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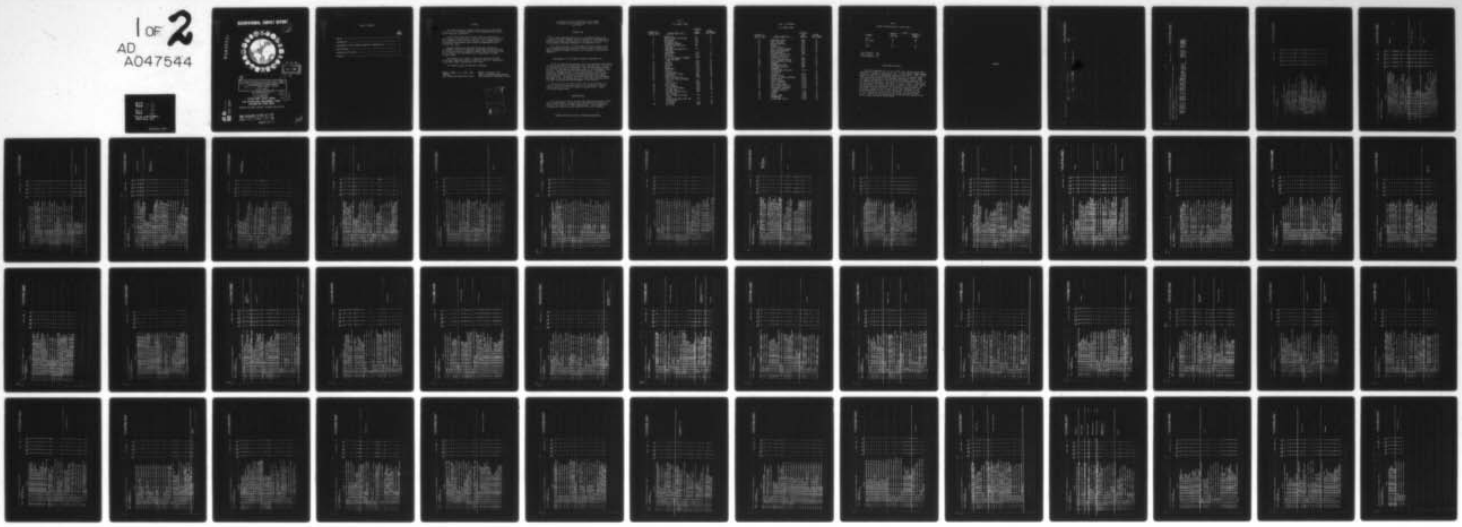

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ELECTRONIC PRINCIPLES OCCUPATIONAL SURVEY REPORT,

TELECOMMUNICATIONS SYSTEMS CONTROL CAREER LADDER AFSC 307X0.

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USAF OCCUPATIONAL MEASUREMENT CENTER
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PREFACE

This report presents a summary of the results of a detailed Air Force Electronic Principles Survey of the Telecommunications Systems Control Specialty, AFSC 307X0.

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

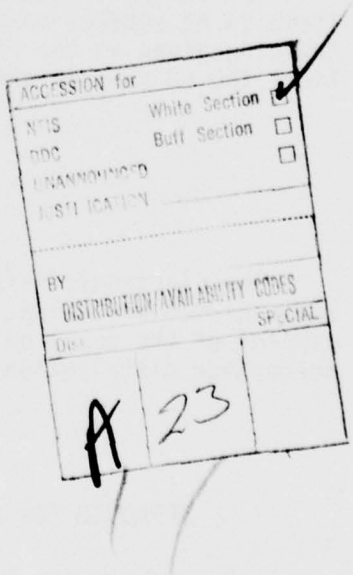
Computer programs for analyzing the data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

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.

JAMES A. TURNER, JR., Colonel, USAF
Commander
USAF Occupational Measurement Center

WALTER E. DRISKILL, Ph.D.
Chief, Occupational Survey Branch
USAF Occupational Measurement Center



ELECTRONIC PRINCIPLES OCCUPATIONAL SURVEY REPORT
TELECOMMUNICATIONS SYSTEMS CONTROL CAREER LADDER
AFSC 307X0

INTRODUCTION

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned to Telecommunications Systems Control Specialty (AFSC 307X0). The data for this report were collected during the period November 1976 through March 1977.

This report describes: (1) development and administration of the survey instrument; and (2) electronic principles used by DAFSC 5-skill level personnel both CONUS and overseas and assigned to selected major commands.

DEVELOPMENT OF THE ELECTRONIC PRINCIPLES INVENTORY (EPI)

The EPI was developed by personnel from the Occupational Survey Branch who were well qualified in theoretical physics and electronics, as well as in task analysis and survey development. Over 300 maintenance personnel from SAC, TAC, ADC, MAC, and AFCS participated in the development of the inventory. Representing the five ATC training centers, electronics experts who averaged 12 years of maintenance experience and four years of electronic principles instruction experience spent several weeks refining the EPI. In addition, personnel at the Electrical Engineering Department of the USAF Academy and the Air Force Human Resources Laboratory were consulted during the development of the inventory.

The final version of the EPI used in this survey contained 1,257 items in 62 subject matter areas covering all electronic principles training given at the five ATC technical training centers. Table 1 lists the 62 subject areas.

ADMINISTRATION

The Electronic Principles Inventory was administered by mail to AFSC 30750 airmen worldwide. Responses from 498 individuals represented 35 percent of the total of all AFSC 30750 personnel. Table 2 shows the percentage distribution by major command of the survey incumbents.

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TABLE 1

EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER	GPSUM PAGE NUMBER
1	MATHEMATICS	A1	4
2	DIRECT CURRENT AND VOLTAGE	A15	4
3	RESISTANCE	A24	4
4	MULTIMETER USES	B52	5
5	ALTERNATING CURRENT	B61	6
6	INDUCTORS AND INDUCTIVE REACTANCE	B67	6
7	CAPACITORS AND CAPACITIVE REACTANCE	C92	7
8	TRANSFORMERS	C128	8
9	MAGNETISM	C171	9
10	RCL CIRCUITS	D185	10
11	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)	D229	12
12	FILTERS	D239	12
13	COUPLING	E261	13
14	SOLDERING	E273	13
15	RELAYS	E294	14
16	MICROPHONES	F314	14
17	SPEAKERS	F327	15
18	OSCILLOSCOPES	F342	15
19	SEMICONDUCTOR DIODES	G354	15
20	TRANSISTORS	G404	17
21	TRANSISTOR AMPLIFIERS	G428	18
22	SOLID-STATE SPECIAL PURPOSE DEVICES	H477	21
23	POWER SUPPLIES	H483	21
24	OSCILLATORS	H512	21
25	MULTIVIBRATORS	I539	22
26	LIMITERS AND CLAMPERS	I555	23
27	ELECTRON TUBES	I565	23
28	ELECTRON TUBE AMPLIFIERS AND CIRCUITS	J609	24
29	SPECIAL PURPOSE ELECTRON TUBES	J616	25
30	HETERODYNING, MODULATION, AND DEMODULATION	J632	25
31	AM SYSTEMS	K638	25
32	FM SYSTEMS	K666	26

TABLE 1 (CONTINUED)

EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER-	GPSUM PAGE NUMBER
33	NUMBERING SYSTEMS	K685	27
34	LOGIC FUNCTIONS	L695	27
35	BOOLEAN EQUATIONS	L708	28
36	COUNTERS	L733	29
37	TIMING CIRCUITS	M757	29
38	USE OF SIGNAL GENERATORS	M769	30
39	MOTORS AND GENERATORS	M779	30
40	METER MOVEMENTS	N808	31
41	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS	N818	31
42	WAVESHAPING CIRCUITS	N834	32
43	SINGLE SIDEBAND SYSTEMS	0845	32
44	PULSE MODULATION SYSTEMS	0875	33
45	ANTENNAS	0914	34
46	TRANSMISSION LINES	P953	36
47	WAVEGUIDES AND CAVITY RESONATORS	P984	37
48	MICROWAVE AMPLIFIERS AND OSCILLATORS	P1034	39
49	REGISTERS	Q1110	41
50	STORAGE DEVICES	Q1117	42
51	DIGITAL TO ANALOG CONVERTERS	Q1126	42
52	PHANTASTRONS	Q1140	43
53	SCHMITT TRIGGERS	R1141	43
54	CABLE FABRICATION	R1144	43
55	INPUT/OUTPUT DEVICES	S1146	43
56	PHOTO SENSITIVE DEVICES	S1149	43
57	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)	S1150	43
58	INFRARED	T1159	43
59	LASERS	T1186	44
60	DISPLAY TUBES	T1220	45
61	PROGRAMMING	U1234	45
62	DB AND POWER RATIOS	U1255	46

TABLE 2

COMMAND REPRESENTATION OF SURVEY SAMPLE

	30750	
COMMAND	PERCENT ASSIGNED	PERCENT OF SAMPLE
AFCS	85	69
All OTHERS	15	31
TOTAL	100	100

Total Assigned - 1421
Total Sampled - 498
Percent Sampled - 35

PRESENTATON OF RESULTS

Personnel responded "yes" or "no" to the 1,257 electronic principles questions as related to their present job. A Group Summary (GPSUM) computer printout is provided in the Appendix portion of this report. Page 2 of the GPSUM lists the five selected groups identified for this report. Pages 4-46 show the percentage of the incumbents responding to the EPI items. The computer program results display the percent members answering "yes" to the subject area questions. The reader can locate a specific subject area by referring to the Appendix page number as listed in Table 1. For example, the Transformers area results are given on pages 8-9 of the GPSUM. The percentage of survey respondents indicating use of specific electronic principles ranged from high in areas such as Meter Movements (p. 31), Alternating Current (p. 6), and Oscilloscopes (p. 15) to low in areas such as Infrared (pp. 43-44), Lasers (pp. 44-45), and Display Tubes (p. 45). Additional AFSC 307X0 data can be obtained upon request to the Chief, Occupational Survey Branch (OMY).

APPENDIX

TABLE OF CONTENTS TOC PAGE 1 AF HUMAN RESOURCES LABORATORY AIR FORCE SYSTEMS COMMAND

REPORT NUMBER	REPORT ID	REPORT TITLE	PAGE NUMBER
1	TOC	TABLE OF CONTEN	1
2	GPSUM1	PCT MBRS RESPON ES BY SELECTED GRPS	2

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

TABULATION OF ELECTRONIC PRINCIPLES UTILIZATION DATA FOR SELECTED GROUPS
IN THE 307X0 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY = SPL001	ALL AIRMEN DAFSC 30750	CONTAINING	498	MEMBERS.
GROUP IDENTITY = SPL002	ALL AIRMEN DAFSC 30750 STATIONED IN CONUS	CONTAINING	288	MEMBERS.
GROUP IDENTITY = SPL003	ALL AIRMEN DAFSC 30750 STATIONED OVERSEAS	CONTAINING	208	MEMBERS.
GROUP IDENTITY = SPL004	ALL AIRMEN DAFSC 30750 ASSIGNED TO AFCS	CONTAINING	349	MEMBERS.
GROUP IDENTITY = SPL005	ALL AMN DAFSC 30750 ASGN TO ALL OTHER COMMANDS	CONTAINING	148	MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DUTY	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	90	87	93	89	91
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	86	84	86	85	89
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	35	33	39	31	46
D	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	24	22	26	22	29
E	COUPLING, SOLDERING, AND RELAYS	41	41	42	43	36
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	86	89	82	85	89
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	15	14	16	13	18
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	64	61	67	61	72
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	8	9	6	4	16
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	44	44	43	40	54
K	AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	38	36	40	36	44
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	23	25	21	23	26
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	69	66	73	68	71
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	78	76	79	76	82
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	26	31	19	23	33
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	36	38	33	33	42
Q	COMPUTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	30	34	25	26	42
R	MULTIVIBRATORS, SCHMITT TRIGGERS, AND CABLE FABRICATION	4	5	2	2	9
S	INPUT/OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	21	24	17	17	30
T	INFRARED, LASERS, AND DISPLAY TUBES	1	2	0	0	3
U	DECIBELS, DB AND POWER RATIOS	78	76	81	76	84

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		QY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 006	
A	1	A1-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO	65	62	68	63	70	
A	2	A1-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU	29	29	29	28	34	MATHEMATICS
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	34	28	42	35	34	
A	4	A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	10	10	10	8	14	
A	5	A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	24	19	32	25	24	
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	29	22	38	31	26	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	33	26	43	35	29	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	5	4	5	5	4	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	14	10	20	15	12	
A	10	A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	5	7	3	3	10	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	6	6	6	6	6	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	2	3	1	1	4	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	3	3	2	2	4	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	11	13	9	9	16	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	82	79	85	81	83	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	10	11	10	8	16	
A	17	A2-03 DO YOU USE THE TERM OHM.	73	69	80	74	73	DIRECT CURRENT AND VOLTAGE
A	18	A2-04 DO YOU USE THE TERM ION.	7	9	5	4	14	
A	19	A2-05 DO YOU USE THE TERM DYNE.	3	4	3	2	7	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	66	62	71	65	68	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	5	7	3	3	9	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	5	6	4	3	9	
A	23	A2-09 DO YOU USE THE TERM PROTON.	5	6	3	2	9	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	25	22	29	23	30	
A	25	A3-02 DO YOU INSPECT RESISTORS.	6	6	6	5	9	
A	26	A3-03 DO YOU CLEAN RESISTORS.	2	3	1	1	5	
A	27	A3-04 DO YOU ADJUST RESISTORS.	9	8	11	9	10	RESISTANCE
A	28	A3-05 DO YOU CHECK OHMIC VALUE OR RESISTORS.	16	12	22	15	20	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	5	5	4	3	8	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	2	2	1	1	4	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	16	13	20	14	20	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR	11	10	12	9	14	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	7	7	7	6	11	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	6	6	6	5	9	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	3	3	2	2	5	
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	5	6	4	3	9	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	19	15	25	18	22	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	10	9	12	8	16	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	10	9	11	8	15	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	8	9	7	5	16	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	6	7	5	3	13	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	9	10	9	7	16	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	9	8	10	7	13	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	8	7	4	14	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	7	7	4	13	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	6	7	4	3	11	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	8	8	9	6	14	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	8	8	8	6	12	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	7	8	6	4	14	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	6	6	5	3	11	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	5	6	3	3	9	
A	52	A1-01 DO YOU MEASURE RESISTANCE.	42	34	52	42	43	
A	53	A1-02 DO YOU REPAIR OHMMETERS.	0	0	0	0	1	
A	54	A1-03 DO YOU MEASURE VOLTAGE.	68	67	69	65	78	MULTIMETER USES
A	55	A1-04 DO YOU REPAIR VOLTMETERS.	1	1	0	1	1	
A	56	A1-05 DO YOU REPAIR AMMETERS.	1	1	1	1	1	
A	57	A1-06 DO YOU MEASURE CURRENT.	63	62	64	60	68	
A	58	A1-07 DO YOU USE MULTIMETERS.	57	53	62	54	64	
A	59	A1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	2	2	1	1	4	
A	60	A1-09 DO YOU READ SCHEMATICS.	30	29	32	28	35	

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			QY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
B	61	B2-01	DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	43	39	48	42	46	
B	62	B2-02	DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	52	50	54	48	61	ALTERNATING CURRENT
B	63	B2-03	DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	50	48	52	47	56	
B	64	B2-04	DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	36	38	35	33	45	
B	65	B2-05	DO YOU USE OR REFER TO THE TERM FREQUENCY.	76	73	80	73	81	
B	66	B2-06	DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	13	13	13	11	17	
B	67	B3-01	DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	11	10	12	8	18	
B	68	B3-02	DO YOU INSPECT INDUCTORS.	2	3	0	1	5	
B	69	B3-03	DO YOU CLEAN INDUCTORS.	1	2	0	1	2	
B	70	B3-04	DO YOU ADJUST INDUCTORS.	2	4	0	1	6	
B	71	B3-05	DO YOU REMOVE OR REPLACE INDUCTORS.	2	2	0	1	4	INDUCTORS AND INDUCTIVE REACTANCE
B	72	B3-06	DO YOU USE OR REFER TO INDUCTANCE.	7	8	4	4	14	
B	73	B3-07	DO YOU USE OR REFER TO HENRIES.	3	4	1	1	6	
B	74	B3-08	DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	7	9	3	3	16	
B	75	B3-09	DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	1	1	0	0	3	
B	76	B3-10	DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	2	3	0	0	5	
B	77	B3-11	DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS	2	3	0	0	5	
B	78	B3-12	DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF	2	3	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	2	3	0	0	5	
B	80	B2-14	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS	2	3	0	0	5	
B	81	B2-15	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	2	3	0	0	5	
B	82	B2-16	DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	2	3	0	0	5	
B	83	B3-17	DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	2	3	0	0	6	
B	84	B3-18	DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	2	3	0	0	5	
B	85	B3-19	DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	1	2	0	0	5	
B	86	B3-20	DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	3	5	0	1	8	
B	87	B3-21	DO YOU CALCULATE INDUCTIVE REACTANCE.	2	4	0	1	7	
B	88	B3-22	DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	4	7	1	1	12	
B	89	B3-23	DO YOU WORK WITH POWER INDUCTORS.	3	4	1	1	7	
B	90	B3-24	DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	6	8	4	2	16	
B	91	B3-25	DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	4	6	1	1	12	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
C 92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	12	11	15	10	20	
C 93	C1-02 DO YOU INSPECT CAPACITORS.	3	3	2	1	6	CAPACITORS AND CAPACITIVE REACTANCE
C 94	C1-03 DO YOU CLEAN CAPACITORS.	1	1	1	1	3	
C 95	C1-04 DO YOU ADJUST CAPACITORS.	3	6	0	1	9	
C 96	C1-05 DO YOU TEST CAPACITORS.	3	5	1	1	9	
C 97	C1-06 DO YOU DISCHARGE CAPACITORS.	2	2	1	1	4	
C 98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	1	2	0	0	3	
C 99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	5	7	2	1	14	
C 100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	1	2	0	0	3	
C 101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	7	8	6	3	16	
C 102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	8	10	6	4	20	
C 103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT	4	5	2	1	10	
C 104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS	3	4	1	1	8	
C 105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE	6	8	3	2	16	
C 106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES	1	1	0	0	3	
C 107	C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	9	9	9	6	17	
C 108	C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	10	10	10	6	19	
C 109	C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC	8	9	7	5	18	
C 110	C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	3	2	3	2	5	
C 111	C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	1	2	0	0	3	
C 112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE	1	2	0	1	3	
C 113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO	1	2	0	0	4	
C 114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	3	5	0	1	8	
C 115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	3	4	1	0	9	
C 116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	2	4	0	0	7	
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	2	3	1	1	6	
C 118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS	3	4	1	1	7	
C 119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	4	6	1	1	11	
C 120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE	2	3	0	0	7	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
C 121	C1-30	DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	4	7	0	1	11	
C 122	C1-31	DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	2	3	0	0	7	
C 123	C1-32	DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	5	7	3	2	13	
C 124	C1-33	DO YOU WORK WITH PAPER (FIXED) CAPACITORS	4	5	2	1	9	
C 125	C1-34	DO YOU WORK WITH MICA (FIXED) CAPACITORS	5	7	2	2	12	
C 126	C1-35	DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	5	7	2	1	14	
C 127	C1-36	DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	5	5	5	3	8	
C 128	C2-01	DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	22	20	25	19	30	
C 129	C2-02	DO YOU INSPECT TRANSFORMERS	4	5	2	2	9	
C 130	C2-03	DO YOU CLEAN TRANSFORMERS	1	2	1	0	4	
C 131	C2-04	DO YOU ADJUST TRANSFORMERS	5	7	2	1	14	
C 132	C2-05	DO YOU TROUBLESHOOT TRANSFORMERS	7	8	5	4	13	TRANSFORMERS
C 133	C2-06	DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	4	5	1	1	9	
C 134	C2-07	DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	1	1	0	0	2	
C 135	C2-08	DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	2	2	0	0	5	
C 136	C2-09	DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	1	2	0	0	3	
C 137	C2-10	DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	2	3	0	0	7	
C 138	C2-11	DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	3	3	1	1	7	
C 139	C2-12	DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	8	9	7	6	15	
C 140	C2-13	DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	3	3	2	1	7	
C 141	C2-14	DO YOU WORK WITH AUTOTRANSFORMERS	2	3	1	1	6	
C 142	C2-15	DO YOU WORK WITH POWER TRANSFORMERS	7	9	4	3	18	
C 143	C2-16	DO YOU WORK WITH AUDIO TRANSFORMERS	17	18	16	13	29	
C 144	C2-17	DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	6	8	3	2	15	
C 145	C2-18	DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	5	4	6	4	6	
C 146	C2-19	DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	4	5	2	1	9	
C 147	C2-20	DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	4	5	1	1	10	
C 148	C2-21	DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	4	5	2	1	9	
C 149	C2-22	DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	2	3	0	0	6	
C 150	C2-23	DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	2	3	0	0	6	
C 151	C2-24	DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	10	11	9	7	17	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
C 152	C2-25	DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	5	8	2	3	12	
C 153	C2-26	DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	6	7	5	4	12	
C 154	C2-27	DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	8	9	7	6	16	
C 155	C2-28	DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	6	2	1	11	
C 156	C2-29	DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	5	7	2	2	11	
C 157	C2-30	DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	6	7	4	3	11	
C 158	C2-31	DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	3	4	0	0	6	
C 159	C2-32	DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	2	3	0	0	6	
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	0	0	7	
C 161	C2-34	DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	4	6	1	2	9	
C 162	C2-35	DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	2	3	0	0	6	
C 163	C2-36	DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	1	2	0	0	5	
C 164	C2-37	DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	2	3	0	0	6	
C 165	C2-38	DO YOU INSPECT THREE PHASE TRANSFORMERS	1	1	0	0	2	
C 166	C2-39	DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	0	1	0	0	1	
C 167	C2-40	DO YOU ADJUST THREE PHASE TRANSFORMERS	1	1	0	0	3	
C 168	C2-41	DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	1	2	0	0	4	
C 169	C2-42	DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	1	1	0	0	2	
C 170	C2-43	DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	0	0	0	0	1	
C 171	C3-01	DO YOU USE OR REFER TO PERMANENT MAGNETS	3	4	2	1	7	
C 172	C3-02	DO YOU USE OR REFER TO TEMPORARY MAGNETS	3	4	1	1	7	
C 173	C3-03	DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	2	2	0	1	4	
C 174	C3-04	DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	2	2	0	0	5	MAGNETISM
C 175	C3-05	DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	2	2	1	1	5	
C 176	C3-06	DO YOU USE OR REFER TO RESIDUAL MAGNETISM	2	3	1	1	5	
C 177	C3-07	DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX	6	8	2	2	16	
C 178	C3-08	DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	1	1	0	0	2	

AF HUMAN RESOURCES LABORATORY
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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
C	179	C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	1	1	0	0	3
C	180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	4	7	1	1	11
C	181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY	2	2	0	1	4
C	182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	12	13	11	9	20
C	183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	5	7	2	2	10
C	184	C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	4	5	2	2	8
D	185	D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	8	9	7	5	16
D	186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	3	5	0	0	9
D	187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	2	2	0	0	5
D	188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	2	3	1	1	5
D	189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	2	2	1	1	5
D	190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	2	2	1	1	4
D	191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	5	7	2	2	11
D	192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	3	4	2	2	7
D	193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	3	5	1	1	9
D	194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	4	5	2	2	9
D	195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	2	3	1	1	5
D	196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	2	4	0	1	7
D	197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	4	7	1	1	13
D	198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	8	9	5	4	16
D	199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	5	7	3	2	14
D	200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	6	8	3	2	16
D	201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	2	3	1	1	7
D	202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	6	8	4	3	14
D	203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	2	4	0	0	7

RCL CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	4	7	1	1	13
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	1	2	0	0	4
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	2	3	1	0	7
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	4	5	2	1	9
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	1	2	0	0	4
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	4	6	1	2	7
D 41	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	1	2	0	0	5
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	1	2	0	0	6
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	1	2	0	0	4
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	1	2	0	0	5
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	2	4	0	0	8
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	1	2	0	0	5
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	2	3	0	0	5
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	3	4	1	1	7
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	2	3	0	0	6
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	1	2	0	0	4
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	2	3	0	0	7
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	1	2	0	0	5
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	1	2	0	0	4
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	2	3	0	0	7
D 224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT	3	4	1	1	7
D 225	D1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT	3	4	1	1	8
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	3	4	1	1	7
D 227	D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q	3	4	1	1	7
D 228	D1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE	3	4	1	1	8

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
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	4	2	2	7	
D 230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	2	3	1	1	5	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)
D 231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	2	3	1	1	5	
D 232	D3-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	2	2	1	1	3	
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	2	0	0	5	
D 234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	1	1	0	0	3	
D 235	D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC	1	2	0	0	4	
D 236	D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO	1	2	0	0	3	
D 237	D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	1	2	0	0	5	
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	2	0	0	3	
D 239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	18	16	20	16	23	
D 240	D3-02 DO YOU INSPECT FILTER CIRCUITS	4	6	2	2	9	
D 241	D3-03 DO YOU CLEAN FILTER CIRCUITS	1	1	0	0	3	
D 242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	3	5	1	1	8	
D 243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	8	8	8	7	11	FILTERS
D 244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	2	2	1	1	4	
D 245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	3	5	1	1	7	
D 246	D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	1	1	0	0	3	
D 247	D3-09 DO YOU WORK WITH LOW PASS FILTERS	10	11	8	7	18	
D 248	D3-10 DO YOU WORK WITH HIGH PASS FILTERS	10	11	9	7	18	
D 249	D3-11 DO YOU WORK WITH BANDPASS FILTERS	15	15	16	13	21	
D 250	D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	10	11	9	7	17	
D 251	D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	3	3	4	4	3	
D 252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	2	3	0	0	5	
D 253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	1	2	0	0	4	
D 254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	1	2	0	0	4	
D 255	D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	9	9	9	8	11	
D 256	D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	5	6	4	3	10	
D 257	D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	5	6	4	3	10	
D 258	D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	5	6	3	3	10	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
	259	03-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	9	8	10	8	11	
	260	03-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	2	3	0	0	5	
	261	E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	10	11	9	8	14	
	262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC	3	5	0	1	7	
	263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	5	7	3	3	9	COUPLING
	264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	7	9	4	4	13	
	265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	4	6	2	2	9	
	266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	6	7	5	5	9	
	267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	7	8	6	6	11	
E	268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	4	6	3	3	9	
E	269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	2	3	1	1	5	
E	270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	2	3	1	1	5	
E	271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	7	8	6	5	11	
E	272	E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	3	4	2	2	5	
E	273	E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	7	6	9	6	9	
E	274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	4	5	3	2	8	
E	275	E2-03 DO YOU ADD FLUX TO CONNECTIONS	3	3	2	2	5	
E	276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	3	3	2	2	6	
E	277	E2-05 DO YOU STRIP INSULATION FROM WIRES	5	5	6	4	9	SOLDERING
E	278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	3	3	1	1	6	
E	279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	5	5	6	4	9	
E	280	E2-08 DO YOU CUT WIRES	5	5	5	4	8	
E	281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	3	3	4	2	6	
E	282	E2-10 DO YOU TIN SOLDERING IRON TIPS	4	3	4	2	7	
E	283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS	5	5	5	3	8	
E	284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	4	3	5	3	7	
E	285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	2	3	2	1	5	
E	286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	7	6	8	6	9	
E	287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	3	3	2	1	5	
E	288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS	2	1	3	2	2	
E	289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	2	2	2	1	5	
E	290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	1	1	0	0	2	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
E	291	E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	5	5	4	3	7	
E	292	E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	1	2	0	0	3	
E	293	E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS	1	2	0	0	3	
E	294	E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS	1	1	0	0	3	
E	295	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	35	36	35	37	30	
E	296	E3-02 DO YOU ADJUST RELAYS	7	6	8	7	7	
E	297	E3-03 DO YOU CLEAN RELAYS	3	3	3	2	5	RELAYS
E	298	E3-04 DO YOU INSPECT RELAYS	10	11	8	9	12	
E	299	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	15	19	10	16	13	
E	300	E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	2	3	0	2	3	
E	301	E3-07 DO YOU TROUBLESHOOT RELAYS	24	25	23	25	21	
E	302	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	3	4	2	3	5	
E	303	E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	3	2	3	2	4	
E	304	E3-10 DO YOU PERFORM TASKS ON RELAY CORES	1	1	0	0	3	
E	305	E3-11 DO YOU PERFORM TASKS ON RELAY COILS	1	2	0	1	3	
E	306	E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	1	2	0	0	3	
E	307	E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	1	1	0	0	3	
E	308	E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS	3	4	3	3	5	
E	309	E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS	3	3	3	3	5	
E	310	E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS	4	5	4	4	5	
E	311	E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS	4	4	3	3	5	
E	312	E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS	6	8	4	5	10	
E	313	E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE	4	4	4	3	7	
F	314	F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES	30	32	28	30	31	
F	315	F1-02 DO YOU INSPECT MICROPHONES	5	5	5	3	10	
F	316	F1-03 DO YOU CLEAN MICROPHONES	3	2	4	3	5	MICROPHONES
F	317	F1-04 DO YOU OPERATE MICROPHONES	31	33	28	31	32	
F	318	F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	13	10	16	12	14	
F	319	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	1	2	1	1	3	
F	320	F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	8	8	8	6	12	
F	321	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	1	1	1	1	2	
F	322	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	6	6	6	5	9	
F	323	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	1	2	0	0	4	
F	324	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	2	3	2	1	5	
F	325	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	6	8	4	5	9	
F	326	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	1	1	0	1	1	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
F	327	F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	51	50	51	49	54	
F	328	F2-02 DO YOU INSPECT SPEAKERS	7	7	7	5	10	SPEAKERS
F	329	F2-03 DO YOU CLEAN SPEAKERS	3	3	4	2	5	
F	330	F2-04 DO YOU OPERATE SPEAKERS	51	81	50	49	53	
F	331	F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	20	19	22	18	26	
F	332	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	2	2	0	1	4	
F	333	F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	5	4	4	3	9	
F	334	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS	1	1	0	0	2	
F	335	F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES	1	2	0	1	3	
F	336	F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	0	1	0	0	1	
F	337	F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	1	1	0	0	2	
F	338	F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	1	1	0	1	2	
F	339	F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	1	1	0	0	2	
F	340	F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	1	1	0	0	2	
F	341	F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	0	1	0	0	1	
F	342	F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	73	72	74	71	79	
F	343	F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	66	66	65	62	75	
F	344	F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	30	30	31	29	35	OSCILLOSCOPES
F	345	F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	48	51	44	45	56	
F	346	F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	46	43	50	43	55	
F	347	F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME	36	38	33	31	46	
F	348	F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	24	24	23	20	32	
F	349	F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	21	25	18	15	35	
F	350	F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	20	21	20	16	30	
F	351	F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	40	38	42	35	51	
F	352	F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROLS	28	26	32	29	40	
F	353	F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	42	45	38	36	55	
G	354	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	3	3	3	3	5	
G	355	G1-02 DO YOU INSPECT DIODES	2	2	0	0	5	
G	356	G1-03 DO YOU REMOVE OR REPLACE DIODES	1	1	0	0	3	
G	357	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT	1	2	0	0	4	
G	358	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	0	1	0	0	1	SEMICONDUCTOR DIODES
G	359	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE,	1	2	0	0	4	
G	360	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	1	2	0	0	5	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	QY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 361	G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	2	3	1	1	5
G 362	G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON	2	3	0	1	5
G 363	G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	1	2	0	0	4
G 364	G1-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	1	2	0	0	4
G 365	G1-12 DO YOU USE OR REFER TO DIODE COLOR CODING	1	2	0	0	3
G 366	G1-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	1	1	0	0	3
G 367	G1-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	1	1	0	0	2
G 368	G1-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	0	1	0	0	1
G 369	G1-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	1	2	0	0	3
G 370	G1-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	1	2	0	0	3
G 371	G1-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	1	2	0	0	5
G 372	G1-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	1	1	0	0	3
G 373	G1-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	0	1	0	0	1
G 374	G1-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	0	1	0	0	1
G 375	G1-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	1	1	0	0	3
G 376	G1-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	1	1	0	0	3
G 377	G1-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	2	3	0	1	5
G 378	G1-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	1	1	0	0	3
G 379	G1-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE	2	3	0	0	5
G 380	G1-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT	1	2	0	0	5
G 381	G1-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	1	2	0	0	5
G 382	G1-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	1	1	0	0	3

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
G	383	G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	1	1	0	0	3	
G	384	G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	1	1	0	0	3	
G	385	G1-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	1	2	0	0	3	
G	386	G1-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	1	2	0	0	4	
G	387	G1-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	1	2	0	0	5	
G	388	G1-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS	1	1	0	0	3	
G	389	G1-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	1	1	0	0	3	
G	390	G1-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	1	2	0	0	4	
G	391	G1-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	1	2	0	0	4	
G	392	G1-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	1	1	0	0	3	
G	393	G1-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	1	1	0	0	3	
G	394	G1-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	1	1	0	0	3	
G	395	G1-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS	1	2	0	0	4	
G	396	G1-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	1	1	0	0	3	
G	397	G1-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	1	1	0	0	3	
G	398	G1-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	1	1	0	0	2	
G	399	G1-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	1	2	0	0	3	
G	400	G1-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	1	2	0	0	5	
G	401	G1-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	1	2	0	0	5	
G	402	G1-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	1	2	0	0	5	
G	403	G1-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	1	2	0	0	5	
G	404	G2-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	4	5	3	2	4	
G	405	G2-02 DO YOU INSPECT TRANSISTORS	2	2	1	0	5	
G	406	G2-03 DO YOU REMOVE OR REPLACE TRANSISTORS	1	2	0	0	3	
G	407	G2-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	2	3	1	1	5	
G	408	G2-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	2	3	0	0	5	TRANSISTORS
G	409	G2-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	2	3	0	0	5	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
G 410	G2-07	DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	2	3	0	0	5	
G 411	G2-08	DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	2	3	0	0	5	
G 412	G2-09	DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	2	3	0	0	5	
G 413	G2-10	DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	2	3	0	0	7	
G 414	G2-11	DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	2	3	0	0	5	
G 415	G2-12	DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	3	5	1	1	8	
G 416	G2-13	DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	2	4	0	1	7	
G 417	G2-14	DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	1	2	0	0	4	
G 418	G2-15	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY	2	3	0	0	6	
G 419	G2-16	DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR	2	3	0	0	6	
G 420	G2-17	DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	2	3	0	0	6	
G 421	G2-18	DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	2	3	0	0	6	
G 422	G2-19	DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	1	2	0	0	5	
G 423	G2-20	DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	1	2	0	0	5	
G 424	G2-21	DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	1	2	0	0	5	
G 425	G2-22	DO YOU CALCULATE BETA TRANSISTOR GAINS	1	2	0	0	4	
G 426	G2-23	DO YOU CALCULATE ALPHA TRANSISTOR GAINS	1	2	0	0	4	
G 427	G2-24	DO YOU CALCULATE GAMMA TRANSISTOR GAINS	1	2	0	0	4	
G 428	G3-01	DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	12	10	13	12	11	
G 429	G3-02	DO YOU INSPECT TRANSISTOR AMPLIFIERS	3	3	2	1	6	
G 430	G3-03	DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	8	7	10	8	8	
G 431	G3-04	DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	7	6	8	6	7	TRANSISTOR AMPLIFIERS
G 432	G3-05	DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	1	1	0	0	2	
G 433	G3-06	DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	8	6	11	7	9	
G 434	G3-07	DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	0	1	0	0	1	
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	2	0	0	3	
G 436	G3-09	DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	2	0	0	3	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
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	2	0	0	3
G 438	G3-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	1	0	0	3
G 439	G3-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	1	1	0	0	3
G 440	G3-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	1	0	0	3
G 441	G3-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A	1	1	0	0	2
G 442	G3-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	1	2	0	0	3
G 443	G3-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	1	1	0	0	3
G 444	G3-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	3	3	2	1	6
G 445	G3-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	2	3	1	1	6
G 446	G3-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	5	5	5	4	9
G 447	G3-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE	1	1	0	0	2
G 448	G3-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE	1	1	0	0	3
G 449	G3-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE	1	1	0	0	3
G 450	G3-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE	1	1	0	0	2
G 451	G3-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES	1	1	0	0	2
G 452	G3-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G 453	G3-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRANS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-	1	2	0	0	3

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY=TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G	454	G3-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G	455	G3-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G	456	G3-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G	457	G3-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	1	0	0	3
G	458	G3-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	1	1	0	0	2
G	459	G3-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	1	1	0	0	2
G	460	G3-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	1	1	0	0	3
G	461	G3-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	1	1	0	0	3
G	462	G3-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	1	1	0	0	3
G	463	G3-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	1	1	0	0	2
G	464	G3-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	4	4	4	3	5
G	465	G3-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	2	2	1	1	4
G	466	G3-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	4	3	4	2	7
G	467	G3-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	3	3	3	2	6
G	468	G3-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	2	2	2	1	4
G	469	G3-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	2	2	2	1	4
G	470	G3-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR	1	1	0	0	3
G	471	G3-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	1	2	0	0	3
G	472	G3-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	1	1	0	0	2
G	473	G3-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	1	2	0	0	3
G	474	G3-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	1	1	0	0	3
G	475	G3-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	1	1	0	0	2

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
G	476	G3-49	DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	1	2	0	0	3	
H	477	H1-01	DO YOU USE OR REFER TO VARACTORS	2	3	1	1	5	
H	478	H1-02	DO YOU USE OR REFER TO TUNNEL DIODES	3	5	0	1	7	SOLID-STATE SPECIAL PURPOSE DEVICES
H	479	H1-03	DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	2	4	0	1	6	
H	480	H1-04	DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	1	2	0	0	4	
H	481	H1-05	DO YOU USE OR REFER TO ZENER DIODES	4	5	2	2	9	
H	482	H1-06	DO YOU USE OR REFER TO INTEGRATED CIRCUITS	10	9	12	9	19	
H	483	H2-01	IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	27	28	26	24	34	
H	484	H2-02	DO YOU INSPECT POWER SUPPLIES	8	10	4	5	14	
H	485	H2-03	DO YOU CLEAN POWER SUPPLIES	2	2	1	1	4	
H	486	H2-04	DO YOU ALIGN OR ADJUST POWER SUPPLIES	5	6	2	3	8	
H	487	H2-05	DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	13	15	12	11	19	POWER SUPPLIES
H	488	H2-06	DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	2	4	0	1	5	
H	489	H2-07	DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	4	6	3	3	9	
H	490	H2-08	DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	1	2	0	0	3	
H	491	H2-09	DO YOU WORK WITH HALF-WAVE RECTIFIERS	2	3	0	0	6	
H	492	H2-10	DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	2	4	0	0	7	
H	493	H2-11	DO YOU WORK WITH BRIDGE RECTIFIERS	3	4	1	1	8	
H	494	H2-12	DO YOU WORK WITH THREE-PHASE RECTIFIERS	1	2	0	0	4	
H	495	H2-13	DO YOU USE OR REFER TO INPUT VOLTAGE	6	7	5	5	9	
H	496	H2-14	DO YOU USE OR REFER TO INPUT FREQUENCY	5	6	4	3	9	
H	497	H2-15	DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	6	7	5	3	12	
H	498	H2-16	DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	5	5	4	3	8	
H	499	H2-17	DO YOU USE OR REFER TO RIPPLE AMPLITUDE	3	3	2	2	5	
H	500	H2-18	DO YOU USE OR REFER TO RIPPLE FREQUENCY	2	3	2	1	5	
H	501	H2-19	DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	2	3	0	1	6	
H	502	H2-20	DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	6	7	4	3	11	
H	503	H2-21	DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	6	7	4	3	10	
H	504	H2-22	DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS	5	5	5	3	9	
H	505	H2-23	DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS	4	5	3	2	9	
H	506	H2-24	DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	2	2	1	1	5	
H	507	H2-25	DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	1	2	0	0	4	
H	508	H2-26	DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	1	2	0	0	4	
H	509	H2-27	DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	1	2	0	0	4	
H	510	H2-28	DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER	8	9	8	8	9	
H	511	H2-29	DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	3	3	1	1	6	
H	512	H3-01	DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	57	53	63	55	64	OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
M	513	M3-02 DO YOU INSPECT OSCILLATORS	10	9	10	7	17
M	514	M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	25	23	27	22	33
M	515	M3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	9	9	9	6	16
M	516	M3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	1	1	1	0	3
M	517	M3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	10	11	8	6	14
M	518	M3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	2	2	0	0	5
M	519	M3-08 DO YOU USE OR REFER TO FEEDBACK	22	19	27	22	24
M	520	M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)	19	19	19	17	24
M	521	M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	24	19	30	23	28
M	522	M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	30	26	35	29	33
M	523	M3-12 DO YOU USE OR REFER TO DAMPING	15	14	17	13	22
M	524	M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	13	12	16	12	16
M	525	M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	3	4	1	1	8
M	526	M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	4	5	2	1	9
M	527	M3-16 DO YOU USE OR REFER TO UNDER DAMPING	4	5	2	1	9
M	528	M3-17 DO YOU USE OR REFER TO OVER DAMPING	4	5	2	1	9
M	529	M3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD	4	5	2	2	7
M	530	M3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD	5	5	5	5	6
M	531	M3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD	8	9	7	7	11
M	532	M3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD	25	29	27	25	27
M	533	M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS	3	3	1	1	6
M	534	M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	3	4	1	1	7
M	535	M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	2	3	1	1	5
M	536	M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	2	2	1	1	4
M	537	M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	2	3	1	1	6
M	538	M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS	29	28	30	27	34
I	539	I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	2	4	0	0	7
I	540	I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS	1	2	0	0	4
I	541	I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS	2	2	0	0	5
I	542	I1-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS	1	2	0	0	4
I	543	I1-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS	2	3	0	0	5
I	544	I1-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS	1	1	0	0	3
I	545	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS	1	2	0	0	4
I	546	I1-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS	0	0	0	0	1
I	547	I1-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS	1	1	0	0	3

MULTIVIBRATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
I	548	11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	1	1	0	0	3	
I	549	11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	1	1	0	0	3	
I	550	11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD	2	2	1	1	5	
I	551	11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	1	1	0	0	3	
I	552	11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	1	2	0	0	3	
I	553	11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	1	2	0	0	3	
I	554	11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS	1	2	0	0	4	
I	555	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	3	4	1	1	7	
I	556	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS	1	2	0	0	5	LIMITERS AND CLAMPERS
I	557	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	1	2	0	0	3	
I	558	12-04 DO YOU WORK WITH LIMITERS WITH BIAS	1	2	0	0	4	
I	559	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS	1	2	0	0	3	
I	560	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS	1	2	0	0	3	
I	561	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	2	3	1	1	5	
I	562	12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	1	2	0	0	3	
I	563	12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	1	2	0	0	3	
I	564	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT	2	3	0	1	5	
I	565	13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	4	4	3	3	7	
I	566	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	1	2	0	0	3	
I	567	13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	1	1	0	0	2	
I	568	13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	1	1	0	0	2	ELECTRON TUBES
I	569	13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	1	1	0	0	3	
I	570	13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	1	1	0	0	2	
I	571	13-07 DO YOU USE OR REFER TO CUTOFF	1	1	0	0	3	
I	572	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	1	1	0	0	2	
I	573	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	1	1	0	0	2	
I	574	13-10 DO YOU USE OR REFER TO TRANSIT TIME	1	1	0	0	2	
I	575	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	1	1	0	0	2	
I	576	13-12 DO YOU USE OR REFER TO SATURATION	1	1	0	0	3	
I	577	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	1	1	0	0	2	
I	578	13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	1	1	0	0	2	
I	579	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE	1	2	0	0	3	
I	580	13-16 DO YOU USE OR REFER TO PLATE CURRENT	1	2	0	0	3	
I	581	13-17 DO YOU USE OR REFER TO GRID VOLTAGE	1	2	0	0	3	
I	582	13-18 DO YOU USE OR REFER TO GRID CURRENT	1	2	0	0	3	
I	583	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	1	2	0	0	3	
I	584	13-20 DO YOU USE OR REFER TO CATHODE CURRENT	1	2	0	0	3	
I	585	13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS	1	1	0	0	2	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
I	586	I3-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	1	1	0	0	2
I	587	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	1	1	0	0	2
I	588	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	1	2	0	0	3
I	589	I3-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	1	1	0	0	3
I	590	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	1	1	0	0	2
I	591	I3-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	1	1	0	0	2
I	592	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	1	1	0	0	2
I	593	I3-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	1	2	0	0	3
I	594	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	1	1	0	0	2
I	595	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	1	1	0	0	2
I	596	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	1	1	0	0	2
I	597	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	1	1	0	0	2
I	598	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	1	2	0	0	4
I	599	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	1	2	0	0	3
I	600	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	0	1	0	0	1
I	601	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	1	1	0	0	2
I	602	I3-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	1	2	0	0	3
I	603	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	1	2	0	0	3
I	604	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	0	1	0	0	1
I	605	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	1	1	0	0	3
I	606	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	1	2	0	0	3
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	1	0	0	2
I	608	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	1	2	0	0	3
J	609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB	3	3	3	2	5
J	610	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER	1	1	0	0	3

ELECTRON TUBE AMPLIFIERS AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
J 611	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	1	1	0	0	3	
J 612	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	1	1	0	0	3	
J 613	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	1	1	0	0	1	
J 614	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	1	1	0	1	1	
J 615	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	1	2	1	1	3	
J 616	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE)	2	2	1	1	4	
J 617	J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	8	8	8	6	11	
J 618	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	1	1	0	0	2	SPECIAL PURPOSE ELECTRON TUBES
J 619	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	1	1	0	0	2	
J 620	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF IGNITRONS	1	2	0	0	3	
J 621	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	1	2	0	0	3	
J 622	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	3	2	3	2	5	
J 623	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	2	2	2	1	4	
J 624	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	2	2	1	1	4	
J 625	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	4	3	4	2	7	
J 626	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	1	1	2	1	3	
J 627	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	1	2	0	0	3	
J 628	J2-13 DO YOU USE OR REFER TO PERSISTENCE	2	3	1	1	5	
J 629	J2-14 DO YOU USE OR REFER TO DECAY TIMES	2	2	1	1	4	
J 630	J2-15 DO YOU USE OR REFER TO FLUORESCENCE	3	3	2	1	7	
J 631	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	3	3	2	1	6	
J 632	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	39	39	38	36	47	
J 633	J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	13	15	11	10	21	
J 634	J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	8	8	7	6	13	
J 635	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	14	13	14	11	20	HETERODYNING, MODULATION, AND DEMODULATION
J 636	J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	2	4	0	0	7	
J 637	J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	5	7	2	3	11	
K 638	K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	16	20	11	14	21	
K 639	K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	5	6	2	2	11	
K 640	K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	2	
K 641	K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	3	5	1	1	9	AM SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY=TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
K 642	K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS	15	19	10	12	23	
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	3	5	1	1	9	
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	4	6	3	3	8	
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	1	2	0	0	4	
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	3	3	1	1	7	
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	3	3	1	1	7	
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	7	10	3	5	12	
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	3	4	2	2	7	
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	5	7	3	4	9	
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	2	3	1	1	7	
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	2	3	0	0	6	
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	3	6	0	2	5	
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	6	8	3	5	9	
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	8	11	5	7	11	
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	10	13	7	8	17	
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	9	11	6	7	16	
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	6	7	4	4	11	
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	6	8	4	5	10	
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	1	2	0	0	5	
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	7	10	3	6	11	
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	2	2	0	0	5	
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	2	3	1	1	6	
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	3	3	2	2	5	
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	3	3	2	2	6	
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	27	24	32	27	30	
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	7	6	8	6	9	
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	3	
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	5	5	4	3	9	
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	26	23	29	25	28	FM SYSTEMS
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	6	5	9	6	8	
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	5	6	9	3	9	
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	2	2	2	1	4	
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	7	8	6	6	11	
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	3	5	1	1	8	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
K 676	K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	2	3	0	0	7	
K 677	K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	3	5	2	2	7	
K 678	K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	3	4	2	2	7	
K 679	K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	5	8	2	3	11	
K 680	K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	3	4	2	1	7	
K 681	K2-16 DO YOU PERFORM TASKS ON LIMITERS	2	3	1	1	4	
K 682	K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	3	3	1	1	7	
K 683	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	5	4	5	4	5	
K 684	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	5	4	5	4	5	
K 685	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	3	3	2	2	5	
K 686	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	5	6	2	2	11	
K 687	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	2	3	1	1	5	NUMBERING SYSTEMS
K 688	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	2	2	1	1	3	
K 689	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	5	7	2	2	11	
K 690	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	2	3	1	1	5	
K 691	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	6	8	4	3	12	
K 692	K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD	2	3	0	1	5	
K 693	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	4	5	2	2	8	
K 694	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	2	3	0	1	3	
L 695	L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	2	2	1	1	2	
L 696	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	0	1	0	0	1	
L 697	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	0	1	0	0	1	LOGIC FUNCTIONS
L 698	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	0	1	0	0	1	
L 699	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	0	1	0	0	1	
L 700	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	0	1	0	0	1	
L 701	K1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	1	1	0	0	1	
L 702	K1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	0	1	0	0	1	
L 703	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	0	1	0	0	1	
L 704	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	1	1	0	0	2	
L 705	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	0	1	0	0	1	
L 706	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	0	1	0	0	1	

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY=TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
L 707	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	1	1	0	0	1
L 708	L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC	0	0	0	0	0
L 709	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	0	1	0	0	1
L 710	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	0	1	0	0	1
L 711	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	0	1	0	0	1
L 712	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	0	1	0	0	1
L 713	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	0	1	0	0	1
L 714	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	0	1	0	0	1
L 715	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	0	1	0	0	1
L 716	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	0	1	0	0	1
L 717	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	0	1	0	0	1
L 718	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	0	1	0	0	1
L 719	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	0	1	0	0	1
L 720	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	0	0	0	0	1
L 721	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	0	1	0	0	1
L 722	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	0	1	0	0	1
L 723	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	0	1	0	0	1
L 724	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	0	1	0	0	1
L 725	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	0	1	0	0	1
L 726	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	0	1	0	0	1
L 727	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	0	1	0	0	1
L 728	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	0	1	0	0	1
L 729	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	0	1	0	0	1
L 730	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	0	1	0	0	1
L 731	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	0	1	0	0	1
L 732	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	0	1	0	0	1

BOOLEAN EQUATIONS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
L 733	L3-01	DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	22	29	19	21	24	
L 734	L3-02	DO YOU USE OR REFER TO UP-COUNTERS	5	7	2	3	10	
L 735	L3-03	DO YOU USE OR REFER TO DOWN-COUNTERS	3	4	1	1	8	COUNTERS
L 736	L3-04	DO YOU USE OR REFER TO SERIAL COUNTERS	4	6	2	2	8	
L 737	L3-05	DO YOU USE OR REFER TO PARALLEL COUNTERS	2	3	1	1	5	
L 738	L3-06	DO YOU USE OR REFER TO RING COUNTERS	1	2	0	0	3	
L 739	L3-07	DO YOU USE OR REFER TO DECADE COUNTERS	6	8	3	4	9	
L 740	L3-08	DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	4	3	5	3	6	
L 741	L3-09	DO YOU USE OR REFER TO DOWN CLOCKS	2	2	1	1	3	
L 742	L3-10	DO YOU USE OR REFER TO UP CLOCKS	2	2	1	1	4	
L 743	L3-11	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	1	1	0	0	2	
L 744	L3-12	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-	1	1	0	0	1	
L 745	L3-13	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	2	3	0	0	5	
L 746	L3-14	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	1	1	0	0	2	
L 747	L3-15	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	1	2	0	0	3	
L 748	L3-16	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	1	1	0	0	1	
L 749	L3-17	DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	3	4	2	3	5	
L 750	L3-18	DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	1	1	0	0	3	
L 751	L3-19	DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENT-	1	1	0	0	2	
L 752	L3-20	DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE	1	1	0	0	2	
L 753	L3-21	DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	2	2	1	1	3	
L 754	L3-22	DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	1	1	0	0	1	
L 755	L3-23	DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	0	1	0	0	1	
L 756	L3-24	DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	1	1	1	0	2	
M 757	M1-01	DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	6	8	4	3	14	
M 758	M1-02	DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	4	7	1	1	12	
M 759	M1-03	DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	3	5	2	2	7	
M 760	M1-04	DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	3	4	2	1	8	TIMING CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
M 761	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS	3	4	1	1	7	
M 762	M1-06 DO YOU USE OR REFER TO RISE TIME	4	7	1	1	11	
M 763	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME	3	5	1	1	8	
M 764	M1-08 DO YOU USE OR REFER TO SWEEP TIME	17	18	16	14	27	
M 765	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	4	6	1	1	11	
M 766	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	3	5	1	1	10	
M 767	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	3	3	2	1	7	
M 768	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	3	5	0	0	9	
M 769	M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	64	62	68	63	67	
M 770	M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	56	55	57	54	60	
M 771	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL	19	16	24	19	20	USE OF SIGNAL GENERATORS
M 772	M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	14	12	16	12	17	
M 773	M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	2	3	1	1	5	
M 774	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS	55	50	61	53	57	
M 775	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	13	16	10	10	21	
M 776	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH	13	15	10	10	21	
M 777	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	6	8	3	4	11	
M 778	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS	27	31	22	23	36	
M 779	M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	2	3	1	2	3	
M 780	M3-02 DO YOU INSPECT MOTORS	1	1	0	0	2	
M 781	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS	1	1	0	0	2	MOTORS AND GENERATORS
M 782	M3-04 DO YOU OPERATE MOTORS	1	1	0	1	2	
M 783	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS	0	1	0	0	1	
M 784	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS	0	1	0	0	1	
M 785	M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	1	1	0	0	2	
M 786	M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	0	1	0	0	1	
M 787	M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS	1	1	0	0	2	
M 788	M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES	1	1	0	0	2	
M 789	M3-11 DO YOU PERFORM ANY TASKS ON ROTORS	1	1	0	0	2	
M 790	M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES	1	1	0	0	2	
M 791	M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS	1	1	0	0	1	
M 792	M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS	0	1	0	0	1	
M 793	M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES	0	1	0	0	1	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		UY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
M	794	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	0	1	0	0	1	
M	795	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	0	1	0	0	1	
M	796	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	1	1	0	0	2	
M	797	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	1	1	0	0	2	
M	798	M3-20 DO YOU WORK WITH INDUCTION MOTORS	1	1	0	0	2	
M	799	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	0	1	0	0	1	
M	800	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	1	1	0	0	1	
M	801	M3-23 DO YOU INSPECT GENERATORS	1	1	1	1	2	
M	802	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	1	1	0	0	2	
M	803	M3-25 DO YOU OPERATE GENERATORS	2	2	1	2	2	
M	804	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	0	1	0	0	1	
M	805	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	1	1	0	0	1	
M	806	M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS	1	1	0	0	2	
M	807	M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	0	1	0	0	1	
N	808	N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	75	73	76	73	79	
N	809	N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	7	6	8	6	8	METER MOVEMENTS
N	810	N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	8	6	10	8	8	
N	811	N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	7	7	8	7	9	
N	812	N1-05 DO YOU READ METER SCALES	75	73	77	74	79	
N	813	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	21	24	16	17	30	
N	814	N1-07 DO YOU ZERO OHMMETERS	33	30	38	31	39	
N	815	N1-08 DO YOU ZERO AMMETERS	22	23	20	18	30	
N	816	N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	30	30	29	27	37	
N	817	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	17	15	20	16	20	
	818	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	1	1	0	0	1	
N	819	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	1	0	0	1	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N	820	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	1	
N	821	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	1	1	0	0	2	
N	822	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	1	0	0	1	
N	823	N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	1	
N	824	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	0	0	0	0	1	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
N	825	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	0	0	0	0	1	
N	826	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF	0	1	0	0	1	
N	827	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE	0	1	0	0	1	
N	828	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	1	1	0	0	1	
N	829	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	0	0	0	0	1	
N	830	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	0	0	0	0	1	
N	831	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	0	1	0	0	1	
N	832	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	0	1	0	0	1	
N	833	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	0	1	0	0	1	
N	834	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	5	8	2	2	14	
N	835	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	3	5	1	1	9	WAVESHAPING CIRCUITS
N	836	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	4	7	1	1	12	
N	837	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	3	4	1	1	7	
N	838	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	3	4	1	1	8	
N	839	N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	1	2	0	0	4	
N	840	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	2	3	0	0	7	
N	841	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	2	3	0	0	7	
N	842	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT	1	1	0	0	2	
N	843	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	4	6	1	1	11	
N	844	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	1	2	0	0	3	
O	845	O1-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	16	20	12	15	22	
O	846	O1-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	6	9	2	5	10	
O	847	O1-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	1	2	0	0	3	SINGLE SIDEBAND SYSTEMS
O	848	O1-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	3	6	0	1	9	
O	849	O1-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	15	19	11	14	20	
O	850	O1-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	4	5	2	3	7	
O	851	O1-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	4	6	1	2	7	
O	852	O1-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	2	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
0	853	01-09 DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS	5	8	1	3	11	
0	854	01-10 DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS	2	3	0	0	6	
0	855	01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	2	3	0	1	5	
0	856	01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS	1	2	0	0	3	
0	857	01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	1	2	0	0	4	
0	858	01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	1	2	0	0	3	
0	859	01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS	3	5	1	1	8	
0	860	01-16 DO YOU PERFORM TASKS ON SSB MIXERS	2	3	0	0	7	
0	861	01-17 DO YOU PERFORM TASKS ON SSB DRIVERS	1	2	0	0	5	
0	862	01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	1	2	0	0	3	
0	863	01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	2	3	0	1	5	
0	864	01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	3	6	0	2	7	
0	865	01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	2	3	0	1	5	
0	866	01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS	3	5	1	1	9	
0	867	01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES	3	5	0	2	5	
0	868	01-24 DO YOU USE OR REFER TO SELECTIVE FADING	8	10	6	6	14	
0	869	01-25 DO YOU USE OR REFER TO PEAK POWER	7	8	6	5	12	
0	870	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY	10	11	8	8	15	
0	871	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	5	6	3	3	9	
0	872	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS	2	3	1	1	4	
0	873	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS	2	2	1	1	4	
0	874	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	2	2	2	1	4	
0	875	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	6	7	3	4	10	
0	876	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS	2	3	0	1	5	
0	877	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	1	1	0	0	2	PULSE MODULATION SYSTEMS
0	878	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS	1	2	0	0	3	
0	879	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	4	6	1	3	8	
0	880	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	1	2	0	0	4	
0	881	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	1	1	0	0	3	
0	882	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	1	1	0	0	2	
0	883	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	3	5	1	1	9	
0	884	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	2	3	0	0	6	
0	885	02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	3	5	0	1	9	
0	886	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	4	7	1	2	9	
0	887	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	1	1	0	1	2	
0	888	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	1	1	0	0	2	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
0 889	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	1	2	0	0	4	
0 890	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	1	1	0	0	3	
0 891	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	1	2	0	0	4	
0 892	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	1	2	0	0	4	
0 893	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	0	1	0	0	1	
0 894	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	1	2	0	0	4	
0 895	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	1	1	0	0	3	
0 896	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	1	2	0	0	4	
0 897	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	2	3	0	0	5	
0 898	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	1	2	0	0	5	
0 899	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	2	3	0	1	5	
0 900	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	1	1	0	0	3	
0 901	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	1	1	0	0	3	
0 902	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES	1	2	0	0	3	
0 903	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	2	3	0	0	6	
0 904	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	2	3	0	1	6	
0 905	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	3	5	1	1	9	
0 906	02-32 DO YOU USE OR REFER TO PULSE SHAPE	3	5	0	1	7	
0 907	02-33 DO YOU USE OR REFER TO PEAK POWER	2	3	1	1	6	
0 909	02-34 DO YOU USE OR REFER TO AVERAGE POWER	3	4	1	1	7	
0 909	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	1	1	0	0	3	
0 910	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	1	1	1	1	3	
0 911	02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	2	3	1	1	4	
0 912	02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	1	2	0	0	4	
0 913	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	2	2	0	1	4	
0 914	03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	13	16	11	11	20	
0 915	03-02 DO YOU INSPECT ANTENNAS	4	6	0	1	9	ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	QY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
Q 916	03-03 DO YOU CLEAN ANTENNAS	1	1	0	0	2
Q 917	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS	2	3	0	1	3
Q 918	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS	2	2	1	1	4
Q 919	03-06 DO YOU TROUBLESHOOT TO ANTENNAS	7	7	7	6	9
Q 920	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS	1	2	0	1	3
Q 921	03-08 DO YOU REMOVE OR INSTALL ANTENNAS	4	7	0	2	9
Q 922	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS	1	2	0	1	3
Q 923	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES	3	5	0	0	8
Q 924	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES	2	4	0	0	8
Q 925	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS	2	3	0	0	7
Q 926	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	1	2	0	0	3
Q 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	1	2	0	0	3
Q 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	1	1	0	0	3
Q 929	03-16 DO YOU WORK WITH HERTZ ANTENNAS	1	2	0	0	3
Q 930	03-17 DO YOU WORK WITH MARCONI ANTENNAS	1	2	1	1	3
Q 931	03-18 DO YOU WORK WITH BROADSIDE ARRAYS	1	2	0	0	3
Q 932	03-19 DO YOU WORK WITH END-FIRE ARRAYS	1	1	0	0	3
Q 933	03-20 DO YOU WORK WITH CARDIOID ARRAYS	1	1	0	0	2
Q 934	03-21 DO YOU WORK WITH COLLINEAR ARRAYS	1	1	0	0	3
Q 935	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS	2	4	0	0	7
Q 936	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	1	1	0	0	3
Q 937	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS	2	3	1	1	6
Q 938	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS	1	1	0	0	3
Q 939	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION	1	2	0	0	4
Q 940	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD	1	2	0	0	5
Q 941	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED	3	5	1	1	8
Q 942	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED	2	3	0	1	5
Q 943	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON	2	3	0	0	5
Q 944	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	1	1	0	0	3

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
Q	945	03-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	2	2	1	1	3
Q	946	03-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	1	1	1	1	2
Q	947	03-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	2	2	1	1	3
Q	948	03-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	4	5	3	2	8
Q	949	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	9	10	6	7	12
Q	950	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	6	6	6	4	9
Q	951	03-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	2	2	2	1	4
Q	952	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS	2	2	2	2	3
P	953	P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES (TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS	31	35	26	29	38
P	954	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	2	3	1	2	4
P	955	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	5	6	3	3	7
P	956	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	7	9	5	5	14
P	957	P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	6	7	3	3	11
P	958	P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	9	11	6	7	15
P	959	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	18	20	16	16	24
P	960	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	12	15	8	9	20
P	961	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	15	19	9	12	21
P	962	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	20	23	16	17	28
P	963	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	10	13	6	8	16
P	964	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	29	32	24	26	36
P	965	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	9	10	8	8	14
P	966	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	6	7	3	4	9
P	967	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	9	10	8	8	11
P	968	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES	2	3	1	1	5
P	969	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	2	2	1	1	4
P	970	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH	3	3	3	3	4

TRANSMISSION LINES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P 971	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	11	11	11	10	13
P 972	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	2	3	0	1	4
P 973	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	6	6	6	5	10
P 974	P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	9	9	10	9	11
P 975	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	6	6	6	6	7
P 976	P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES	5	6	5	5	7
P 977	P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES	1	2	0	1	3
P 978	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES	2	3	2	2	4
P 979	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES	1	2	0	0	3
P 980	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF	2	2	2	1	3
P 981	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	9	10	8	9	11
P 982	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	7	8	7	6	11
P 983	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	2	2	2	2	3
P 984	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	4	4	4	3	7
P 985	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	3
P 986	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	1
P 987	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	1
P 988	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	1
P 989	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS	0	1	0	0	1
P 990	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	2
P 991	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS	1	2	0	0	3
P 992	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES	0	1	0	0	1
P 993	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS	1	1	0	0	2
P 994	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS	1	1	0	0	3
P 995	P2-12 DO YOU REMOVE OR INSTALL E BENDS	0	1	0	0	1
P 996	P2-13 DO YOU REMOVE OR INSTALL H BENDS	0	1	0	0	1
P 997	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS	1	1	0	0	1
P 998	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS	0	1	0	0	1
P 999	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS	0	1	0	0	1
P1000	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS	1	1	0	0	2
P1001	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS	1	1	0	0	2
P1002	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES	1	1	0	0	3

WAVEGUIDES AND CAVITY RESONATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	QY=TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P1003	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES	1	1	0	0	3
P1004	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES	1	2	0	0	3
P1005	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES	1	2	0	0	3
P1006	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES	1	1	0	0	3
P1007	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS	1	2	0	0	3
P1008	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS	1	2	0	0	3
P1009	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS	1	2	0	0	3
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	1	1	0	0	2
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	1	0	0	1
P1012	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF	1	1	0	0	3
P1013	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION	0	1	0	0	1
P1014	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	1	1	0	0	3
P1015	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES	1	1	0	0	3
P1016	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES	0	1	0	0	1
P1017	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES	0	1	0	0	1
P1018	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1019	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1020	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1021	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	2	0	0	3
P1022	P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED O WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	1
P1023	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	1
P1024	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	1

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
P1025	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES I WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	1	0	0	1	
P1026	P2-43 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	1	
P1027	P2-44 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1	
P1028	P2-45 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	3	
P1029	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING	0	1	0	0	1	
P1030	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING	0	1	0	0	1	
P1031	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING	0	1	0	0	1	
P1032	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER THE METHOD OF TUNING	1	1	0	0	2	
P1033	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS	1	1	0	0	2	
P1034	P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	4	5	3	3	7	
P1035	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	1	2	0	0	3	
P1036	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	1	1	0	0	3	MICROWAVE AMPLIFIERS AND OSCILLATORS
P1037	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE	1	2	0	0	3	
P1038	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY	1	2	0	0	3	
P1039	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION	1	2	0	0	4	
P1040	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING	1	1	0	0	3	
P1041	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS	1	2	0	0	4	
P1042	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS	1	2	0	0	3	
P1043	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS	2	4	0	0	7	
P1044	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)	2	2	1	1	5	
P1045	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS	1	1	0	0	3	
P1046	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS	1	2	1	1	3	
P1047	P3-14 DO YOU WORK WITH MAGNETRONS	1	1	0	0	3	
P1048	P3-15 DO YOU INSPECT KLYSTRONS OR TWT	1	2	0	0	3	
P1049	P3-16 DO YOU CLEAN KLYSTRONS OR TWT	1	1	0	0	2	
P1050	P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY	0	1	0	0	1	
P1051	P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY	1	1	0	0	3	
P1052	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT	1	2	0	0	3	
P1053	P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT	1	2	0	0	4	
P1054	P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT	1	1	0	0	2	
P1055	P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS	1	1	0	0	2	
P1056	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS	1	2	0	0	3	
P1057	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS	1	1	0	0	3	
P1058	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS	1	2	0	0	4	

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P1059	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1060	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1061	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1062	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER	1	1	0	0	3
P1063	P3-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS	1	1	0	0	2
P1064	P3-31 DO YOU INSPECT MAGNETRONS	1	1	0	0	2
P1065	P3-32 DO YOU CLEAN MAGNETRONS	0	1	0	0	1
P1066	P3-33 DO YOU ADJUST MAGNETRONS	1	1	0	0	2
P1067	P3-34 DO YOU TUNE MAGNETRONS	1	1	0	0	2
P1068	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS	1	1	0	0	2
P1069	P3-36 DO YOU TROUBLESHOOT MAGNETRONS	1	1	0	0	2
P1070	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON	0	1	0	0	1
P1071	P3-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS	0	1	0	0	1
P1072	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES	1	1	0	0	2
P1073	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES	1	1	0	0	2
P1074	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS	1	1	0	0	2
P1075	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS	0	1	0	0	1
P1076	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES	0	0	0	0	1
P1077	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS	0	0	0	0	1
P1078	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES	0	0	0	0	1
P1079	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS	1	1	0	0	3
P1080	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES	1	1	0	0	2
P1081	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES	1	1	0	0	3
P1082	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS	1	2	0	0	3
P1083	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS	1	1	0	0	2
P1084	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES	1	2	0	0	3
P1085	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS	1	1	0	0	2
P1086	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS	1	1	0	0	3
P1087	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES	1	2	0	0	3

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
P1088	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS	1	1	0	0	3	
P1089	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS	1	2	0	0	3	
P1090	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	1	1	0	0	3	
P1091	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	1	1	0	0	2	
P1092	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	1	2	0	0	3	
P1093	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES	1	1	0	0	3	
P1094	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS	1	2	0	0	3	
P1095	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS	1	1	0	0	3	
P1096	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS	1	2	0	0	5	
P1097	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS	0	1	0	0	1	
P1098	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES	1	1	0	0	2	
P1099	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES	0	1	0	0	1	
P1100	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES	1	1	0	0	3	
P1101	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS	0	1	0	0	1	
P1102	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES	1	1	0	0	3	
P1103	P3-70 DO YOU PERFORM TASKS ON ANODES	0	1	0	0	1	
P1104	P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS	0	0	0	0	1	
P1105	P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS	0	0	0	0	1	
P1106	P3-73 DO YOU PERFORM TASKS ON HEATER LEADS	0	1	0	0	1	
P1107	P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES	0	1	0	0	1	
P1108	P3-75 DO YOU PERFORM TASKS ON CATHODES	0	1	0	0	1	
P1109	P3-76 DO YOU PERFORM TASKS ON MAGNETS	0	1	0	0	1	
Q1110	Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS	2	3	1	1	5	
Q1111	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	1	2	1	1	2	
Q1112	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	1	1	0	0	2	REGISTERS
Q1113	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	1	1	0	0	2	
Q1114	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	0	1	0	0	1	
Q1115	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	1	1	0	1	1	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
Q1116	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	1	1	0	0	2	
Q1117	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB	16	15	16	13	21	
Q1118	Q2-02 DO YOU USE OR REFER TO DELAY LINES	2	2	2	2	3	STORAGE DEVICES
Q1119	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	5	5	3	4	7	
Q1120	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	7	9	5	6	12	
Q1121	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	8	9	6	6	13	
Q1122	Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OR MEMORY SYSTEMS	5	7	3	4	9	
Q1123	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS	5	7	3	3	11	
Q1124	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS	2	2	1	1	5	
Q1125	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	1	1	0	0	2	
Q1126	Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO-ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D)	17	22	12	13	28	
Q1127	Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT	2	3	0	1	4	
Q1128	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A)	1	2	0	0	3	DIGITAL TO ANALOG CONVERTERS
Q1129	Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	1	2	0	1	3	
Q1130	Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	2	1	1	3	
Q1131	Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	1	0	0	3	
Q1132	Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	1	0	0	3	
Q1133	Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	1	0	0	3	
Q1134	Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER	3	4	1	2	5	
Q1135	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	2	2	1	1	4	
Q1136	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	1	1	0	0	3	
Q1137	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	1	2	0	1	3	
Q1138	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	1	2	1	1	3	
Q1139	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A/D) CONVERTERS	3	4	1	2	5	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-ISK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
R1140	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	0	0	0	0	1	PHANTASTRONS
R1141	R2-01 IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	1	2	0	0	3	
R1142	R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	1	1	0	0	2	SCHMITT TRIGGERS
R1143	R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	1	1	0	0	1	
R1144	R3-01 IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	3	4	1	1	7	
R1145	R3-02 DO YOU FABRICATE COAXIAL CABLES	2	2	1	1	4	CABLE FABRICATION
S1146	S1-01 IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	20	22	17	17	27	
S1147	S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	6	6	7	5	11	INPUT/OUTPUT DEVICES
S1148	S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	1	1	0	0	2	
S1149	S2-01 DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	1	2	0	0	3	PHOTO SENSITIVE DEVICES
S1150	S3-01 IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	0	1	0	0	1	
S1151	S3-02 DO YOU MEASURE EXCITATION FREQUENCIES	0	1	0	0	1	
S1152	S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	0	1	0	0	1	
S1153	S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCIES	0	1	0	0	1	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)
S1154	S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	1	1	0	0	2	
S1155	S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	1	0	0	1	
S1156	S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	1	0	0	1	
S1157	S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	2	0	1	2	
S1158	S3-09 DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	1	0	0	2	
T1159	T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	0	0	0	0	0	
T1160	T1-02 DO YOU INSPECT INFRARED SYSTEMS	0	0	0	0	0	INFRARED
T1161	T1-03 DO YOU CLEAN INFRARED SYSTEMS	0	0	0	0	0	
T1162	T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS	0	0	0	0	0	
T1163	T1-05 DO YOU OPERATE INFRARED SYSTEMS	0	0	0	0	0	
T1164	T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS	0	0	0	0	0	
T1165	T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS	0	0	0	0	0	
T1166	T1-08 DO YOU TROUBLESHOOT DOWN TO INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	
T1167	T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS	0	0	0	0	0	
T1168	T1-10 DO YOU REMOVE OR REPLACE INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
T1169	T1-11	DO YOU USE OR REFER TO FAR REGION	0	0	0	0	0
T1170	T1-12	DO YOU USE OR REFER TO INTERMEDIATE REGION	0	0	0	0	0
T1171	T1-13	DO YOU USE OR REFER TO NEAR REGION	0	0	0	0	0
T1172	T1-14	DO YOU USE OR REFER TO MICRON	0	0	0	0	0
T1173	T1-15	DO YOU USE OR REFER TO GRAY BODIES	0	0	0	0	0
T1174	T1-16	DO YOU USE OR REFER TO BLACK BODIES	0	0	0	0	0
T1175	T1-17	DO YOU USE OR REFER TO ABSORPTION	0	0	0	0	0
T1176	T1-18	DO YOU USE OR REFER TO SCATTERING	0	0	0	0	0
T1177	T1-19	DO YOU USE OR REFER TO ABSOLUTE ZERO	0	0	0	0	0
T1178	T1-20	DO YOU PERFORM TASKS ON BLITZ	0	0	0	0	0
T1179	T1-21	DO YOU PERFORM TASKS ON TARGET BUTTONS	0	0	0	0	0
T1180	T1-22	DO YOU PERFORM TASKS ON ERECTOR LENSES	0	0	0	0	0
T1181	T1-23	DO YOU PERFORM TASKS ON OCULAR LENSES	0	0	0	0	0
T1182	T1-24	DO YOU PERFORM TASKS ON CORRECTION LENSES	0	0	0	0	0
T1183	T1-25	DO YOU PERFORM TASKS ON FILTERS	0	0	0	0	0
T1184	T1-26	DO YOU PERFORM TASKS ON SPHERICAL MIRRORS	0	0	0	0	0
T1185	T1-27	DO YOU PERFORM TASKS ON PLANE MIRRORS	0	0	0	0	0
T1186	T2-01	DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS	0	0	0	0	1
T1187	T2-02	DO YOU INSPECT LASER SYSTEMS	0	0	0	0	0
T1188	T2-03	DO YOU CLEAN LASER SYSTEMS	0	0	0	0	0
T1189	T2-04	DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0
T1190	T2-05	DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0
T1191	T2-06	DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASER SYSTEMS	0	0	0	0	0
T1192	T2-07	DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASER SYSTEMS	0	0	0	0	0
T1193	T2-08	DO YOU TROUBLESHOOT TO COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0
T1194	T2-09	DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASER SYSTEMS	0	0	0	0	0
T1195	T2-10	DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0
T1196	T2-11	DO YOU USE OR REFER TO ANGSTROMS (A)	0	0	0	0	0
T1197	T2-12	DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS	0	0	0	0	0
T1198	T2-13	DO YOU USE OR REFER TO GROUND STATE	0	0	0	0	0
T1199	T2-14	DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0
T1200	T2-15	DO YOU USE OR REFER TO PACKET OF RADIATION	0	0	0	0	0
T1201	T2-16	DO YOU USE OR REFER TO PHOTONS	0	0	0	0	0
T1202	T2-17	DO YOU USE OR REFER TO SPONTANEOUS EMISSION	0	0	0	0	0
T1203	T2-18	DO YOU USE OR REFER TO STIMULATED EMISSION	0	0	0	0	0
T1204	T2-19	DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE	0	0	0	0	0
T1205	T2-20	DO YOU USE OR REFER TO INVERSION LEVEL	0	0	0	0	0
T1206	T2-21	DO YOU USE OR REFER TO MONOCHROMATIC	0	0	0	0	0
T1207	T2-22	DO YOU WORK WITH ACTIVE MATERIALS	0	0	0	0	0
T1208	T2-23	DO YOU WORK WITH PUMPING SOURCES	0	0	0	0	0
T1209	T2-24	DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS	0	0	0	0	0

LASERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
T1210	T2-25 DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS	0	0	0	0	0	
T1211	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES	0	0	0	0	0	
T1212	T2-27 DO YOU WORK WITH RUBY	0	0	0	0	0	
T1213	T2-28 DO YOU WORK WITH HELIUM-NEON	0	0	0	0	0	
T1214	T2-29 DO YOU WORK WITH HELIUM-XENON	0	0	0	0	0	
T1215	T2-30 DO YOU WORK WITH XENON	0	0	0	0	0	
T1216	T2-31 DO YOU WORK WITH CESIUM-HELIUM	0	0	0	0	0	
T1217	T2-32 DO YOU WORK WITH ARGON	0	0	0	0	0	
T1218	T2-33 DO YOU WORK WITH NEODYMIUM IN GLASS	0	0	0	0	0	
T1219	T2-34 DO YOU WORK WITH GALLIUM ARSENIDE	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	1	0	0	3	
T1221	T3-02 DO YOU INSPECT DVST OR MMST	0	0	0	0	0	
T1222	T3-03 DO YOU CLEAN DVST OR MMST	0	0	0	0	0	DISPLAY TUBES
T1223	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST	0	0	0	0	0	
T1224	T3-05 DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	1	1	0	0	2	
T1225	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS	0	0	0	0	0	
T1226	T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	0	0	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	
T1228	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MMST	0	0	0	0	0	
T1229	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS	0	0	0	0	0	
T1230	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS	0	0	0	0	0	
T1231	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS	0	0	0	0	0	
T1232	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS	0	0	0	0	0	
T1233	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS	0	0	0	0	0	
U1234	U1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS	4	6	1	3	4	
U1235	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS	2	2	0	1	2	
U1236	U1-03 DO YOU USE OR REFER TO PROGRAMS	3	4	1	3	3	PROGRAMMING
U1237	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS	0	1	0	0	1	
U1238	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	1	1	0	0	2	
U1239	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS	0	1	0	0	1	
U1240	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS	3	5	1	3	3	
U1241	U1-08 DO YOU USE OR REFER TO TIME-SHARING	1	2	0	1	3	
U1242	U1-09 DO YOU USE OR REFER TO DATA WORDS	3	4	1	2	3	
U1243	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS	2	3	1	2	3	
U1244	U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	2	2	0	1	3	
U1245	U1-12 DO YOU USE OR REFER TO STEERING/INFORMATION	1	1	0	0	2	
U1246	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS	2	3	1	2	3	
U1247	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	2	3	0	1	2	
U1248	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	1	2	0	1	1	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY=TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
U1249	U1=16 DO YOU PERFORM TASKS ON INPUT DEVICES	1	1	0	1	2	
U1250	U1=17 DO YOU PERFORM TASKS ON STORAGE DEVICES	1	1	0	1	2	
U1251	U1=18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	0	0	0	0	1	
U1252	U1=19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	1	2	0	1	3	
U1253	U1=20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	1	1	0	1	1	
U1254	U1=21 DO YOU PERFORM TASKS ON POWER SUPPLIES	1	1	0	0	1	
U1255	U2=01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	74	72	76	72	80	
U1256	U2=02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	31	22	43	33	28	DB AND POWER RATIOS
U1257	U2=03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	30	23	39	31	28	
U1258	U2=04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	3	2	3	3	2	

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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 Electronic Principles Inventory to airmen assigned to Telecommunications Systems Control Specialty (AFSC 307X). 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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This specialty has the following functions:

Superintends telecommunications systems technical operations and control facilities. Plans and organizes telecommunications systems control activities. Directs technical telecommunications systems control activities. Establishes and conducts on-the-job training for telecommunications systems control personnel. Inspects and evaluates telecommunications systems control activities.