE ARRAYS	0	0	0	0	0	0
0 932 03-19 DO YOU WORK WITH END-FIRE ARRAYS	0	0	0	0	0	0
0 933 03-20 DO YOU WORK WITH CARDIOID ARRAYS	0	0	0	0	0	0
0 934 03-21 DO YOU WORK WITH COLLINEAR ARRAYS	1	0	1	0	0	0
0 935 03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS	0	0	0	0	0	0
0 936 03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	0	0	0	0	0	0
0 937 03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS	0	0	0	0	9	0
0 938 03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS	0	0	0	0	0	0
0 939 03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION	0	0	0	0	0	0
0 940 03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD	0	0	0	0	0	0
0 941 03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED	2	2	2	0	0	0
0 942 03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED	0	2	1	0	9	7
0 943 03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON	0	0	0	0	9	0
0 944 03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
O	996	03-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	1	0	1	0	9	0	
O	996	03-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	0	0	0	0	0	0	
O	997	03-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	0	0	0	0	9	0	
O	998	03-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	11	17	13	8	0	0	
O	999	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	8	7	7	8	9	0	
O	850	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	1	5	2	0	0	0	
O	851	03-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	10	7	10	0	0	0	
O	852	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS	1	0	1	0	0	0	
P	953	P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES (TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS	3	5	3	0	0	0	
P	954	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	
P	955	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	0	0	0	0	0	0	TRANSMISSION LINES
P	956	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	
P	957	P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	0	2	1	0	0	0	
P	958	P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	0	2	1	0	0	0	
P	959	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	0	2	1	0	0	0	
P	960	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	0	2	1	0	0	0	
P	961	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	0	2	1	0	0	0	
P	962	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	3	2	2	0	0	0	
P	963	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	1	0	1	0	0	0	
P	964	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	1	2	1	0	0	0	
P	965	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	0	0	0	0	0	0	
P	966	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	0	0	0	0	0	0	
P	967	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	0	0	0	0	0	0	
P	968	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES	0	0	0	0	0	0	
P	969	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	0	0	0	0	0	0	
P	970	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
P 971	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	0	0	0	0	0	0	
P 972	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	0	0	0	0	0	0	
P 973	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	
P 974	P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	0	0	0	0	0	0	
P 975	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	0	0	0	0	0	0	
P 976	P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES	0	0	0	0	0	0	
P 977	P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES	0	0	0	0	0	0	
P 978	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES	0	0	0	0	0	0	
P 979	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES	0	0	0	0	0	0	
P 980	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF	0	0	0	0	0	0	
P 981	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	0	0	0	0	0	0	
P 982	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	0	0	0	0	0	0	
P 983	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	0	0	0	0	0	0	
P 984	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	15	25	17	23	18	21	
P 985	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS	19	22	16	15	18	21	
P 986	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS	12	25	15	15	18	14	
P 987	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS	3	5	4	8	0	7	WAVEGUIDES AND CAVITY RESONATORS
P 988	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS	2	0	1	8	0	7	
P 989	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS	0	0	0	8	0	0	
P 990	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS	8	10	9	15	9	7	
P 991	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS	3	5	3	8	9	0	
P 992	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES	13	20	15	15	18	7	
P 993	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS	4	5	4	15	9	7	
P 994	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS	5	0	4	8	9	0	
P 995	P2-12 DO YOU REMOVE OR INSTALL E BENDS	0	0	0	8	0	0	
P 996	P2-13 DO YOU REMOVE OR INSTALL H BENDS	0	0	0	8	0	0	
P 997	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS	0	0	0	8	0	0	
P 998	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS	0	0	0	8	0	0	
P 999	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS	0	0	0	8	0	0	
P1000	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS	0	0	0	8	0	0	
P1001	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS	0	0	0	8	0	0	
P1002	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
P1003	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES	0	0	0	0	0	0
P1004	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES	0	0	0	0	0	0
P1005	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES	0	0	0	0	0	0
P1006	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES	0	0	0	0	0	0
P1007	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0
P1008	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0
P1009	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0
P1010	P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7 WAVELENGTHS	0	0	0	0	0	0
P1011	P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH .35	0	0	0	0	0	0
P1012	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF	0	0	0	0	0	0
P1013	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION	0	0	0	0	0	0
P1014	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	0	0	0	0	0	0
P1015	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0
P1016	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0
P1017	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0
P1018	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0
P1019	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0
P1020	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0
P1021	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	2	5	2	15	9	21
P1022	P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	2	5	2	0	0	0
P1023	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	0	0
P1024	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
P1025	P2-92 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	0	0	
P1026	P2-93 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	8	0	0	
P1027	P2-94 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	
P1028	P2-95 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	3	5	3	8	0	14	
P1029	P2-96 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING	0	0	0	0	0	0	
P1030	P2-97 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING	0	0	0	0	0	0	
P1031	P2-98 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING	0	0	0	0	0	7	
P1032	P2-99 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER THE METHOD OF TUNING	2	2	2	0	0	7	
P1033	P2-00 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS	0	0	0	8	0	14	
P1034	P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	3	2	3	8	0	7	MICROWAVE AMPLIFIERS AND OSCILLATORS
P1035	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	0	0	0	0	0	0	
P1036	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	0	0	0	0	0	0	
P1037	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE	0	0	0	0	0	0	
P1038	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY	1	2	1	0	0	7	
P1039	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION	1	2	1	0	0	0	
P1040	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING	1	2	1	0	0	7	
P1041	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS	0	0	0	0	0	0	
P1042	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS	0	0	0	0	0	0	
P1043	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS	2	2	2	8	0	14	
P1044	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)	0	0	0	0	0	0	
P1045	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	
P1046	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	
P1047	P3-14 DO YOU WORK WITH MAGNETRONS	0	0	0	0	0	0	
P1048	P3-15 DO YOU INSPECT KLYSTRONS OR TWT	2	2	2	0	0	14	
P1049	P3-16 DO YOU CLEAN KLYSTRONS OR TWT	2	2	2	0	0	7	
P1050	P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY	3	2	3	8	0	14	
P1051	P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY	3	2	2	0	0	14	
P1052	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT	3	2	3	8	0	7	
P1053	P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT	3	2	2	0	0	7	
P1054	P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT	2	2	2	8	0	14	
P1055	P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS	2	2	2	0	0	7	
P1056	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	
P1057	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	
P1058	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
P1059	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0
P1060	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS	0	0	0	0	0	0
P1061	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS	0	0	0	0	0	0
P1062	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER	0	0	0	0	0	0
P1063	P3-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS	0	0	0	0	0	0
P1064	P3-31 DO YOU INSPECT MAGNETRONS	0	0	0	0	0	0
P1065	P3-32 DO YOU CLEAN MAGNETRONS	0	0	0	0	0	0
P1066	P3-33 DO YOU ADJUST MAGNETRONS	0	0	0	0	0	0
P1067	P3-34 DO YOU TUNE MAGNETRONS	0	0	0	0	0	0
P1068	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS	0	0	0	0	0	0
P1069	P3-36 DO YOU TROUBLESHOOT MAGNETRONS	0	0	0	0	0	0
P1070	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON	0	0	0	0	0	0
P1071	P3-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS	0	0	0	0	0	0
P1072	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES	0	0	0	0	0	0
P1073	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES	0	0	0	0	0	0
P1074	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS	0	0	0	0	0	0
P1075	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS	0	0	0	0	0	0
P1076	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES	0	0	0	0	0	0
P1077	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS	0	0	0	0	0	0
P1078	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES	0	0	0	0	0	0
P1079	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS	0	0	0	0	0	0
P1080	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES	0	0	0	0	0	0
P1081	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES	1	0	1	0	0	14
P1082	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS	1	0	1	0	0	7
P1083	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS	1	0	1	0	0	7
P1084	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES	1	0	1	0	0	14
P1085	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS	1	0	1	0	0	0
P1086	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS	1	0	1	0	0	7
P1087	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES	1	0	1	0	0	7

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
P1088	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS	2	2	2	0	0	7	
P1089	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS	1	0	1	0	0	0	
P1090	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	1	0	1	0	0	0	
P1091	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	1	0	1	0	0	0	
P1092	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	1	0	1	0	0	0	
P1093	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES	1	0	1	0	0	0	
P1094	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS	1	0	1	0	0	0	
P1095	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS	0	0	0	0	0	0	
P1096	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS	1	0	1	0	0	0	
P1097	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS	0	0	0	0	0	0	
P1098	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES	0	0	0	0	0	0	
P1099	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES	0	0	0	0	0	0	
P1100	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES	0	0	0	0	0	0	
P1101	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS	0	0	0	0	0	0	
P1102	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES	0	0	0	0	0	0	
P1103	P3-70 DO YOU PERFORM TASKS ON ANODES	0	0	0	0	0	0	
P1104	P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS	0	0	0	0	0	0	
P1105	P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS	0	0	0	0	0	0	
P1106	P3-73 DO YOU PERFORM TASKS ON HEATER LEADS	0	0	0	0	0	0	
P1107	P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES	0	0	0	0	0	0	
P1108	P3-75 DO YOU PERFORM TASKS ON CATHODES	0	0	0	0	0	0	
P1109	P3-76 DO YOU PERFORM TASKS ON MAGNETS	0	0	0	0	0	0	
Q1110	Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS	0	0	1	0	0	0	
Q1111	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	0	0	1	0	0	0	
Q1112	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	0	0	1	0	0	0	
Q1113	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	0	0	1	0	0	0	REGISTERS
Q1114	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	0	0	0	0	0	0	
Q1115	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	1	2	1	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
Q1116	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	2	2	2	8	0	0	
Q1117	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB	9	7	9	8	9	0	
Q1118	Q2-02 DO YOU USE OR REFER TO DELAY LINES	0	0	1	0	0	7	
Q1119	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	0	0	1	0	0	0	
Q1120	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	0	0	1	0	0	0	STORAGE DEVICES
Q1121	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	0	0	1	0	0	0	
Q1122	Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OR MEMORY SYSTEMS	0	0	1	0	0	0	
Q1123	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS	0	0	1	0	0	0	
Q1124	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS	0	0	1	0	0	0	
Q1125	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	0	0	1	0	0	0	
Q1126	Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO-ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D)	1	0	1	0	0	0	
Q1127	Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT	0	0	0	0	0	0	
Q1128	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A)	0	0	0	0	0	0	DIGITAL TO ANALOG CONVERTERS
Q1129	Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	0	0	0	0	0	0	
Q1130	Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	
Q1131	Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	
Q1132	Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	
Q1133	Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	0	0	0	0	0	0	
Q1134	Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER	0	0	0	0	0	0	
Q1135	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	
Q1136	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	
Q1137	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	
Q1138	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	0	0	0	0	0	0	
Q1139	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A/D) CONVERTERS	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK		SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
R1140	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	0	0	0	8	0	14	PHANTASTRONS
R1141	R2-01 IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	1	0	1	0	0	7	
R1142	R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	
R1143	R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	0	0	1	0	0	0	SCHMITT TRIGGERS
R1144	R3-01 IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	5	2	5	15	27	29	
R1145	R3-02 DO YOU FABRICATE COAXIAL CABLES	4	5	5	31	27	29	CABLE FABRICATION
S1146	S1-01 IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	23	10	20	31	36	7	
S1147	S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	3	0	3	0	18	7	INPUT/OUTPUT DEVICES
S1148	S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	0	0	0	0	0	0	
S1149	S2-01 DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	2	7	3	0	0	7	PHOTO SENSITIVE DEVICES
S1150	S3-01 IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	1	0	1	0	9	0	
S1151	S3-02 DO YOU MEASURE EXCITATION FREQUENCIES	0	0	0	0	9	0	
S1152	S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	0	0	0	0	9	0	
S1153	S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCIES	0	0	0	0	9	0	
S1154	S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	0	0	0	0	9	0	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)
S1155	S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	0	9	0	
S1156	S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	0	9	0	
S1157	S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	0	9	0	
S1158	S3-09 DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	0	1	0	9	0	
T1159	T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	40	47	42	31	45	43	
T1160	T1-02 DO YOU INSPECT INFRARED SYSTEMS	35	30	34	31	45	36	
T1161	T1-03 DO YOU CLEAN INFRARED SYSTEMS	27	27	27	23	27	21	INFRARED
T1162	T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS	30	27	29	15	18	21	
T1163	T1-05 DO YOU OPERATE INFRARED SYSTEMS	34	35	34	23	18	43	
T1164	T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS	14	20	15	23	18	36	
T1165	T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS	23	22	22	15	27	21	
T1166	T1-08 DO YOU TROUBLESHOOT DOWN TO INFRARED SYSTEM COMPONENT PARTS	7	15	9	0	9	21	
T1167	T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS	25	17	23	15	18	29	
T1168	T1-10 DO YOU REMOVE OR REPLACE INFRARED SYSTEM COMPONENT PARTS	11	17	12	0	9	14	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037
T1169	T1-11 DO YOU USE OR REFER TO FAR REGION	5	5	5	0	0	0
T1170	T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION	6	5	6	0	0	7
T1171	T1-13 DO YOU USE OR REFER TO NEAR REGION	5	5	5	0	0	0
T1172	T1-14 DO YOU USE OR REFER TO MICRON	6	10	7	8	0	7
T1173	T1-15 DO YOU USE OR REFER TO GRAY BODIES	7	7	7	8	0	0
T1174	T1-16 DO YOU USE OR REFER TO BLACK BODIES	7	10	8	8	18	7
T1175	T1-17 DO YOU USE OR REFER TO ABSORPTION	8	10	9	0	9	0
T1176	T1-18 DO YOU USE OR REFER TO SCATTERING	8	10	9	0	0	0
T1177	T1-19 DO YOU USE OR REFER TO ABSOLUTE ZERO	4	7	5	0	9	0
T1178	T1-20 DO YOU PERFORM TASKS ON BLITZ	0	0	0	0	0	0
T1179	T1-21 DO YOU PERFORM TASKS ON TARGET BUTTONS	0	0	0	0	0	0
T1180	T1-22 DO YOU PERFORM TASKS ON ERECTOR LENSES	0	0	0	0	0	0
T1181	T1-23 DO YOU PERFORM TASKS ON OCULAR LENSES	1	0	1	0	0	0
T1182	T1-24 DO YOU PERFORM TASKS ON CORRECTION LENSES	2	0	1	0	0	0
T1183	T1-25 DO YOU PERFORM TASKS ON FILTERS	2	0	1	0	9	0
T1184	T1-26 DO YOU PERFORM TASKS ON SPHERICAL MIRRORS	1	0	1	0	9	0
T1185	T1-27 DO YOU PERFORM TASKS ON PLANE MIRRORS	0	0	0	0	0	0
T1186	T2-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS	6	2	5	0	0	7
T1187	T2-02 DO YOU INSPECT LASER SYSTEMS	6	2	5	0	0	7
T1188	T2-03 DO YOU CLEAN LASER SYSTEMS	3	0	2	0	0	7
T1189	T2-04 DO YOU OPERATE LASER SYSTEMS	4	2	4	0	0	7
T1190	T2-05 DO YOU OPERATE LASER SYSTEMS	4	2	4	0	0	7
T1191	T2-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASER SYSTEMS	3	0	2	0	0	7
T1192	T2-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASER SYSTEMS	3	0	2	0	0	7
T1193	T2-08 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF LASER SYSTEMS	3	0	2	0	0	7
T1194	T2-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASER SYSTEMS	3	0	2	0	0	7
T1195	T2-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASER SYSTEMS	1	0	1	0	0	0
T1196	T2-11 DO YOU USE OR REFER TO ANGSTROMS (A)	1	0	1	0	0	0
T1197	T2-12 DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS	0	0	0	0	0	0
T1198	T2-13 DO YOU USE OR REFER TO GROUND STATE	0	0	0	0	0	0
T1199	T2-14 DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0	0
T1200	T2-15 DO YOU USE OR REFER TO PACKET OF RADIATION	0	0	0	0	0	0
T1201	T2-16 DO YOU USE OR REFER TO PHOTONS	0	0	0	0	0	0
T1202	T2-17 DO YOU USE OR REFER TO SPONTANEOUS EMISSION	0	0	0	0	0	0
T1203	T2-18 DO YOU USE OR REFER TO STIMULATED EMISSION	0	0	0	0	0	0
T1204	T2-19 DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE	0	0	0	0	0	0
T1205	T2-20 DO YOU USE OR REFER TO INVERSION LEVEL	0	0	0	0	0	0
T1206	T2-21 DO YOU USE OR REFER TO MONOCHROMATIC	1	0	1	0	0	0
T1207	T2-22 DO YOU WORK WITH ACTIVE MATERIALS	1	0	1	0	0	0
T1208	T2-23 DO YOU WORK WITH PUMPING SOURCES	1	0	1	0	0	0
T1209	T2-24 DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS	1	0	1	0	0	0

LASERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
T1210	T2-25 DO YOU WORK WITH HALF SILVERED (92B REFLECTIVE) MIRRORS	1	0	1	0	0	0	
T1211	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES	1	0	1	0	0	0	
T1212	T2-27 DO YOU WORK WITH RUBY	0	0	0	0	0	0	
T1213	T2-28 DO YOU WORK WITH HELIUM-NEON	1	0	1	0	0	0	
T1214	T2-29 DO YOU WORK WITH HELIUM-XENON	0	0	0	0	0	0	
T1215	T2-30 DO YOU WORK WITH XENON	0	0	0	0	0	0	
T1216	T2-31 DO YOU WORK WITH CESIUM-HELIUM	0	0	0	0	0	0	
T1217	T2-32 DO YOU WORK WITH ARGON	1	2	1	0	0	0	
T1218	T2-33 DO YOU WORK WITH NEODYMIUM IN GLASS	0	0	0	0	0	0	
T1219	T2-34 DO YOU WORK WITH GALLIUM ARSENIDE	0	0	0	0	0	0	
T1220	T3-01 IN YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE MODE	1	0	1	0	0	0	
T1221	T3-02 DO YOU INSPECT DVST OR MMST	1	0	1	0	0	0	
T1222	T3-03 DO YOU CLEAN DVST OR MMST	1	0	1	0	0	0	DISPLAY TUBES
T1223	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST	1	0	1	0	0	0	
T1224	T3-05 DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	1	0	1	0	0	0	
T1225	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS	1	0	1	0	0	0	
T1226	T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	1	0	1	0	0	0	
T1227	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF DVST	0	0	0	0	0	0	
T1228	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MMST	0	0	0	0	0	0	
T1229	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS	0	0	0	0	0	0	
T1230	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS	0	0	0	0	0	0	
T1231	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS	0	0	0	0	0	0	
T1232	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS	0	0	0	0	0	0	
T1233	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS	1	0	1	0	0	0	
U1234	U1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS	0	0	0	0	0	0	
U1235	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS	0	0	0	0	0	0	
U1236	U1-03 DO YOU USE OR REFER TO PROGRAMS	0	0	0	0	0	0	
U1237	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS	0	0	0	0	0	0	PROGRAMMING
U1238	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	0	0	0	0	0	0	
U1239	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS	0	0	0	0	0	0	
U1240	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS	0	0	0	0	0	0	
U1241	U1-08 DO YOU USE OR REFER TO TIME-SHARING	0	0	0	0	0	0	
U1242	U1-09 DO YOU USE OR REFER TO DATA WORDS	0	0	0	0	0	0	
U1243	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS	0	0	0	0	0	0	
U1244	U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	0	0	0	0	0	0	
U1245	U1-12 DO YOU USE OR REFER TO STEERING/INFORMATION	0	0	0	0	0	0	
U1246	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS	0	0	0	0	0	0	
U1247	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	0	0	0	0	0	0	
U1248	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 032	SPL 033	SPL 034	SPL 035	SPL 036	SPL 037	
U1249	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES	0	0	0	0	0	0	
U1250	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	0	0	0	0	0	0	
U1251	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	0	0	0	0	0	0	
U1252	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	0	0	0	0	0	0	
U1253	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	0	0	0	0	0	0	
U1254	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	0	0	0	0	0	0	
U1255	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	2	0	1	8	18	21	
U1256	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	0	0	0	0	9	0	DB AND POWER RATIOS
U1257	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	0	0	0	0	9	0	
U1258	U2-04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	10	2	8	8	9	7	

UNITED STATES AIR FORCE
JOB INVENTORY

MISSILE SYSTEMS MAINTENANCE (EPI)
AFSCS 31631L, 31651L, 31671L, 31790

A MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE

A 1 A1-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO AMPLIFY OR ATTENUATE VOLTAGE, RESISTANCE, ETC., BY POWERS OF 10.
A 2 A1-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU TO MULTIPLY OR DIVIDE BY A POWER OF 10 BEFORE YOU CAN APPLY THE INFORMATION FROM THE PUBLICATION IN A USEFUL WAY ON THE JOB.
A 3 A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.
A 4 A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.
A 5 A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.
A 6 A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.
A 7 A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.
A 8 A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.
A 9 A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.
A 10 A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.
A 11 A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.
A 12 A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.
A 13 A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.
A 14 A1-14 DO YOU SOLVE OR USE PROPORTIONS.
A 15 A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).
A 16 A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).
A 17 A2-03 DO YOU USE THE TERM OHM.
A 18 A2-04 DO YOU USE THE TERM ION.
A 19 A2-05 DO YOU USE THE TERM DYNE.
A 20 A2-06 DO YOU USE THE TERM AMPERE.
A 21 A2-07 DO YOU USE THE TERM NEUTRON.
A 22 A2-08 DO YOU USE THE TERM COULOMB.
A 23 A2-09 DO YOU USE THE TERM PROTON.
A 24 A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.
A 25 A3-02 DO YOU INSPECT RESISTORS.
A 26 A3-03 DO YOU CLEAN RESISTORS.
A 27 A3-04 DO YOU ADJUST RESISTORS.
A 28 A3-05 DO YOU CHECK OHMIC VALUE OR RESISTORS.
A 29 A3-06 DO YOU REMOVE OR REPLACE RESISTORS.
A 30 A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.
A 31 A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.
A 32 A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR POTENTIOMETER.
A 33 A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.
A 34 A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.
A 35 A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.
A 36 A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO ACHIEVE A SPECIFIC VOLTAGE.
A 37 A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES
A 38 A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.
A 39 A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.
A 40 A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.
A 41 A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.
A 42 A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.
A 43 A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.
A 44 A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.
A 45 A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.
A 46 A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.
A 47 A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.
A 48 A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.
A 49 A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.
A 50 A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.
A 51 A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.

B MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE

B 52 B1-01 DO YOU MEASURE RESISTANCE.

B 53 B1-02 DO YOU REPAIR OHMMETERS.
B 54 B1-03 DO YOU MEASURE VOLTAGE.
B 55 B1-04 DO YOU REPAIR VOLTMETERS.
B 56 B1-05 DO YOU REPAIR AMMETERS.
B 57 B1-06 DO YOU MEASURE CURRENT.
B 58 B1-07 DO YOU USE MULTIMETERS.
B 59 B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.
B 60 B1-09 DO YOU READ SCHEMATICS.
B 61 B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).
B 62 B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.
B 63 B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).
B 64 B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.
B 65 B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.
B 66 B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.
B 67 B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.
B 68 B3-02 DO YOU INSPECT INDUCTORS.
B 69 B3-03 DO YOU CLEAN INDUCTORS.
B 70 B3-04 DO YOU ADJUST INDUCTORS.
B 71 B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.
B 72 B3-06 DO YOU USE OR REFER TO INDUCTANCE.
B 73 B3-07 DO YOU USE OR REFER TO HENRIES.
B 74 B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.
B 75 B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.
B 76 B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.
B 77 B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS
B 78 B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF TURNS OF THE COIL.
B 79 B3-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE CROSS SECTIONAL AREA OF THE CORE.
B 80 B3-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS LENGTH.
B 81 B3-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE PERMEABILITY OF THE CORE MATERIAL.
B 82 B3-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.
B 83 B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.
B 84 B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.
B 85 B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.
B 86 B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.
B 87 B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.
B 88 B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.
B 89 B3-23 DO YOU WORK WITH POWER INDUCTORS.
B 90 B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.
B 91 B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.

C CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM

C 92 C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.
C 93 C1-02 DO YOU INSPECT CAPACITORS.
C 94 C1-03 DO YOU CLEAN CAPACITORS.
C 95 C1-04 DO YOU ADJUST CAPACITORS.
C 96 C1-05 DO YOU TEST CAPACITORS.
C 97 C1-06 DO YOU DISCHARGE CAPACITORS.
C 98 C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.
C 99 C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.
C100 C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.
C101 C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.
C102 C1-11 DO YOU USE OR REFER TO CAPACITANCE.
C103 C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT
C104 C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS
C105 C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE
C106 C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES
C107 C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS
C108 C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS
C109 C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC
C110 C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS
C111 C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS
C112 C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE DIELECTRIC CONSTANT
C113 C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO THE DIELECTRIC THICKNESS
C114 C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES
C115 C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL
C116 C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS
C117 C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY APPEARS TO DO SO
C118 C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS
C119 C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT

CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO FREQUENCY
C120 C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE
C121 C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS
C122 C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS
C123 C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS
C124 C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS
C125 C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS
C126 C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS
C127 C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS
C128 C2-01 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB
C129 C2-02 DO YOU INSPECT TRANSFORMERS
C130 C2-03 DO YOU CLEAN TRANSFORMERS
C131 C2-04 DO YOU ADJUST TRANSFORMERS
C132 C2-05 DO YOU TROUBLESHOOT TRANSFORMERS
C133 C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS
C134 C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING
C135 C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)
C136 C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M
C137 C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS
C138 C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS
C139 C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS
C140 C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS
C141 C2-14 DO YOU WORK WITH AUTOTRANSFORMERS
C142 C2-15 DO YOU WORK WITH POWER TRANSFORMERS
C143 C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS
C144 C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS
C145 C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS
C146 C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE
C147 C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE
C148 C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES
C149 C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN TURNS RATIO
C150 C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN TURNS RATIO
C151 C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS
C152 C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS
C153 C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS
C154 C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS
C155 C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS
C156 C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS
C157 C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS
C158 C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING SCHEMATIC SYMBOLS
C159 C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH
C160 C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO
C161 C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS
C162 C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS
C163 C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS
C164 C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS
C165 C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS
C166 C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS
C167 C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS
C168 C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS
C169 C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS
C170 C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS
C171 C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS
C172 C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS
C173 C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS
C174 C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS
C175 C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS
C176 C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM
C177 C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX
C178 C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM
C179 C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM
C180 C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION
C181 C3-11 DO YOU USE OR REFER TO FLUX DENSITY
C182 C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT
C183 C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES

C184 C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL

D RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS

D185 D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB
D186 D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS
D187 D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS
D188 D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS
D189 D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS
D190 D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS
D191 D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS
D192 D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS
D193 D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS
D194 D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS
D195 D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS
D196 D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS
D197 D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS
D198 D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS
D199 D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS
D200 D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS
D201 D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS
D202 D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS
D203 D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS
D204 D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS
D205 D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS
D206 D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS
D207 D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS
D208 D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS
D209 D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS
D210 D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS
D211 D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS
D212 D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS
D213 D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS
D214 D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS
D215 D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS
D216 D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD
D217 D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW
D218 D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS
D219 D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION
D220 D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS
D221 D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION
D222 D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS
D223 D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS
D224 D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT FREQUENCY FOR SERIES RCL CIRCUITS
D225 D1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT FREQUENCY FOR PARALLEL RCL CIRCUITS
D226 D1-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE
D227 D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q
D228 D1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE ANGLES FOR RCL CIRCUITS
D229 D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS
D230 D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS
D231 D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE
D232 D3-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS
D233 D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE (5) TIME CONSTANTS (TC)
D234 D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS
D235 D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE

CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC TIME FOR RC OR LR CIRCUITS
D236 D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO REACH SPECIFIC VALUES FOR RC OR LR CIRCUITS
D237 D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND COMPONENT VOLTAGES TO REACH SPECIFIC VALUES IN SPECIFIC TIMES
D238 D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR ZERO) AFTER FIVE (5) TIME CONSTANTS
D239 D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB
D240 D3-02 DO YOU INSPECT FILTER CIRCUITS
D241 D3-03 DO YOU CLEAN FILTER CIRCUITS
D242 D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS
D243 D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL
D244 D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS
D245 D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT
D246 D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS
D247 D3-09 DO YOU WORK WITH LOW PASS FILTERS
D248 D3-10 DO YOU WORK WITH HIGH PASS FILTERS
D249 D3-11 DO YOU WORK WITH BANDPASS FILTERS
D250 D3-12 DO YOU WORK WITH BAND-REJECT FILTERS
D251 D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH
D252 D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION
D253 D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION
D254 D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION
D255 D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION
D256 D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS
D257 D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS
D258 D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS
D259 D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT
D260 D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC FILTERS

E COUPLING, SOLDERING, AND RELAYS

E261 E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB
E262 E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC COUPLING
E263 E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH IMPEDANCE COUPLING
E264 E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH TRANSFORMER COUPLING
E265 E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING
E266 E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING
E267 E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING
E268 E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS
E269 E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS
E270 E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS
E271 E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS
E272 E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS
E273 E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS
E274 E2-02 DO YOU SELECT TYPE OF SOLDER TO USE
E275 E2-03 DO YOU ADD FLUX TO CONNECTIONS
E276 E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS
E277 E2-05 DO YOU STRIP INSULATION FROM WIRES
E278 E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS
E279 E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS
E280 E2-08 DO YOU CUT WIRES
E281 E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS
E282 E2-10 DO YOU TIN SOLDERING IRON TIPS
E283 E2-11 DO YOU CLEAN SOLDERING IRON TIPS
E284 E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS
E285 E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS
E286 E2-14 DO YOU INSPECT SOLDERED CONNECTIONS
E287 E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING
E288 E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS
E289 E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS
E290 E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL
E291 E2-19 DO YOU MAKE HARDWIRE CONNECTIONS
E292 E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS
E293 E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS
E294 E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS
E295 E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB
E296 E3-02 DO YOU ADJUST RELAYS
E297 E3-03 DO YOU CLEAN RELAYS
E298 E3-04 DO YOU INSPECT RELAYS
E299 E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS
E300 E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS
E301 E3-07 DO YOU TROUBLESHOOT RELAYS
E302 E3-08 DO YOU STRAIGHTEN RELAY CONTACTS
E303 E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS
E304 E3-10 DO YOU PERFORM TASKS ON RELAY CORES
E305 E3-11 DO YOU PERFORM TASKS ON RELAY COILS

E306 E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES
E307 E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS
E308 E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS
E309 E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS
E310 E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS
E311 E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS
E312 E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS
E313 E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE

F MICROPHONES, SPEAKERS, AND OSCILLOSCOPES

F314 F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES
F315 F1-02 DO YOU INSPECT MICROPHONES
F316 F1-03 DO YOU CLEAN MICROPHONES
F317 F1-04 DO YOU OPERATE MICROPHONES
F318 F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OR MICROPHONES
F319 F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS
F320 F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES
F321 F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS
F322 F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES
F323 F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES
F324 F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES
F325 F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES
F326 F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES
F327 F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS
F328 F2-02 DO YOU INSPECT SPEAKERS
F329 F2-03 DO YOU CLEAN SPEAKERS
F330 F2-04 DO YOU OPERATE SPEAKERS
F331 F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OF SPEAKERS
F332 F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS
F333 F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS
F334 F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS
F335 F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES
F336 F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS
F337 F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS
F338 F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS
F339 F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS
F340 F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS
F341 F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES
F342 F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB
F343 F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS
F344 F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS
F345 F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS
F346 F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY
F347 F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME
F348 F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS
F349 F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES
F350 F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS
F351 F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE
F352 F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROLS
F353 F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE

6 SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS

6354 61-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB
6355 61-02 DO YOU INSPECT DIODES
6356 61-03 DO YOU REMOVE OR REPLACE DIODES
6357 61-04 DO YOU CHECK DIODES USING AN INSTRUMENT
6358 61-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES
6359 61-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE, TO COMPUTE FORWARD OR REVERSE LIAS RESISTANCE
6360 61-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES
6361 61-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES
6362 61-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON THEIR PHYSICAL APPEARANCE
6363 61-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW
6364 61-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE
6365 61-12 DO YOU USE OR REFER TO DIODE COLOR CODING
6366 61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS
6367 61-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS
6368 61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538
6369 61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT
6370 61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN

ELECTRON MOVING IN ORBIT
6371 61-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE
6372 61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT
6373 61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON
6374 61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON
6375 61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)
6376 61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)
6377 61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END
6378 61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON
6379 61-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE INCREASES RESISTANCE DECREASES)
6380 61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT CHARACTERISTIC CURVES (PERHAPS YOU DO THIS TO IDENTIFY POINTS OF STRUCTURAL BREAKDOWN OR OPERATING REGIONS)
6381 61-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR INTERPRET CIRCUIT DIAGRAMS
6382 61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS
6383 61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS
6384 61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS
6385 61-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS
6386 61-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS
6387 61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS
6388 61-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS
6389 61-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS
6390 61-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL
6391 61-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL
6392 61-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS
6393 61-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS
6394 61-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS
6395 61-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS
6396 61-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL
6397 61-44 DO YOU USE OR REFER TO THE 1011 BACK TO FRONT RESISTANCE RATIO FOR DIODES
6398 61-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS
6399 61-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION
6400 61-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS
6401 61-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS
6402 61-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS
6403 61-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS
6404 62-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.
6405 62-02 DO YOU INSPECT TRANSISTORS
6406 62-03 DO YOU REMOVE OR REPLACE TRANSISTORS
6407 62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT
6408 62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS
6409 62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS
6410 62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS
6411 62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION
6412 62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION
6413 62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)
6414 62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR
6415 62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS
6416 62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC
6417 62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION
6418 62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY SMALLER THAN THE EMITTER CURRENT IE (USUALLY IB BEING 2 TO 8 PERCENT OF IE)
6419 62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR TRANSISTORS
6420 62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES
6421 62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES
6422 62-19 DO YOU USE OR REFER TO BETA TRANSISTOR GAINS

6423 62-20 DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS
6424 62-21 DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS
6425 62-22 DO YOU CALCULATE BETA TRANSISTOR GAINS
6426 62-23 DO YOU CALCULATE ALPHA TRANSISTOR GAINS
6427 62-24 DO YOU CALCULATE GAMMA TRANSISTOR GAINS
6428 63-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB
6429 63-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS
6430 63-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS
6431 63-04 DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL
6432 63-05 DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS
6433 63-06 DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER
6434 63-07 DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS
6435 63-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE CURRENT
6436 63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT
6437 63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN BASE CURRENT
6438 63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT
6439 63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL
6440 63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN BASE CURRENT WHICH RESULTS FROM A SPECIFIC INPUT SIGNAL
6441 63-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A LOAD-LINE ON A TRANSISTOR CHARACTERISTIC CURVE)
6442 63-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR
6443 63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR
6444 63-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION
6445 63-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION
6446 63-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION
6447 63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE IN BASE-EMITTER VOLTAGE INTO THE CHANGE THE BASE COLLECTOR VOLTAGE TO DETERMINE THE VOLTAGE GAIN
6448 63-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE IN BASE CURRENT INTO THE CHANGE IN COLLECTOR CURRENT TO DETERMINE THE CURRENT GAIN
6449 63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE CURRENT GAIN TIMES THE VOLTAGE GAIN TO DETERMINE THE POWER GAIN
6450 63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE INCREASES (THIS AFFECTS THE STATIC OPERATING POINT (Q) OF THE TRANSISTOR)
6451 63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES
6452 63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH EMITTER (SWAMPING) RESISTOR STABILIZATION
6453 63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-BIAS STABILIZATION
6454 63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH THERMISTOR STABILIZATION
6455 63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH FORWARD BIAS DIODE STABILIZATION
6456 63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH REVERSE BIAS DIODE STABILIZATION
6457 63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH DOUBLE DIODE STABILIZATION
6458 63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION
6459 63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION
6460 63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION
6461 63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION
6462 63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION
6463 63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION
6464 63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS
6465 63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION
6466 63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS
6467 63-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS
6468 63-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION
6469 63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE

CAUSES OF FREQUENCY DISTORTION
6470 G3-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR TRANSISTOR AMPLIFIERS IN THE COMMON COLLECTOR CONFIGURATION
6471 G3-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS
6472 G3-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS
6473 G3-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS
6474 G3-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS
6475 G3-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS
6476 G3-49 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS

H SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS

H477 H1-01 DO YOU USE OR REFER TO VARACTORS
H478 H1-02 DO YOU USE OR REFER TO TUNNEL DIODES
H479 H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)
H480 H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS
H481 H1-05 DO YOU USE OR REFER TO ZENER DIODES
H482 H1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS
H483 H2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES
H484 H2-02 DO YOU INSPECT POWER SUPPLIES
H485 H2-03 DO YOU CLEAN POWER SUPPLIES
H486 H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES
H487 H2-05 DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL
H488 H2-06 DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS
H489 H2-07 DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES
H490 H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS
H491 H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS
H492 H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS
H493 H2-11 DO YOU WORK WITH BRIDGE RECTIFIERS
H494 H2-12 DO YOU WORK WITH THREE-PHASE RECTIFIERS
H495 H2-13 DO YOU USE OR REFER TO INPUT VOLTAGE
H496 H2-14 DO YOU USE OR REFER TO INPUT FREQUENCY
H497 H2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE
H498 H2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE
H499 H2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE
H500 H2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY
H501 H2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE
H502 H2-20 DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS
H503 H2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE
H504 H2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS
H505 H2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS
H506 H2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS
H507 H2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS
H508 H2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS
H509 H2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS
H510 H2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER
H511 H2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER
H512 H3-01 DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB
H513 H3-02 DO YOU INSPECT OSCILLATORS
H514 H3-03 DO YOU ALIGN OR ADJUST OSCILLATORS
H515 H3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS
H516 H3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS
H517 H3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL
H518 H3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS
H519 H3-08 DO YOU USE OR REFER TO FEEDBACK
H520 H3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)
H521 H3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY
H522 H3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY
H523 H3-12 DO YOU USE OR REFER TO DAMPING
H524 H3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK
H525 H3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT
H526 H3-15 DO YOU USE OR REFER TO CRITICAL DAMPING
H527 H3-16 DO YOU USE OR REFER TO UNDER DAMPING
H528 H3-17 DO YOU USE OR REFER TO OVER DAMPING
H529 H3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD
H530 H3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD
H531 H3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD
H532 H3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD
H533 H3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS
H534 H3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS
H535 H3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS
H536 H3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS
H537 H3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS
H538 H3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS

I MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES

I539 I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB
I540 I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS
I541 I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS

1542 11-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS
1543 11-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS
1544 11-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS
1545 11-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS
1546 11-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS
1547 11-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS
1548 11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS
1549 11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS
1550 11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD
1551 11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS
1552 11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS
1553 11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS
1554 11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS
1555 12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB
1556 12-02 DO YOU WORK WITH SERIES DIODE LIMITERS
1557 12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS
1558 12-04 DO YOU WORK WITH LIMITERS WITH BIAS
1559 12-05 DO YOU WORK WITH ZENER DIODE LIMITERS
1560 12-06 DO YOU WORK WITH TRANSISTOR LIMITERS
1561 12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS
1562 12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS
1563 12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS
1564 12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT
1565 13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES
1566 13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD
1567 13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES
1568 13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES
1569 13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES
1570 13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES
1571 13-07 DO YOU USE OR REFER TO CUTOFF
1572 13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING
1573 13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING
1574 13-10 DO YOU USE OR REFER TO TRANSIT TIME
1575 13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING
1576 13-12 DO YOU USE OR REFER TO SATURATION
1577 13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE
1578 13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES
1579 13-15 DO YOU USE OR REFER TO PLATE VOLTAGE
1580 13-16 DO YOU USE OR REFER TO PLATE CURRENT
1581 13-17 DO YOU USE OR REFER TO GRID VOLTAGE
1582 13-18 DO YOU USE OR REFER TO GRID CURRENT
1583 13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE
1584 13-20 DO YOU USE OR REFER TO CATHODE CURRENT
1585 13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN GRID VOLTAGE)
1586 13-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS
1587 13-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS
1588 13-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)
1589 13-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES
1590 13-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE
1591 13-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE
1592 13-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE
1593 13-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES
1594 13-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS
1595 13-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS
1596 13-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF
1597 13-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION
1598 13-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN
1599 13-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY
1600 13-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN
1601 13-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN
1602 13-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN
1603 13-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN
1604 13-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE
1605 13-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION
1606 13-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS
1607 13-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN THE ELECTRON TUBES YOU WORK ON
1608 13-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS

J ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,

J609 J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB
J610 J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS
J611 J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS
J612 J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS
J613 J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS
J614 J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS
J615 J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER
J616 J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE)
J617 J2-02 DO YOU WORK WITH CATHODE-RAY TUBES
J618 J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES
J619 J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED
J620 J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS
J621 J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED
J622 J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)
J623 J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)
J624 J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)
J625 J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS
J626 J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS
J627 J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS
J628 J2-13 DO YOU USE OR REFER TO PERSISTENCE
J629 J2-14 DO YOU USE OR REFER TO DECAY TIMES
J630 J2-15 DO YOU USE OR REFER TO FLUORESCENCE
J631 J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE
J632 J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB
J633 J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS
J634 J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS
J635 J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS
J636 J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS
J637 J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS

K AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS

K638 K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB
K639 K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS
K640 K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS
K641 K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS
K642 K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS
K643 K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS
K644 K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS
K645 K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS
K646 K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS
K647 K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS
K648 K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS
K649 K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS
K650 K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS
K651 K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS
K652 K1-15 DO YOU PERFORM TASKS ON DETECTORS
K653 K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE
K654 K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS
K655 K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS
K656 K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS
K657 K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS
K658 K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION
K659 K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION
K660 K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION
K661 K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE
K662 K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS
K663 K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS
K664 K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS
K665 K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS
K666 K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB
K667 K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS
K668 K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS
K669 K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS
K670 K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS
K671 K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS
K672 K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS
K673 K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS

K674 K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS
K675 K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS
K676 K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)
K677 K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS
K678 K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS
K679 K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS
K680 K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS
K681 K2-16 DO YOU PERFORM TASKS ON LIMITERS
K682 K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS
K683 K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS
K684 K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS
K685 K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS
K686 K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS
K687 K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS
K688 K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS
K689 K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS
K690 K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS
K691 K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM
K692 K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD
K693 K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD
K694 K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM

L LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS

L695 L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS
L696 L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES
L697 L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES
L698 L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS
L699 L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES
L700 L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES
L701 K1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES
L702 K1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS
L703 L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS
L704 L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES
L705 L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES
L706 L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES
L707 L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES
L708 L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC CIRCUITS
L709 L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS
L710 L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS
L711 L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS
L712 L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES
L713 L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS
L714 L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA
L715 L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES
L716 L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS
L717 L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE
L718 L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS
L719 L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS
L720 L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS
L721 L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS
L722 L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS
L723 L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS
L724 L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS
L725 L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS
L726 L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES
L727 L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS
L728 L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS
L729 L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS
L730 L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS
L731 L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS
L732 L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS
L733 L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB
L734 L3-02 DO YOU USE OR REFER TO UP-COUNTERS
L735 L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS

L736 L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS
L737 L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS
L738 L3-06 DO YOU USE OR REFER TO RING COUNTERS
L739 L3-07 DO YOU USE OR REFER TO DECADE COUNTERS
L740 L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS
L741 L3-09 DO YOU USE OR REFER TO DOWN CLOCKS
L742 L3-10 DO YOU USE OR REFER TO UP CLOCKS
L743 L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS
L744 L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS
L745 L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS
L746 L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS
L747 L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER
L748 L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS
L749 L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS
L750 L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS
L751 L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS
L752 L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTERS
L753 L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS
L754 L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS
L755 L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES
L756 L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT

M TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS

M757 M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS
M758 M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS
M759 M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK
M760 M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK
M761 M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS
M762 M1-06 DO YOU USE OR REFER TO RISE TIME
M763 M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME
M764 M1-08 DO YOU USE OR REFER TO SWEEP TIME
M765 M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS
M766 M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS
M767 M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS
M768 M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS
M769 M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB
M770 M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS
M771 M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL GENERATORS
M772 M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS
M773 M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS
M774 M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS
M775 M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE
M776 M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH
M777 M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH
M778 M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS
M779 M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR GENERATORS
M780 M3-02 DO YOU INSPECT MOTORS
M781 M3-03 DO YOU CLEAN OR LUBRICATE MOTORS
M782 M3-04 DO YOU OPERATE MOTORS
M783 M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS
M784 M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS
M785 M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS
M786 M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS
M787 M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS
M788 M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES
M789 M3-11 DO YOU PERFORM ANY TASKS ON ROTORS
M790 M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES
M791 M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS
M792 M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS
M793 M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES
M794 M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR
M795 M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR
M796 M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS
M797 M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS
M798 M3-20 DO YOU WORK WITH INDUCTION MOTORS
M799 M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS

N800 M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS
N801 M3-23 DO YOU INSPECT GENERATORS
N802 M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS
N803 M3-25 DO YOU OPERATE GENERATORS
N804 M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS
N805 M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS
N806 M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS
N807 M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS

N METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS

N808 N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB
N809 N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS
N810 N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS
N811 N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS
N812 N1-05 DO YOU READ METER SCALES
N813 N1-06 DO YOU EXTEND THE RANGE OF AMMETERS
N814 N1-07 DO YOU ZERO OHMMETERS
N815 N1-08 DO YOU ZERO AMMETERS
N816 N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS
N817 N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)
N818 N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB
N819 N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS
N820 N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS
N821 N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS
N822 N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS
N823 N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS
N824 N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS
N825 N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS
N826 N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS
N827 N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS
N828 N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS
N829 N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS
N830 N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS
N831 N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS
N832 N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS
N833 N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS
N834 N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB
N835 N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS
N836 N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)
N837 N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)
N838 N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)
N839 N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS
N840 N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS
N841 N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT
N842 N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT AND OUTPUT CONFIGURATION
N843 N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS
N844 N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS

O SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS

0845 01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB
0846 01-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS
0847 01-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS
0848 01-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS
0849 01-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS
0850 01-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS
0851 01-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS
0852 01-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS
0853 01-09 DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS
0854 01-10 DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS
0855 01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS
0856 01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS
0857 01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS
0858 01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS
0859 01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS
0860 01-16 DO YOU PERFORM TASKS ON SSB MIXERS
0861 01-17 DO YOU PERFORM TASKS ON SSB DRIVERS
0862 01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS

0863 01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS
0864 01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS
0865 01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS
0866 01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS
0867 01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES
0868 01-24 DO YOU USE OR REFER TO SELECTIVE FADING
0869 01-25 DO YOU USE OR REFER TO PEAK POWER
0870 01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY
0871 01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS
0872 01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS
0873 01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS
0874 01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS
0875 02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB
0876 02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS
0877 02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS
0878 02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS
0879 02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS
0880 02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS
0881 02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS
0882 02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS
0883 02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS
0884 02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS
0885 02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS
0886 02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS
0887 02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS
0888 02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM
0889 02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES
0890 02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES
0891 02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS
0892 02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS
0893 02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS
0894 02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS
0895 02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES
0896 02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS
0897 02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS
0898 02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS
0899 02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS
0900 02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS
0901 02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS
0902 02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES
0903 02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)
0904 02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)
0905 02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)
0906 02-32 DO YOU USE OR REFER TO PULSE SHAPE
0907 02-33 DO YOU USE OR REFER TO PEAK POWER
0908 02-34 DO YOU USE OR REFER TO AVERAGE POWER
0909 02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)
0910 02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)
0911 02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS
0912 02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS
0913 02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS
0914 03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB
0915 03-02 DO YOU INSPECT ANTENNAS
0916 03-03 DO YOU CLEAN ANTENNAS
0917 03-04 DO YOU PHYSICALLY ALIGN ANTENNAS
0918 03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS
0919 03-06 DO YOU TROUBLESHOOT TO ANTENNAS
0920 03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS
0921 03-08 DO YOU REMOVE OR INSTALL ANTENNAS
0922 03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS
0923 03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES
0924 03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES
0925 03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS
0926 03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS INDUCTIVE LOADS TO THE GENERATOR
0927 03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS INDUCTIVE LOADS TO THE GENERATOR

0928 03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS CAPACITIVE LOADS TO THE GENERATOR
0929 03-16 DO YOU WORK WITH HERTZ ANTENNAS
0930 03-17 DO YOU WORK WITH MARCONI ANTENNAS
0931 03-18 DO YOU WORK WITH BROADSIDE ARRAYS
0932 03-19 DO YOU WORK WITH END-FIRE ARRAYS
0933 03-20 DO YOU WORK WITH CARDIOID ARRAYS
0934 03-21 DO YOU WORK WITH COLLINEAR ARRAYS
0935 03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS
0936 03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS
0937 03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS
0938 03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS
0939 03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION
0940 03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD
0941 03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED
0942 03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED
0943 03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON
0944 03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR SPECIFIC WAVELENGTHS
0945 03-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS
0946 03-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS
0947 03-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS
0948 03-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS
0949 03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS
0850 03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS
0851 03-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY
0852 03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS

P TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS

P953 P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES (TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS WELL AS HIGH VOLTAGE POWER LINES, ETC. DO NOT CONSIDER WAVEGUIDES AS TRANSMISSION LINES
P954 P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES
P955 P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES
P956 P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES
P957 P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES
P958 P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES
P959 P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES
P960 P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES
P961 P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES
P962 P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES
P963 P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES
P964 P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES
P965 P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION (OPEN, SHORTED, CAPACITIVE, INDUCTIVE)
P966 P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS
P967 P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS
P968 P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES
P969 P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES
P970 P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH MATCHING TRANSFORMERS TO MATCH TRANSMISSION LINES TO LOADS
P971 P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS
P972 P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING
P973 P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA
P974 P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES
P975 P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES
P976 P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES
P977 P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES
P978 P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES
P979 P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES
P980 P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF TRANSMISSION LINES REMAIN CONSTANT, THE ELECTRICAL LENGTH

INCREASES
P981 P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES
P982 P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES
P983 P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING
P984 P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB
P985 P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS
P986 P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS
P987 P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS
P988 P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS
P989 P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS
P990 P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS
P991 P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS
P992 P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES
P993 P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS
P994 P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS
P995 P2-12 DO YOU REMOVE OR INSTALL E BENDS
P996 P2-13 DO YOU REMOVE OR INSTALL H BENDS
P997 P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS
P998 P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS
P999 P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS
P000 P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS
P001 P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS
P002 P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES
P003 P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES
P004 P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES
P005 P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES
P006 P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES
P007 P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS
P008 P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS
P009 P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS
P010 P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7 WAVELENGTHS OF THE OPERATING FREQUENCY
P011 P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH .35 USED AS AN AVERAGE
P012 P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF
P013 P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION
P014 P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR DIRECTION OF "H" FIELD IN WAVEGUIDES
P015 P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES
P016 P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES
P017 P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES
P018 P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P019 P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P020 P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P021 P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P022 P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P023 P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA
P024 P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA
P025 P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA
P026 P2-43 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P027 P2-44 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P028 P2-45 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH
P029 P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING
P030 P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING
P031 P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING
P032 P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER THE METHOD OF TUNING
P033 P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS
P034 P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR MAGNETRONS
P035 P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE
P036 P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME
P037 P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE
P038 P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY
P039 P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION
P040 P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING
P041 P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS
P042 P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS
P043 P3-10 DO YOU WORK WITH REFLEX KLYSTRONS
P044 P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)

P045 P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS
P046 P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS
P047 P3-14 DO YOU WORK WITH MAGNETRONS
P048 P3-15 DO YOU INSPECT KLYSTRONS OR TWT
P049 P3-16 DO YOU CLEAN KLYSTRONS OR TWT
P050 P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY
P051 P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY
P052 P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT
P053 P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT
P054 P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT
P055 P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS
P056 P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS
P057 P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS
P058 P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS
P059 P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS
P060 P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS
P061 P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS
P062 P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER
P063 P3-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS
P064 P3-31 DO YOU INSPECT MAGNETRONS
P065 P3-32 DO YOU CLEAN MAGNETRONS
P066 P3-33 DO YOU ADJUST MAGNETRONS
P067 P3-34 DO YOU TUNE MAGNETRONS
P068 P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS
P069 P3-36 DO YOU TROUBLESHOOT MAGNETRONS
P070 P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON
P071 P3-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS
P072 P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES
P073 P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES
P074 P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS
P075 P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS
P076 P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES
P077 P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS
P078 P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES
P079 P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS
P080 P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES
P081 P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES
P082 P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS
P083 P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS
P084 P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES
P085 P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS
P086 P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS
P087 P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES
P088 P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS
P089 P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS
P090 P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES
P091 P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS
P092 P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES
P093 P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES
P094 P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS
P095 P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS
P096 P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS
P097 P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS
P098 P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES
P099 P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES
P100 P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES
P101 P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS
P102 P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES
P103 P3-70 DO YOU PERFORM TASKS ON ANODES
P104 P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS
P105 P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS
P106 P3-73 DO YOU PERFORM TASKS ON HEATER LEADS
P107 P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES
P108 P3-75 DO YOU PERFORM TASKS ON CATHODES
P109 P3-76 DO YOU PERFORM TASKS ON MAGNETS

Q REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS

Q110 Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS
Q111 Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS
Q112 Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS
Q113 Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS
Q114 Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS
Q115 Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS
Q116 Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES HAVE PASSED
Q117 Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB
Q118 Q2-02 DO YOU USE OR REFER TO DELAY LINES
Q119 Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES
Q120 Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS
Q121 Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES
Q122 Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OR MEMORY SYSTEMS
Q123 Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS
Q124 Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS
Q125 Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES
Q126 Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO-ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D) CONVERTERS, OR BINARY-TO-DECIMAL READOUT CONVERTERS
Q127 Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT VOLTAGES
Q128 Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS IS DETERMINED BY ADDING THE DENOMINATORS OF THE RESISTORS
Q129 Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS
Q130 Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS
Q131 Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS
Q132 Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report summarizes the results of the administration of the Electronics Principles survey to Missile Systems Maintenance personnel in the L shred who perform maintenance on air-to-air and air-to-ground missiles. The report gives a detailed listing of the technical tasks and knowledge needed to perform the jobs within the specialty or career ladder.

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Performs maintenance on missile and Remotely Piloted Vehicle (RPV) guidance and control systems, subsystems, and components; operates, calibrates, and maintains related test, monitoring, and checkout equipment; performs malfunction analysis, and repairs, maintains, modifies, inspects, and services missile and RPV systems, subsystems, and ground operating equipment to component level; performs field maintenance on electronic test, launch control, checkout, and related ground support equipment used by missile activities, and assembles and disassembles missiles and RPVs.