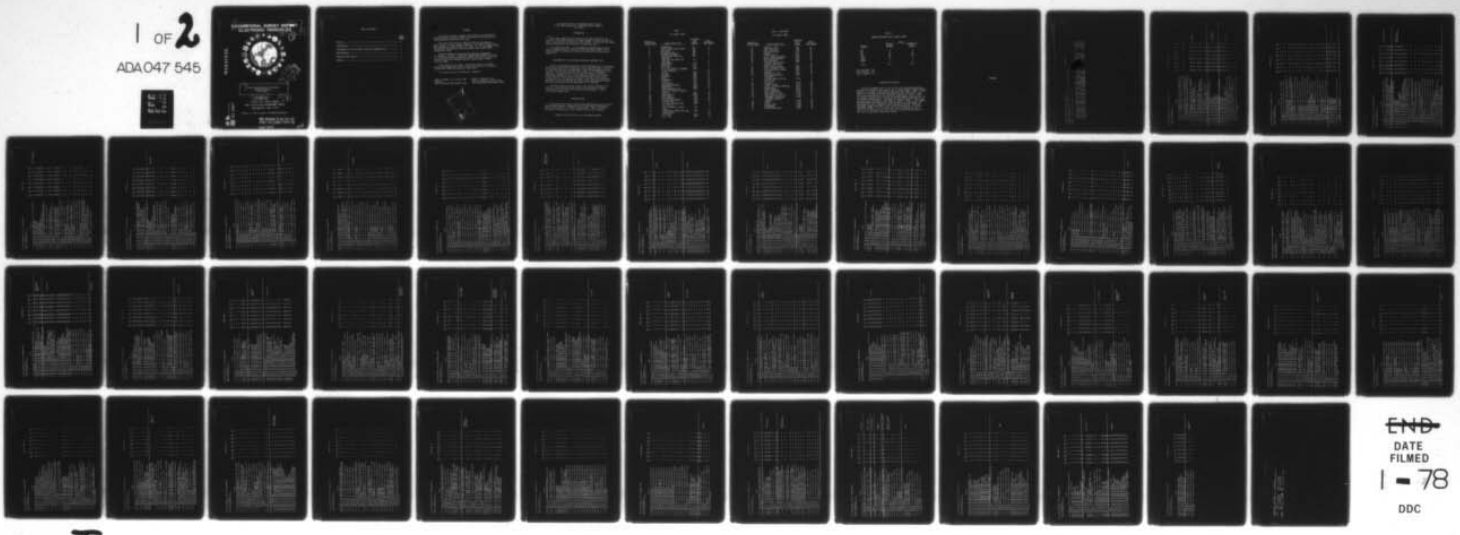
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OCCUPATIONAL SURVEY REPORT
ELECTRONIC PRINCIPLES



DIGITAL NAVIGATION/TACTICS TRAINING
DEVICES SPECIALIST
AFSC 34156

AFPT-90-341-222
25 AUGUST 1977

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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PREFACE

This report presents a summary of the results of a detailed Air Force Electronic Principles Survey of the Digital Navigation/Tactics Training Devices Specialist, AFSC 34156.

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 Frederick B. Bower, Jr. 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
DIGITAL NAVIGATION/TACTICS TRAINING DEVICES SPECIALIST
AFSC 34156

INTRODUCTION

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned as Digital Navigation/ Tactics Training Devices Specialists (AFSC 34156). The data for this report were collected during the period April through June 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 34156 airmen worldwide. Responses from 105 individuals represented 74 percent of the total of all AFSC 34156 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	2
2	DIRECT CURRENT AND VOLTAGE	A15	2
3	RESISTANCE	A24	2
4	MULTIMETER USES	B52	3
5	ALTERNATING CURRENT	B61	4
6	INDUCTORS AND INDUCTIVE REACTANCE	B67	4
7	CAPACITORS AND CAPACITIVE REACTANCE	C92	5
8	TRANSFORMERS	C128	6
9	MAGNETISM	C171	7
10	RCL CIRCUITS	D185	8
11	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)	D229	10
12	FILTERS	D239	10
13	COUPLING	E261	11
14	SOLDERING	E273	11
15	RELAYS	E295	12
16	MICROPHONES	F314	12
17	SPEAKERS	F327	13
18	OSCILLOSCOPES	F342	13
19	SEMICONDUCTOR DIODES	G354	13
20	TRANSISTORS	G404	15
21	TRANSISTOR AMPLIFIERS	G428	16
22	SOLID-STATE SPECIAL PURPOSE DEVICES	H477	19
23	POWER SUPPLIES	H483	19
24	OSCILLATORS	H512	19
25	MULTIVIBRATORS	I539	20
26	LIMITERS AND CLAMPERS	I555	21
27	ELECTRON TUBES	I565	21
28	ELECTRON TUBE AMPLIFIERS AND CIRCUITS	J609	22
29	SPECIAL PURPOSE ELECTRON TUBES	J616	23
30	HETERODYNING, MODULATION, AND DEMODULATION	J632	23
31	AM SYSTEMS	K638	23
32	FM SYSTEMS	K666	24

TABLE 1 (CONTINUED)

EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER	GPSUM PAGE NUMBER
33	NUMBERING SYSTEMS	K685	25
34	LOGIC FUNCTIONS	L695	25
35	BOOLEAN EQUATIONS	L708	26
36	COUNTERS	L733	27
37	TIMING CIRCUITS	M757	27
38	USE OF SIGNAL GENERATORS	M769	28
39	MOTORS AND GENERATORS	M779	28
40	METER MOVEMENTS	N808	29
41	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS	N818	29
42	WAVESHAPING CIRCUITS	N834	30
43	SINGLE SIDEBAND SYSTEMS	0845	30
44	PULSE MODULATION SYSTEMS	0875	31
45	ANTENNAS	0914	32
46	TRANSMISSION LINES	P953	34
47	WAVEGUIDES AND CAVITY RESONATORS	P984	35
48	MICROWAVE AMPLIFIERS AND OSCILLATORS	P1034	37
49	REGISTERS	Q1110	39
50	STORAGE DEVICES	Q1117	40
51	DIGITAL TO ANALOG CONVERTERS	Q1126	40
52	PHANTASTRONS	Q1140	41
53	SCHMITT TRIGGERS	R1141	41
54	CABLE FABRICATION	R1144	41
55	INPUT/OUTPUT DEVICES	S1146	41
56	PHOTO SENSITIVE DEVICES	S1149	41
57	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)	S1150	41
58	INFRARED	T1159	41
59	LASERS	T1186	42
60	DISPLAY TUBES	T1220	43
61	PROGRAMMING	U1234	43
62	DB AND POWER RATIOS	U1255	44

TABLE 2

COMMAND REPRESENTATION OF SURVEY SAMPLE

	34156	
COMMAND	PERCENT ASSIGNED	PERCENT OF SAMPLE
ATC	5	7
MAC	3	5
SAC	22	24
TAC	56	59
USAFE	12	2
PACAF	2	1
OTHER	-	2
TOTAL	100	100

Total Assigned - 146
Total Sampled - 105
Percent Sampled - 74%

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 1 of the GPSUM lists the eight selected groups identified for this report. Pages 2-44 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 6-7 of the GPSUM. The percentage of survey respondents indicating use of specific electronic principles ranged from high in areas such as Soldering (pp. 11-12) and Numbering Systems (p. 25) to low in areas such as Infrared and Lasers (pp. 41-43). Additional AFSC 34156 data can be obtained upon request to the Chief, Occupational Survey Branch (OMY).

APPENDIX

TABULATION OF ELECTRONIC PRINCIPLES UTILIZATION DATA FOR SELECTED GROUPS
IN THE 34156 CAMEEM FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	SPC126	ALL AIRMEN DAFSC 34156	CONTAINING	105 MEMBERS.
GROUP IDENTITY =	SPC127	ALL AIRMEN DAFSC 34156 STATIONED IN CON	CONTAINING	100 MEMBERS.
GROUP IDENTITY =	SPC128	ALL AIRMEN DAFSC 34156 STATIONED OVERSEA	CONTAINING	5 MEMBERS.
GROUP IDENTITY =	SPC129	ALL AIRMEN DAFSC 34156 ASSIGNED TO AIC	CONTAINING	7 MEMBERS.
GROUP IDENTITY =	SPC130	ALL AMN DAFSC 34156 ASSIGNED TO MAC	CONTAINING	6 MEMBERS.
GROUP IDENTITY =	SPC131	ALL AMN DAFSC 34156 ASSIGNED TO SAC	CONTAINING	25 MEMBERS.
GROUP IDENTITY =	SPC132	ALL AMN DAFSC 34156 ASSIGNED TO TAC	CONTAINING	64 MEMBERS.
GROUP IDENTITY =	SPC133	ALL AMN DAFSC 34156 ASSIGNED TO USAFE	CONTAINING	2 MEMBERS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
A	1	A1-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO AMPLIFY OR ATTENUATE VOLTAGE, RESISTANCE, ETC., BY POWERS OF 10.	94	94	100	86	100	92	95	100	
A	2	A1-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU TO MULTIPLY OR DIVIDE BY A POWER OF 10 BEFORE YOU CAN APPLY THE INFORMATION FROM THE PUBLICATION IN A USEFUL WAY ON THE JOB.	55	53	100	14	50	56	56	100	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	63	62	80	29	50	80	60	50	
A	4	A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	37	35	80	29	17	36	37	50	
A	5	A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	46	44	80	29	17	52	45	50	MATHEMATICS
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	23	20	60	29	0	28	18	50	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	27	24	80	29	0	32	23	50	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	25	23	60	14	0	24	26	0	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	19	16	80	14	0	20	16	50	
A	10	A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	46	44	80	43	0	48	47	50	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	72	72	80	71	33	92	68	50	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	27	27	20	14	0	32	29	0	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	27	25	60	14	0	28	27	0	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	45	44	60	43	17	60	41	0	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	99	99	100	86	100	100	100	100	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	58	58	60	57	83	52	58	0	
A	17	A2-03 DO YOU USE THE TERM OHM.	97	97	100	86	100	100	97	100	
A	18	A2-04 DO YOU USE THE TERM ION.	29	27	60	14	17	28	29	0	DIRECT CURRENT AND VOLTAGE
A	19	A2-05 DO YOU USE THE TERM DYNE.	19	19	20	14	17	24	18	0	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	96	96	100	86	100	100	95	100	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	24	23	40	29	17	36	18	0	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	31	31	40	14	33	40	29	0	
A	23	A2-09 DO YOU USE THE TERM PROTON.	23	24	40	29	17	32	18	0	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	88	89	60	71	100	92	89	50	
A	25	A3-02 DO YOU INSPECT RESISTORS.	90	90	100	86	83	88	92	100	
A	26	A3-03 DO YOU CLEAN RESISTORS.	72	72	80	57	83	64	76	50	
A	27	A3-04 DO YOU ADJUST RESISTORS.	90	91	80	86	83	96	90	50	
A	28	A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.	94	94	100	86	100	96	94	100	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	95	95	100	86	100	96	95	100	RESISTANCE
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	41	40	60	43	50	56	32	50	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	95	95	100	86	100	96	95	100	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR POTENTIOMETER.	90	90	100	71	83	96	90	100	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	94	94	100	71	83	96	97	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	92	92	100	71	83	96	94	100	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	31	31	40	14	50	36	29	0	
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO ACHIEVE A SPECIFIC VOLTAGE.	43	44	20	29	67	64	35	50	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	96	96	100	86	100	96	97	100	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	72	71	100	43	50	84	71	100	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	70	68	100	43	50	84	66	100	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	78	77	100	43	50	76	84	100	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	58	57	80	43	67	76	50	100	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	72	71	100	43	50	84	71	100	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	70	69	100	43	50	84	68	100	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	73	72	100	43	50	80	74	100	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	65	63	100	43	50	68	65	100	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	59	58	80	43	50	76	53	100	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	67	65	100	43	50	80	63	100	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	66	64	100	43	50	80	61	100	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	69	67	100	43	50	76	68	100	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	62	60	100	43	50	68	60	100	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	58	57	80	43	50	76	52	100	
B	52	B1-01 DO YOU MEASURE RESISTANCE.	98	96	100	86	100	100	98	100	
B	53	B1-02 DO YOU REPAIR OHMMETERS.	15	16	0	29	17	20	13	0	
B	54	B1-03 DO YOU MEASURE VOLTAGE.	99	99	100	86	100	100	100	100	
B	55	B1-04 DO YOU REPAIR VOLTMETERS.	10	11	0	14	0	20	8	0	MULTIMETER USES
B	56	B1-05 DO YOU REPAIR AMMETERS.	11	12	0	14	0	20	10	0	
B	57	B1-06 DO YOU MEASURE CURRENT.	93	93	100	71	83	100	94	100	
B	58	B1-07 DO YOU USE MULTIMETERS.	90	97	80	71	100	100	98	100	
B	59	B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	6	6	0	14	0	4	6	0	
B	60	B1-09 DO YOU READ SCHEMATICS.	98	98	100	71	100	100	100	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DT-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
B	61	B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	76	75	100	43	67	80	77	100	ALTERNATING CURRENT
B	62	B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	94	94	100	86	100	92	95	100	
B	63	B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	79	78	100	57	100	88	74	100	
B	64	B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	72	74	40	0	83	92	74	50	
B	65	B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.	95	95	100	86	100	92	97	100	
B	66	B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	48	46	80	57	67	40	45	50	
B	67	B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	68	67	80	71	33	68	69	100	
B	68	B3-02 DO YOU INSPECT INDUCTORS.	56	56	60	43	17	68	56	50	
B	69	B3-03 DO YOU CLEAN INDUCTORS.	40	41	20	43	17	48	40	50	INDUCTORS AND INDUCTIVE REACTANCE
B	70	B3-04 DO YOU ADJUST INDUCTORS.	46	44	80	57	17	68	35	100	
B	71	B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	63	62	80	57	17	72	63	100	
B	72	B3-06 DO YOU USE OR REFER TO INDUCTANCE.	58	58	60	71	17	64	58	50	
B	73	B3-07 DO YOU USE OR REFER TO HENRIES.	43	42	60	43	17	44	44	50	
B	74	B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	46	45	60	43	17	52	45	50	
B	75	B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	10	11	0	0	0	16	11	0	
B	76	B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	21	22	0	29	0	36	18	0	
B	77	B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS	17	18	0	14	0	28	16	0	
B	78	B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF TURNS OF THE COIL.	15	16	0	14	0	24	16	0	
B	79	B3-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE CROSS SECTIONAL AREA OF THE CORE.	14	15	0	14	0	16	16	0	
B	80	B3-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS LENGTH.	17	18	0	14	0	28	16	0	
B	81	B3-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE PERMEABILITY OF THE CORE MATERIAL.	17	18	0	14	0	28	16	0	
B	82	B3-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	17	18	0	29	0	32	13	0	
B	83	B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	19	20	0	29	0	32	16	0	
B	84	B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	19	20	0	29	0	32	16	0	
B	85	B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	21	20	40	29	0	32	16	0	
B	86	B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	30	30	40	29	0	40	29	0	
B	87	B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	22	21	40	29	0	32	18	0	
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	25	24	40	29	0	32	23	0	
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	40	41	20	43	0	40	37	50	
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	43	42	60	29	17	52	42	50	
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	29	29	20	43	17	32	27	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	90	90	100	86	83	88	92	100	CAPACITORS AND CAPACITIVE REACTANCE
C	93	C1-02 DO YOU INSPECT CAPACITORS.	89	89	80	57	83	88	94	50	
C	94	C1-03 DO YOU CLEAN CAPACITORS.	61	62	40	43	67	56	66	50	
C	95	C1-04 DO YOU ADJUST CAPACITORS.	63	62	80	57	83	60	61	50	
C	96	C1-05 DO YOU TEST CAPACITORS.	84	83	100	43	67	92	85	100	
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	90	90	100	43	83	96	94	100	
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	95	95	100	57	100	100	97	100	
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	34	33	60	43	33	44	27	50	
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	5	5	0	0	17	8	3	0	
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	91	91	100	57	100	92	94	100	
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	90	90	100	71	100	92	90	100	
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT	23	24	0	29	33	28	21	0	
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS	86	85	100	71	83	92	84	100	
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE	51	51	60	57	33	60	48	0	
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES	38	35	100	29	33	52	29	100	
C	107	C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	96	96	100	86	100	100	95	100	
C	108	C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	89	88	100	71	100	92	87	100	
C	109	C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC	84	83	100	71	100	92	79	100	
C	110	C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	10	11	0	14	17	8	11	0	
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	22	20	60	29	0	36	15	50	
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE DIELECTRIC CONSTANT	12	13	0	14	0	20	11	0	
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO THE DIELECTRIC THICKNESS	13	14	0	14	0	20	13	0	
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	35	33	80	29	17	32	36	100	
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	36	36	60	29	33	36	37	100	
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	33	31	80	29	0	32	34	100	
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	44	44	40	43	50	48	42	100	
C	118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS	35	35	40	29	0	48	34	0	
C	119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO FREQUENCY	27	26	40	29	17	32	24	0	
C	120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE	21	20	40	29	0	28	18	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	44	44	40	71	33	56	37	50	
C 122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	44	43	60	29	50	56	39	50	
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	93	93	100	86	100	96	92	100	
C 124	C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS	81	80	100	86	100	80	77	100	
C 125	C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS	85	84	100	86	100	88	81	100	
C 126	C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	85	84	100	86	100	88	81	100	
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	13	13	20	0	17	16	13	0	
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	80	80	80	71	67	84	81	100	
C 129	C2-02 DO YOU INSPECT TRANSFORMERS	77	76	100	57	67	76	79	100	
C 130	C2-03 DO YOU CLEAN TRANSFORMERS	54	56	20	29	67	48	61	50	
C 131	C2-04 DO YOU ADJUST TRANSFORMERS	44	46	0	57	0	60	44	0	TRANSFORMERS
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS	77	77	80	57	33	76	84	50	
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	87	86	100	71	67	96	85	100	
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	11	12	0	0	0	16	13	0	
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	8	8	0	0	0	8	10	0	
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	10	11	0	14	0	12	11	0	
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	19	20	0	14	0	28	19	0	
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	20	21	0	29	0	24	21	0	
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	13	14	0	14	0	20	13	0	
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	11	12	0	14	0	12	13	0	
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS	36	36	40	0	0	40	42	50	
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS	83	82	100	71	67	92	81	100	
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS	61	60	80	57	50	68	58	50	
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	38	39	20	29	50	48	35	0	
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	10	11	0	0	17	8	13	0	
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	78	77	100	57	50	84	79	100	
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	72	71	100	57	50	76	73	100	
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	61	61	60	43	67	76	56	0	
C 149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN TURNS RATIO	40	40	40	14	0	60	39	0	
C 150	C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN TURNS RATIO	51	51	60	29	33	76	45	50	
C 151	C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	84	83	100	71	67	84	85	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
C 152	C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	70	68	100	43	67	72	69	100	
C 153	C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	74	73	100	57	67	76	74	100	
C 154	C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	75	74	100	57	67	76	76	100	
C 155	C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	44	44	40	14	33	56	44	50	
C 156	C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	52	50	100	29	50	64	47	100	
C 157	C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	63	61	100	57	67	64	60	100	
C 158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING SCHEMATIC SYMBOLS	46	45	60	29	17	56	45	50	
C 159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	24	24	20	29	0	28	24	0	
C 160	C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO	28	28	20	29	0	28	31	50	
C 161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	48	47	60	29	17	60	47	50	
C 162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	21	22	0	29	0	24	23	0	
C 163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	20	21	0	29	0	20	19	0	
C 164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	47	46	60	43	0	56	47	50	
C 165	C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS	39	38	60	43	17	52	34	50	
C 166	C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	24	25	0	29	0	36	23	0	
C 167	C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS	23	24	0	29	0	24	26	0	
C 168	C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	38	38	40	57	17	48	34	0	
C 169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	41	40	60	57	17	56	34	50	
C 170	C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	9	9	0	0	17	16	6	0	
C 171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS	37	36	60	0	17	44	39	50	MAGNETISM
C 172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS	40	39	60	0	17	52	40	50	
C 173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	23	22	40	0	0	28	24	0	
C 174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	21	20	40	0	0	28	21	0	
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	23	22	40	0	0	28	24	0	
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM	25	23	60	14	0	28	24	50	
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX	30	29	40	14	0	40	29	0	
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	9	8	20	0	0	12	6	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DI-TASK	SPC 126	SPC 127	SPC 130	SPC 127	SPC 132	SPC 131	SPC 134	SPC 133	
C	179	C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	8	6	40	0	0	8	6	0	
C	180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	24	22	60	0	0	36	21	50	
C	181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY	25	24	40	14	0	40	21	50	
C	182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	49	48	60	14	0	68	48	50	
C	183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	26	25	40	0	17	44	21	0	
C	184	C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	25	24	40	0	17	40	21	0	
D	185	DI-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	72	72	60	57	17	76	79	100	
D	186	DI-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	30	29	40	14	0	48	26	0	RCL CIRCUITS
D	187	DI-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	28	27	40	14	0	48	23	0	
D	188	DI-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	46	45	60	14	0	72	42	50	
D	189	DI-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	45	44	60	14	0	72	40	50	
D	190	DI-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	40	40	40	14	0	64	37	0	
D	191	DI-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	43	42	60	29	0	64	39	50	
D	192	DI-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	24	25	0	14	0	36	24	0	
D	193	DI-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	24	25	0	14	0	36	24	0	
D	194	DI-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	25	26	0	14	0	36	26	0	
D	195	DI-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	19	20	0	0	0	32	19	0	
D	196	DI-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	22	23	0	14	0	32	23	0	
D	197	DI-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	40	39	60	14	0	56	39	50	
D	198	DI-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	41	41	40	14	0	52	44	0	
D	199	DI-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	34	34	40	14	0	52	32	0	
D	200	DI-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	37	36	60	14	0	48	37	50	
D	201	DI-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	21	21	20	14	0	40	16	0	
D	202	DI-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	28	27	40	0	0	48	24	50	
D	203	DI-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	23	22	40	14	0	40	18	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	46	44	60	14	17	52	47	100
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	29	28	40	14	17	44	24	50
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	14	14	20	14	0	28	10	50
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	22	21	40	14	0	32	19	0
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	15	16	0	0	0	28	15	0
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	19	18	40	14	0	28	16	0
D 210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	10	11	0	0	0	20	10	0
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	12	13	0	0	0	28	10	0
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	18	19	0	14	0	32	16	0
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	16	17	0	14	0	32	13	0
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	24	23	40	14	0	36	21	0
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	12	12	20	0	0	24	10	0
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	14	13	40	14	0	24	10	0
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	22	21	40	14	0	32	19	0
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	66	65	80	57	33	68	64	100
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	42	43	20	57	33	52	39	0
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	55	54	80	57	33	64	52	100
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	37	38	20	57	33	52	31	0
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	7	7	0	0	0	12	6	0
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	19	18	40	14	17	32	13	0
D 224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT FREQUENCY FOR SERIES RCL CIRCUITS	22	21	40	14	0	36	18	0
D 225	D1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT FREQUENCY FOR PARALLEL RCL CIRCUITS	19	18	40	14	0	32	15	0
D 226	D1-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE	26	27	0	14	0	44	24	0
D 227	D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q	16	17	0	14	0	32	13	-
D 228	D1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE ANGLES FOR RCL CIRCUITS	21	20	40	0	0	36	18	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
D 229	D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS	39	37	80	29	0	44	39	50	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)
D 230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	33	31	80	29	0	48	27	50	
D 231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	23	21	60	14	0	28	21	0	
D 232	D3-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	18	16	60	29	0	28	11	0	
D 233	D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE (5) TIME CONSTANTS (TC)	30	27	80	14	0	52	21	50	
D 234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	13	11	60	0	0	28	6	0	
D 235	D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC TIME FOR RC OR LR CIRCUITS	12	9	80	0	0	32	2	50	
D 236	D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO REACH SPECIFIC VALUES FOR RC OR LR CIRCUITS	12	10	60	0	0	32	3	0	
D 237	D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND COMPONENT VOLTAGES TO REACH SPECIFIC VALUES IN SPECIFIC TIMES	11	9	60	0	0	28	3	50	
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 FIVE (5) TIME CONSTANTS	18	17	40	0	0	40	11	50	
D 239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	76	76	80	71	33	80	79	100	FILTERS
D 240	D3-02 DO YOU INSPECT FILTER CIRCUITS	67	66	80	43	33	76	68	100	
D 241	D3-03 DO YOU CLEAN FILTER CIRCUITS	47	48	20	29	17	52	52	50	
D 242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	58	58	60	43	33	68	58	50	
D 243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	65	65	60	29	33	80	66	50	
D 244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	67	66	80	43	33	80	66	100	
D 245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	70	70	80	43	33	80	73	100	
D 246	D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	61	60	80	29	33	76	60	100	
D 247	D3-09 DO YOU WORK WITH LOW PASS FILTERS	55	56	40	43	17	56	61	0	
D 248	D3-10 DO YOU WORK WITH HIGH PASS FILTERS	54	55	40	43	17	56	62	0	
D 249	D3-11 DO YOU WORK WITH BANDPASS FILTERS	42	42	40	29	17	52	42	0	
D 250	D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	39	39	40	29	17	40	42	0	
D 251	D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	27	26	40	14	17	28	27	100	
D 252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	39	40	20	43	0	52	39	50	
D 253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	41	40	60	43	0	52	39	50	
D 254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	37	35	80	29	0	40	37	100	
D 255	D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	26	27	0	14	33	32	26	0	
D 256	D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	32	31	60	43	0	36	31	50	
D 257	D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	35	34	60	43	0	44	32	50	
D 258	D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	30	28	60	29	0	36	27	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
D 259	D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	32	34	0	14	33	36	35	0	
D 260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC FILTERS	14	13	40	29	0	28	6	0	
E 261	E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	63	62	80	43	33	68	65	50	
E 262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC COUPLING	61	59	100	29	17	68	63	100	COUPLING
E 263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH IMPEDANCE COUPLING	50	47	100	29	17	48	52	100	
E 264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH TRANSFORMER COUPLING	57	55	100	29	17	56	61	100	
E 265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	60	59	80	14	17	68	65	50	
E 266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	50	48	80	14	17	52	53	50	
E 267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	55	54	80	14	17	56	61	50	
E 268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	57	55	100	43	17	60	58	100	
E 269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	55	53	100	43	17	56	56	100	
E 270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	45	42	100	29	17	44	45	100	
E 271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	53	52	80	43	17	52	56	50	
E 272	E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	15	16	0	0	33	16	16	0	
E 273	E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	94	94	100	71	100	92	97	100	
E 274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	78	77	100	57	100	68	73	100	
E 275	E2-03 DO YOU ADD FLUX TO CONNECTIONS	81	81	80	71	100	60	89	50	SOLDERING
E 276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	91	91	100	71	100	92	92	100	
E 277	E2-05 DO YOU STRIP INSULATION FROM WIRES	96	96	100	71	100	96	98	100	
E 278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	94	94	100	71	100	96	96	100	
E 279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	95	95	100	71	100	96	97	100	
E 280	E2-08 DO YOU CUT WIRES	94	94	100	71	100	92	97	100	
E 281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	63	62	80	43	67	68	61	50	
E 282	E2-10 DO YOU TIN SOLDERING IRON TIPS	94	94	100	71	100	96	95	100	
E 283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS	94	94	100	71	100	96	95	100	
E 284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	87	86	100	71	100	92	84	100	
E 285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	95	95	100	71	100	96	97	100	
E 286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	93	93	100	71	100	92	95	100	
E 287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	60	59	80	57	67	52	61	50	
E 288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS	93	93	100	71	83	96	95	100	
E 289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	86	85	100	71	83	88	85	100	
E 290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	41	38	100	14	67	40	37	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
E 291	E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	91	91	100	71	100	92	92	100	
E 292	E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	95	95	100	71	100	96	97	100	
E 293	E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS	96	96	100	71	100	96	98	100	
E 294	E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS	96	96	100	71	100	96	98	100	
E 295	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	90	90	100	86	67	96	90	100	
E 296	E3-02 DO YOU ADJUST RELAYS	47	48	20	43	50	68	40	50	
E 297	E3-03 DO YOU CLEAN RELAYS	60	61	40	29	33	80	60	50	
E 298	E3-04 DO YOU INSPECT RELAYS	80	81	60	71	67	88	81	100	RELAYS
E 299	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	92	92	100	86	83	96	92	100	
E 300	E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	24	23	40	0	17	28	24	100	
E 301	E3-07 DO YOU TROUBLESHOOT RELAYS	82	82	80	43	50	92	85	50	
E 302	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	51	53	20	29	50	56	55	50	
E 303	E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	52	54	20	29	33	60	56	50	
E 304	E3-10 DO YOU PERFORM TASKS ON RELAY CORES	12	13	0	14	0	24	10	0	
E 305	E3-11 DO YOU PERFORM TASKS ON RELAY COILS	16	16	20	14	0	24	15	50	
E 306	E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	19	19	20	14	0	28	18	50	
E 307	E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	27	28	0	14	0	40	27	0	
E 308	E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS	77	76	100	86	67	76	76	100	
E 309	E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS	76	75	100	86	67	72	76	100	
E 310	E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS	71	70	100	86	67	68	69	100	
E 311	E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS	72	71	100	86	67	68	71	100	
E 312	E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS	69	67	100	43	83	72	66	100	
E 313	E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE	69	67	100	43	50	84	65	100	
F 314	F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES	83	82	100	29	83	92	84	100	
F 315	F1-02 DO YOU INSPECT MICROPHONES	73	72	100	29	67	84	73	100	
F 316	F1-03 DO YOU CLEAN MICROPHONES	67	66	80	29	67	80	65	100	
F 317	F1-04 DO YOU OPERATE MICROPHONES	84	83	100	29	83	92	85	100	MICROPHONES
F 318	F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OR MICROPHONES	64	65	40	29	50	76	66	0	
F 319	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	35	34	60	0	50	36	35	100	
F 320	F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	78	77	100	29	83	92	76	100	
F 321	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	39	37	80	0	50	36	40	100	
F 322	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	38	36	80	14	50	28	40	100	
F 323	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	11	12	0	0	0	28	8	0	
F 324	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	16	16	20	0	0	32	13	50	
F 325	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	48	46	80	29	17	68	42	50	
F 326	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	5	5	0	0	0	16	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
F 327	F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	69	67	100	29	50	72	71	100	SPEAKERS
F 328	F2-02 DO YOU INSPECT SPEAKERS	63	61	100	29	50	64	65	100	
F 329	F2-03 DO YOU CLEAN SPEAKERS	49	49	40	29	33	48	53	50	
F 330	F2-04 DO YOU OPERATE SPEAKERS	63	62	80	29	33	60	69	50	
F 331	F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OF SPEAKERS	60	58	100	29	50	64	60	100	
F 332	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	15	16	0	0	0	12	21	0	
F 333	F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	59	57	100	29	50	68	56	100	
F 334	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS	12	13	0	0	0	16	15	0	
F 335	F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES	13	13	20	0	17	12	15	50	
F 336	F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	4	4	0	0	0	12	2	0	
F 337	F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	7	7	0	0	0	12	6	0	
F 338	F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	8	8	0	0	0	16	6	0	
F 339	F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	12	13	0	0	17	24	10	0	
F 340	F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	10	11	0	0	17	24	6	0	
F 341	F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	4	4	0	0	0	12	2	0	
F 342	F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	94	94	100	86	100	88	97	100	
F 343	F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	93	93	100	86	100	92	94	100	
F 344	F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	93	93	100	86	100	92	94	100	OSCILLOSCOPES
F 345	F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	93	93	100	86	100	88	95	100	
F 346	F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	90	91	80	71	100	86	94	100	
F 347	F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME	92	93	80	86	100	88	95	100	
F 348	F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	46	47	20	57	17	64	42	0	
F 349	F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	85	85	80	86	50	88	87	100	
F 350	F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	83	82	100	71	83	88	81	100	
F 351	F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	95	95	100	86	100	92	97	100	
F 352	F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROL	81	80	100	86	83	80	79	100	
F 353	F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	97	97	100	86	100	92	100	100	
G 354	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	88	89	60	86	100	88	86	50	
G 355	G1-02 DO YOU INSPECT DIODES	85	84	100	71	100	80	85	100	
G 356	G1-03 DO YOU REMOVE OR REPLACE DIODES	90	90	80	71	100	88	92	50	
G 357	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT	90	89	100	86	100	88	89	100	SEMICONDUCTOR DIODES
G 358	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	9	8	20	0	0	20	5	50	
G 359	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE, TO COMPUTE FORWARD OR REVERSE BIAS RESISTANCE	25	24	40	14	17	32	23	50	
G 360	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	30	28	60	43	0	44	23	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SB7 126	SB7 127	SB2 128	SB6 129	SB3 130	SB5 131	SB1 132	SB4 133
G 361	GI-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	68	66	100	57	67	60	66	100
G 362	GI-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON THEIR PHYSICAL APPEARANCE	76	75	100	86	100	80	69	100
G 363	GI-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	16	15	40	14	17	12	16	50
G 364	GI-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	62	60	100	71	67	68	56	100
G 365	GI-12 DO YOU USE OR REFER TO DIODE COLOR CODING	37	35	80	29	50	44	31	100
G 366	GI-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT ARDUND A NUCLEUS	5	5	0	0	0	16	2	0
G 367	GI-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	4	4	0	0	0	12	2	0
G 368	GI-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	83	82	100	86	100	88	77	100
G 369	GI-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	5	5	0	0	0	16	2	0
G 370	GI-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	5	5	0	0	0	16	2	0
G 371	GI-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	59	58	80	71	67	64	53	100
G 372	GI-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	8	8	0	0	0	20	5	0
G 373	GI-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	7	7	0	0	0	16	5	0
G 374	GI-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	7	7	0	0	0	16	5	0
G 375	GI-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	8	8	0	0	0	20	5	0
G 376	GI-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	8	8	0	0	0	20	5	0
G 377	GI-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	89	88	100	86	100	80	90	100
G 378	GI-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	30	29	60	29	33	24	31	100
G 379	GI-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE INCREASES RESISTANCE DECREASES)	50	50	60	43	50	60	47	50
G 380	GI-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT CHARACTERISTIC CURVES (PERHAPS YOU DO THIS TO IDENTIFY POINTS OF STRUCTURAL BREAKDOWN OR OPERATING REGIONS)	29	29	20	14	17	32	31	0
G 381	GI-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR INTERPRET CIRCUIT DIAGRAMS	72	71	100	71	50	76	71	100
G 382	GI-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	13	13	20	14	0	28	8	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
G 383	G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	10	9	20	0	0	24	5	0	
G 384	G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	12	12	20	14	0	28	6	0	
G 385	G1-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	11	11	20	0	0	32	5	0	
G 386	G1-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	10	10	20	0	0	28	5	0	
G 387	G1-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	21	20	40	0	17	36	16	50	
G 388	G1-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS	10	10	20	0	0	24	5	0	
G 389	G1-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	10	9	20	0	0	28	3	0	
G 390	G1-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	42	41	60	57	33	52	35	50	
G 391	G1-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	41	40	60	43	33	52	35	50	
G 392	G1-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	18	17	40	14	17	28	13	0	
G 393	G1-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	16	17	40	14	17	28	13	0	
G 394	G1-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	12	11	40	0	0	28	6	0	
G 395	G1-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS	15	14	40	14	0	28	10	0	
G 396	G1-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	15	14	40	0	0	28	11	0	
G 397	G1-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	40	38	60	57	50	44	32	100	
G 398	G1-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	9	8	20	0	0	24	3	0	
G 399	G1-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	67	65	100	43	83	72	63	100	
G 400	G1-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	40	37	100	43	17	52	32	100	
G 401	G1-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	30	28	80	29	17	44	23	50	
G 402	G1-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	37	34	100	43	17	48	29	100	
G 403	G1-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	43	40	100	43	17	52	37	100	
G 404	G2-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	93	94	60	86	100	88	97	50	
G 405	G2-02 DO YOU INSPECT TRANSISTORS	88	87	100	86	100	84	87	100	
G 406	G2-03 DO YOU REMOVE OR REPLACE TRANSISTORS	95	95	100	86	100	88	98	100	
G 407	G2-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	93	93	100	86	100	88	95	100	TRANSISTORS
G 408	G2-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	87	86	100	86	67	88	87	100	
G 409	G2-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	87	86	100	86	67	92	85	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	JY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
G 410	G2-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	86	85	100	86	67	92	84	100	
G 411	G2-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	30	30	40	43	33	40	24	0	
G 412	G2-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	30	29	40	43	33	40	23	0	
G 413	G2-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	62	62	60	86	83	60	58	0	
G 414	G2-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	30	30	40	43	33	48	21	0	
G 415	G2-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	95	95	100	86	100	92	97	100	
G 416	G2-13 DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	93	93	100	86	100	88	95	100	
G 417	G2-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	80	80	80	71	100	84	77	50	
G 418	G2-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY SMALLER THAN THE EMITTER CURRENT IE (USUALLY IB BEING 2 TO 8 PERCENT OF IE)	50	48	80	57	33	48	48	50	
G 419	G2-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR TRANSISTORS	56	55	80	57	33	68	52	50	
G 420	G2-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	29	28	40	29	17	44	23	0	
G 421	G2-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	54	53	80	14	33	72	52	100	
G 422	G2-19 DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	28	28	20	29	17	44	23	0	
G 423	G2-20 DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	25	25	20	14	17	44	19	0	
G 424	G2-21 DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	24	24	20	14	17	40	19	0	
G 425	G2-22 DO YOU CALCULATE BETA TRANSISTOR GAINS	15	16	0	14	0	32	11	0	
G 426	G2-23 DO YOU CALCULATE ALPHA TRANSISTOR GAINS	13	14	0	0	0	32	10	0	
G 427	G2-24 DO YOU CALCULATE GAMMA TRANSISTOR GAINS	13	14	0	0	0	32	10	0	
G 428	G3-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	77	76	100	71	50	72	81	100	
G 429	G3-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS	73	72	100	57	50	72	76	100	
G 430	G3-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	69	67	100	57	50	68	69	100	
G 431	G3-04 DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	78	77	100	71	50	72	82	100	TRANSISTOR AMPLIFIERS
G 432	G3-05 DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	78	77	100	71	50	72	82	100	
G 433	G3-06 DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	76	75	100	71	50	72	79	100	
G 434	G3-07 DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	74	73	100	71	50	68	77	100	
G 435	G3-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE CURRENT	33	32	60	29	17	60	23	0	
G 436	G3-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT	21	19	60	29	17	32	13	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133
G 437	G3-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN BASE CURRENT	33	32	60	29	17	60	23	0
G 438	G3-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT	19	17	60	29	0	32	11	50
G 439	G3-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	36	34	80	43	0	56	27	50
G 440	G3-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN BASE CURRENT WHICH RESULTS FROM A SPECIFIC INPUT SIGNAL	22	19	80	43	0	36	11	50
G 441	G3-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A LOAD-LINE ON A TRANSISTOR CHARACTERISTIC CURVE)	12	13	0	14	0	20	5	0
G 442	G3-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	18	19	0	29	17	36	11	0
G 443	G3-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	10	11	0	29	0	24	5	0
G 444	G3-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	50	50	60	57	17	56	50	0
G 445	G3-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	34	35	20	43	0	44	34	0
G 446	G3-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	32	33	20	43	0	40	32	0
G 447	G3-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE IN BASE-EMITTER VOLTAGE INTO THE CHANGE THE BASE COLLECTOR VOLTAGE TO DETERMINE THE VOLTAGE GAIN	11	11	20	14	0	24	5	0
G 448	G3-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE IN BASE CURRENT INTO THE CHANGE IN COLLECTOR CURRENT TO DETERMINE THE CURRENT GAIN	10	10	20	14	0	24	5	0
G 449	G3-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE CURRENT GAIN TIMES THE VOLTAGE GAIN TO DETERMINE THE POWER GAIN	13	13	20	14	0	24	10	0
G 450	G3-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE INCREASES (THIS AFFECTS THE STATIC OPERATING POINT [Q] OF THE TRANSISTOR)	18	18	20	29	0	28	15	0
G 451	G3-24 DO YOU COMPUTE THE STATIC OPERATING POINT [Q] OF A TRANSISTOR AT DIFFERENT TEMPERATURES	8	8	0	14	0	16	5	0
G 452	G3-[illegible] DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO [illegible]CTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH [illegible]ES (SWAMPING) RESISTOR STABILIZATION	43	41	80	43	17	52	39	100
G [illegible]	[illegible] DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO [illegible]CTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-BIAS STABILIZATION	36	36	80	57	17	48	31	100

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	126	127	128	129	130	131	132	133
G 454	63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH THERMISTOR STABILIZATION	36	34	80	57	17	48	27	100
G 455	63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH FORWARD BIAS DIODE STABILIZATION	41	39	80	57	17	52	31	100
G 456	63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH REVERSE BIAS DIODE STABILIZATION	41	39	80	57	17	52	34	100
G 457	63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH DOUBLE DIODE STABILIZATION	38	36	80	57	17	48	31	100
G 458	63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	45	43	80	29	17	56	42	100
G 459	63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	42	40	80	29	17	52	39	100
G 460	63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	37	35	80	29	0	48	34	100
G 461	63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	44	42	80	29	17	60	39	100
G 462	63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	43	41	60	29	17	60	37	100
G 463	63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	37	35	80	29	17	52	31	100
G 464	63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	50	50	60	29	50	52	52	50
G 465	63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	62	60	100	43	50	60	63	100
G 466	63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	44	42	80	14	50	48	42	100
G 467	63-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	39	38	60	0	17	44	42	50
G 468	63-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	39	38	60	0	17	44	42	50
G 469	63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	46	44	80	14	50	48	45	100
G 470	63-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR TRANSISTOR AMPLIFIERS IN THE COMMON COLLECTOR CONFIGURATION	30	28	80	29	17	36	24	50
G 471	63-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	36	36	40	29	0	48	35	0
G 472	63-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	31	31	40	0	17	36	34	50
G 473	63-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	70	69	100	57	50	64	74	100
G 474	63-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	51	51	60	29	33	56	53	50
G 475	63-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	50	49	60	29	33	56	50	50

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			BY TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
G	476	G3-49	DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	54	53	80	29	33	52	56	50	
H	477	H1-01	DO YOU USE OR REFER TO VARACTORS	36	35	60	14	17	52	32	50	
H	478	H1-02	DO YOU USE OR REFER TO TUNNEL DIODES	45	43	80	29	50	48	42	100	SOLID-STATE SPECIAL PURPOSE DEVICES
H	479	H1-03	DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	76	75	100	71	83	88	69	100	
H	480	H1-04	DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	62	60	100	43	67	72	56	100	
H	481	H1-05	DO YOU USE OR REFER TO ZENER DIODES	90	90	100	71	100	92	90	100	
H	482	H1-06	DO YOU USE OR REFER TO INTEGRATED CIRCUITS	93	93	100	71	100	92	95	100	
H	483	H2-01	IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	95	95	100	86	100	92	97	100	
H	484	H2-02	DO YOU INSPECT POWER SUPPLIES	91	91	100	86	83	86	94	100	
H	485	H2-03	DO YOU CLEAN POWER SUPPLIES	81	80	100	71	83	80	81	100	
H	486	H2-04	DO YOU ALIGN OR ADJUST POWER SUPPLIES	94	94	100	86	83	92	97	100	
H	487	H2-05	DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	92	92	100	71	100	88	95	100	POWER SUPPLIES
H	488	H2-06	DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	86	85	100	71	100	84	85	100	
H	489	H2-07	DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	94	94	100	71	100	92	97	100	
H	490	H2-08	DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	82	81	100	57	100	84	81	100	
H	491	H2-09	DO YOU WORK WITH HALF-WAVE RECTIFIERS	76	75	100	71	67	72	77	100	
H	492	H2-10	DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	82	81	100	71	67	80	84	100	
H	493	H2-11	DO YOU WORK WITH BRIDGE RECTIFIERS	80	79	100	57	67	80	82	100	
H	494	H2-12	DO YOU WORK WITH THREE-PHASE RECTIFIERS	52	52	60	29	50	60	52	50	
H	495	H2-13	DO YOU USE OR REFER TO INPUT VOLTAGE	86	85	100	71	50	88	89	100	
H	496	H2-14	DO YOU USE OR REFER TO INPUT FREQUENCY	67	65	100	57	50	76	63	100	
H	497	H2-15	DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	77	76	100	57	50	80	79	100	
H	498	H2-16	DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	65	63	100	71	50	76	58	100	
H	499	H2-17	DO YOU USE OR REFER TO RIPPLE AMPLITUDE	69	67	100	43	33	72	71	100	
H	500	H2-18	DO YOU USE OR REFER TO RIPPLE FREQUENCY	62	60	100	43	33	68	61	100	
H	501	H2-19	DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	46	43	100	43	33	40	45	100	
H	502	H2-20	DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	73	72	100	71	50	76	73	100	
H	503	H2-21	DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	74	73	100	57	50	88	71	100	
H	504	H2-22	DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS	77	77	80	71	50	88	76	100	
H	505	H2-23	DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS	64	64	60	43	50	80	61	50	
H	506	H2-24	DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	54	53	80	43	33	76	47	100	
H	507	H2-25	DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	47	45	80	43	33	64	39	100	
H	508	H2-26	DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	44	42	80	29	17	60	39	100	
H	509	H2-27	DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	46	44	80	29	17	64	40	100	
H	510	H2-28	DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER	34	35	20	29	67	20	39	0	
H	511	H2-29	DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	11	11	20	0	17	12	11	50	
H	512	H3-01	DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	65	66	40	57	67	60	69	50	OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
H 513	H3-02 DO YOU INSPECT OSCILLATORS	57	57	60	29	50	56	61	100	
H 514	H3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	57	57	60	43	67	56	58	100	
H 515	H3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	59	60	40	43	50	60	63	50	
H 516	H3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	50	50	40	43	50	48	52	50	
H 517	H3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	64	64	60	57	67	60	68	100	
H 518	H3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	53	53	60	57	67	52	52	100	
H 519	H3-08 DO YOU USE OR REFER TO FEEDBACK	58	58	60	57	50	60	58	100	
H 520	H3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)	36	36	40	29	50	44	32	50	
H 521	H3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	38	38	40	29	17	56	34	50	
H 522	H3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	44	44	40	43	17	56	42	50	
H 523	H3-12 DO YOU USE OR REFER TO DAMPING	43	43	40	43	50	44	42	50	
H 524	H3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	52	52	60	57	50	52	52	100	
H 525	H3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	20	21	0	14	0	36	18	0	
H 526	H3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	25	25	20	0	17	36	24	0	
H 527	H3-16 DO YOU USE OR REFER TO UNDER DAMPING	23	23	20	0	0	32	24	0	
H 528	H3-17 DO YOU USE OR REFER TO OVER DAMPING	23	23	20	0	0	32	24	0	
H 529	H3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD	37	36	60	29	17	36	39	100	
H 530	H3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD	45	44	60	43	17	40	48	100	
H 531	H3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD	30	29	60	29	0	44	26	100	
H 532	H3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD	24	25	0	14	50	12	29	0	
H 533	H3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS	22	23	0	29	0	28	23	0	
H 534	H3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	21	22	0	29	0	28	21	0	
H 535	H3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	20	21	0	43	0	24	16	0	
H 536	H3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	8	8	0	0	0	8	10	0	
H 537	H3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	7	7	0	0	0	8	8	0	
H 538	H3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS	35	35	40	14	50	32	37	50	
I 539	I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	70	70	80	29	50	72	76	100	
I 540	I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS	59	58	80	29	50	60	61	100	
I 541	I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS	61	60	80	29	50	64	63	100	MULTIVIBRATORS
I 542	I1-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS	55	54	80	29	50	64	53	100	
I 543	I1-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS	64	63	80	29	50	72	65	100	
I 544	I1-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS	61	60	80	29	33	68	63	100	
I 545	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS	63	62	80	29	33	68	66	100	
I 546	I1-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS	60	59	80	29	33	64	63	100	
I 547	I1-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS	35	34	60	14	0	44	35	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
I 548	11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	42	41	60	14	0	52	44	50	
I 549	11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	26	26	20	0	17	40	24	50	
I 550	11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD	29	30	0	0	33	28	34	0	
I 551	11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	53	52	80	14	50	52	56	100	
I 552	11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	67	66	80	29	50	68	71	100	
I 553	11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	67	66	80	29	50	64	73	100	
I 554	11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS	10	11	0	0	17	8	13	0	
I 555	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	60	59	80	57	50	60	60	100	
I 556	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS	44	43	60	43	33	56	39	50	
I 557	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	45	44	60	43	33	52	42	50	LIMITERS AND CLAMPERS
I 558	12-04 DO YOU WORK WITH LIMITERS WITH BIAS	39	39	40	43	33	52	34	50	
I 559	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS	50	49	80	43	33	60	47	100	
I 560	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS	47	45	80	29	33	60	42	100	
I 561	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	19	19	20	0	33	0	27	50	
I 562	12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	39	37	80	57	33	48	31	100	
I 563	12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	37	37	40	57	33	52	29	50	
I 564	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT	24	24	20	0	33	8	32	50	
I 565	13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	33	34	20	43	67	44	26	50	
I 566	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	33	34	20	43	67	44	26	50	
I 567	13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	19	19	20	43	0	32	13	50	ELECTRON TUBES
I 568	13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	27	28	0	43	50	40	19	0	
I 569	13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	28	29	0	43	67	44	18	0	
I 570	13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	26	26	20	29	50	44	16	50	
I 571	13-07 DO YOU USE OR REFER TO CUTOFF	20	21	0	14	33	36	15	0	
I 572	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	14	15	0	14	33	20	11	0	
I 573	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	15	16	0	14	33	24	11	0	
I 574	13-10 DO YOU USE OR REFER TO TRANSIT TIME	13	14	0	14	33	20	10	0	
I 575	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	12	13	0	0	33	20	10	0	
I 576	13-12 DO YOU USE OR REFER TO SATURATION	28	28	20	29	67	36	21	50	
I 577	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	17	18	0	29	33	24	13	0	
I 578	13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	4	4	0	0	0	4	5	0	
I 579	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE	28	28	20	29	50	36	23	50	
I 580	13-16 DO YOU USE OR REFER TO PLATE CURRENT	25	25	20	29	33	36	19	50	
I 581	13-17 DO YOU USE OR REFER TO GRID VOLTAGE	31	32	20	29	67	44	24	50	
I 582	13-18 DO YOU USE OR REFER TO GRID CURRENT	27	27	20	29	33	44	19	50	
I 583	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	30	31	20	29	50	44	24	50	
I 584	13-20 DO YOU USE OR REFER TO CATHODE CURRENT	26	28	20	29	33	44	21	50	
I 585	13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN GRID VOLTAGE)	4	4	0	0	0	8	3	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	GP6 126	GP7 127	GP8 128	GP9 129	GP10 130	GP11 131	GP12 132	GP13 133	
I 586	I3-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	2	2	0	0	0	4	2	0	
I 587	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	6	6	0	29	0	8	3	0	
I 588	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	3	3	0	0	0	4	3	0	
I 589	I3-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	3	3	0	0	0	4	3	0	
I 590	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	4	4	0	14	0	4	3	0	
I 591	I3-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	4	4	0	14	0	4	3	0	
I 592	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	4	3	20	0	0	4	3	50	
I 593	I3-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	6	6	0	14	0	4	6	0	
I 594	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	7	7	0	0	0	12	6	0	
I 595	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	7	7	0	0	0	12	6	0	
I 596	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	10	10	0	14	0	16	6	0	
I 597	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	9	9	0	14	0	16	6	0	
I 598	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	18	19	0	29	0	32	15	0	
I 599	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	13	14	0	29	17	24	8	0	
I 600	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	11	12	0	43	0	16	8	0	
I 601	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	12	13	0	43	0	20	8	0	
I 602	I3-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	20	20	20	43	17	36	11	50	
I 603	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	10	10	0	0	0	16	10	0	
I 604	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	3	3	0	0	0	8	2	0	
I 605	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	24	24	20	14	50	36	18	50	
I 606	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	29	29	20	29	67	40	21	50	
I 607	I3-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN THE ELECTRON TUBES YOU WORK ON	7	7	0	14	0	16	3	0	
I 608	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	17	17	20	29	17	28	11	50	
J 609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB	17	17	20	43	17	16	15	50	ELECTRON TUBE AMPLIFIERS AND CIRCUITS
J 610	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	8	8	0	29	0	16	3	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
J 611	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	6	6	0	14	0	8	5	0	
J 612	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	10	10	20	29	0	12	8	50	
J 613	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	9	9	0	14	0	8	10	0	
J 614	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	10	11	0	29	0	12	10	0	
J 615	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	8	8	0	14	17	0	10	0	
J 616	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE)	14	13	40	43	17	16	2	50	
J 617	J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	43	43	40	57	67	56	34	50	SPECIAL PURPOSE ELECTRON TUBES
J 618	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	12	13	0	0	17	24	10	0	
J 619	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	15	16	0	0	33	24	13	0	
J 620	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS	8	8	0	29	17	12	3	0	
J 621	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	8	8	0	29	17	12	3	0	
J 622	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	36	36	40	43	67	48	27	50	
J 623	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)	39	39	40	57	67	48	31	50	
J 624	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)	32	32	40	57	67	36	24	50	
J 625	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	37	38	20	43	67	52	29	50	
J 626	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	25	25	20	57	50	40	13	50	
J 627	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	30	31	20	29	50	52	21	50	
J 628	J2-13 DO YOU USE OR REFER TO PERSISTENCE	31	32	20	43	67	40	24	50	
J 629	J2-14 DO YOU USE OR REFER TO DECAY TIMES	29	29	20	43	67	32	23	50	
J 630	J2-15 DO YOU USE OR REFER TO FLUORESCENCE	23	24	0	43	50	40	13	0	
J 631	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	32	34	0	57	50	48	24	0	
J 632	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	13	13	20	0	0	12	16	50	
J 633	J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	9	9	0	0	0	8	11	0	HETERODYNING, MODULATION, AND DEMODULATION
J 634	J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	8	8	0	0	0	8	10	0	
J 635	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	4	2	0	
J 636	J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	5	5	0	0	0	8	5	0	
J 637	J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	5	5	0	0	0	4	6	0	
K 638	K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	5	4	20	0	0	4	5	50	
K 639	K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	4	5	0	AM SYSTEMS
K 640	K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	4	5	0	
K 641	K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	3	3	0	0	0	4	3	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
K 642	K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	4	5	0	
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	4	4	0	0	0	4	5	0	
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	4	5	0	
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	3	3	0	0	0	4	3	0	
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	3	3	0	0	0	4	3	0	
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	3	3	0	0	0	4	3	0	
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	3	3	0	0	0	4	3	0	
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	3	3	0	0	0	4	3	0	
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	3	3	0	0	0	4	3	0	
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	2	2	0	0	0	0	3	0	
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	3	3	0	0	0	4	3	0	
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	3	3	0	0	0	0	5	0	
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	1	1	0	0	0	0	2	0	
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	2	2	0	0	0	4	2	0	
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	3	3	0	0	0	4	3	0	
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	3	3	0	0	0	4	3	0	
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	2	2	0	0	0	4	2	0	
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	3	3	0	0	0	4	3	0	
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	1	1	0	0	0	0	2	0	
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	2	2	0	0	0	4	2	0	
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	1	1	0	0	0	0	2	0	
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	1	1	0	0	0	0	2	0	
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	4	4	0	0	0	4	5	0	
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	3	3	0	0	0	4	3	0	
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	7	6	20	0	0	8	6	50	
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	0	6	0	FM SYSTEMS
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	3	3	0	0	0	0	5	0	
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	4	5	0	
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	5	5	0	0	0	8	5	0	
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	4	4	0	0	0	8	3	0	
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	4	4	0	0	0	4	5	0	
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	3	3	0	0	0	8	2	0	
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	7	7	0	0	0	8	8	0	
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	4	4	0	0	0	4	5	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
K 676	K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	5	5	0	0	0	6	5	0	
K 677	K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	7	7	0	0	0	6	8	0	
K 678	K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	5	5	0	0	0	4	6	0	
K 679	K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	5	5	0	0	0	8	5	0	
K 680	K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	5	5	0	0	0	8	5	0	
K 681	K2-16 DO YOU PERFORM TASKS ON LIMITERS	4	4	0	0	0	8	3	0	
K 682	K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	4	4	0	0	0	8	3	0	
K 683	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	5	5	0	0	0	4	6	0	
K 684	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	6	6	0	0	0	8	6	0	
K 685	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	85	86	60	57	100	84	86	100	
K 686	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	89	90	60	71	100	88	92	100	NUMBERING SYSTEMS
K 687	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	88	88	80	57	100	96	87	100	
K 688	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	90	90	80	57	100	96	90	100	
K 689	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	91	92	80	71	100	96	92	100	
K 690	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	90	91	80	57	100	96	92	100	
K 691	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	85	85	80	71	100	88	84	100	
K 692	K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD	68	68	60	57	83	80	63	50	
K 693	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	76	76	80	71	100	88	69	100	
K 694	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	79	79	80	57	83	88	77	100	
L 695	L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	82	82	60	71	100	84	81	100	
L 696	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	59	58	80	57	83	60	55	100	LOGIC FUNCTIONS
L 697	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	59	58	80	57	83	60	55	100	
L 698	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	57	56	80	57	83	52	55	100	
L 699	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	57	56	80	57	83	60	52	100	
L 700	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	65	64	80	57	83	60	65	100	
L 701	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	65	64	80	57	83	60	65	100	
L 702	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	62	61	80	57	83	52	63	100	
L 703	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	62	61	80	57	83	56	61	100	
L 704	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	79	80	60	71	83	84	79	50	
L 705	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	80	80	80	71	83	84	79	100	
L 706	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	80	80	80	71	83	84	79	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	126	127	128	129	130	131	132	133	
L 707	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	76	76	60	71	83	84	73	100	
L 708	L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC CIRCUITS	68	67	80	43	67	52	76	100	BOOLEAN EQUATIONS
L 709	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	26	24	60	29	50	36	16	50	
L 710	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	26	23	80	14	50	36	16	100	
L 711	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	36	34	80	57	50	40	27	100	
L 712	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	67	66	80	43	67	68	68	100	
L 713	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	57	56	80	43	67	56	56	100	
L 714	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	56	55	80	43	67	52	56	100	
L 715	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	34	34	40	29	67	40	29	0	
L 716	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	30	29	60	0	67	32	27	50	
L 717	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	65	64	80	57	67	60	66	100	
L 718	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	46	44	80	29	50	48	44	100	
L 719	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	53	52	80	43	67	52	52	100	
L 720	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	51	50	80	43	67	48	50	100	
L 721	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	65	64	80	57	67	64	66	100	
L 722	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	64	63	80	43	67	64	65	100	
L 723	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	65	64	80	57	67	64	65	100	
L 724	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	63	62	80	57	67	64	61	100	
L 725	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	67	66	80	57	67	64	68	100	
L 726	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	56	55	80	57	67	48	56	100	
L 727	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	54	53	80	57	67	44	55	100	
L 728	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	54	53	80	57	67	44	55	100	
L 729	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	68	67	80	57	67	68	68	100	
L 730	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	62	61	80	57	67	56	63	100	
L 731	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	61	60	80	57	67	52	63	100	
L 732	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	43	41	80	29	67	36	42	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
L 733	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	75	75	80	57	83	76	76	100	
L 734	L3-02 DO YOU USE OR REFER TO UP-COUNTERS	75	75	80	57	83	76	76	100	
L 735	L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS	75	75	80	57	83	76	76	100	
L 736	L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS	63	62	80	57	83	60	61	100	COUNTERS
L 737	L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS	64	63	80	57	83	64	61	100	
L 738	L3-06 DO YOU USE OR REFER TO RING COUNTERS	39	38	60	29	50	32	40	50	
L 739	L3-07 DO YOU USE OR REFER TO DECADE COUNTERS	64	63	80	57	83	60	63	100	
L 740	L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	52	52	60	57	83	56	47	50	
L 741	L3-09 DO YOU USE OR REFER TO DOWN CLOCKS	64	63	80	57	67	64	63	100	
L 742	L3-10 DO YOU USE OR REFER TO UP CLOCKS	63	62	80	57	67	64	61	100	
L 743	L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	55	55	60	43	83	72	47	50	
L 744	L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS	52	52	60	57	67	68	44	50	
L 745	L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	52	51	80	57	83	52	47	100	
L 746	L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	30	30	20	29	67	32	26	50	
L 747	L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	51	50	80	57	83	52	45	100	
L 748	L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	58	57	80	43	83	72	50	100	
L 749	L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	51	50	80	57	50	68	42	100	
L 750	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	37	36	60	57	50	44	29	50	
L 751	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS	37	36	60	43	50	48	29	50	
L 752	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTERS	38	36	80	43	50	44	31	100	
L 753	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	34	32	80	29	33	36	31	100	
L 754	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	30	28	80	14	50	36	24	100	
L 755	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	32	31	60	29	50	36	27	50	
L 756	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	40	39	60	29	67	52	32	50	
M 757	M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	78	76	80	43	50	84	82	100	
M 758	M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	44	42	80	29	33	44	44	100	
M 759	M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	54	54	60	43	50	56	55	50	TIMING CIRCUITS
M 760	M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	53	53	60	43	50	56	53	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	126	127	128	129	130	131	132	133	
M 761	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS	40	39	60	29	33	40	40	50	
M 762	M1-06 DO YOU USE OR REFER TO RISE TIME	67	67	60	43	67	76	66	50	
M 763	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME	64	64	60	57	50	72	63	50	
M 764	M1-08 DO YOU USE OR REFER TO SWEEP TIME	80	80	80	57	67	92	79	100	
M 765	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	65	65	60	57	67	68	65	50	
M 766	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	71	71	80	57	50	72	74	100	
M 767	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	60	60	60	71	33	68	58	50	
M 768	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	64	64	60	71	33	80	60	50	
M 769	M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	45	45	40	57	17	36	50	100	
M 770	M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	43	44	20	57	17	36	48	50	USE OF SIGNAL GENERATORS
M 771	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL GENERATORS	39	39	40	57	0	36	42	100	
M 772	M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	38	38	40	57	0	32	42	100	
M 773	M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	27	26	40	29	0	24	29	100	
M 774	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS	30	30	40	29	17	32	31	100	
M 775	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	33	33	40	43	17	36	32	100	
M 776	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH	26	27	0	43	17	36	23	0	
M 777	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	20	21	0	43	0	32	16	0	
M 778	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS	31	32	20	43	0	32	34	50	
M 779	M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR GENERATORS	67	68	40	57	50	60	74	100	
M 780	M3-02 DO YOU INSPECT MOTORS	66	67	40	57	50	64	71	100	MOTORS AND GENERATORS
M 781	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS	65	66	40	57	50	64	69	100	
M 782	M3-04 DO YOU OPERATE MOTORS	55	57	20	57	50	56	56	50	
M 783	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS	66	67	40	57	50	64	71	100	
M 784	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS	36	37	20	29	17	40	36	50	
M 785	M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	66	68	20	57	50	68	71	50	
M 786	M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	31	32	20	29	33	36	31	50	
M 787	M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS	18	19	0	29	0	28	16	0	
M 788	M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES	22	23	0	29	0	36	19	0	
M 789	M3-11 DO YOU PERFORM ANY TASKS ON ROTORS	24	25	0	43	0	36	21	0	
M 790	M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES	35	36	20	43	17	44	34	50	
M 791	M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS	27	28	0	43	17	36	24	0	
M 792	M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS	22	23	0	29	0	32	21	0	
M 793	M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES	20	21	0	29	0	32	18	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
M 794	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	13	14	0	14	0	16	15	0	
M 795	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	21	22	0	29	0	20	24	0	
M 796	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	16	17	0	14	0	20	16	0	
M 797	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	52	53	40	43	33	52	56	100	
M 798	M3-20 DO YOU WORK WITH INDUCTION MOTORS	40	40	40	29	33	48	39	100	
M 799	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	34	34	40	29	33	36	34	100	
M 800	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	46	46	40	29	33	52	47	100	
M 801	M3-23 DO YOU INSPECT GENERATORS	51	52	40	43	33	60	52	100	
M 802	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	50	50	40	43	33	60	45	100	
M 803	M3-25 DO YOU OPERATE GENERATORS	43	44	20	43	33	48	44	50	
M 804	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	44	44	40	29	33	52	44	100	
M 805	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	28	28	20	29	17	32	27	50	
M 806	M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS	50	52	20	29	17	64	53	50	
M 807	M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	24	24	20	29	17	24	20	50	
N 808	N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	86	86	80	86	50	80	92	100	
N 809	N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	21	21	20	0	0	32	21	50	
N 810	N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	29	29	20	14	0	32	32	50	METER MOVEMENTS
N 811	N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	23	23	20	14	0	32	23	50	
N 812	N1-05 DO YOU READ METER SCALES	86	86	80	86	50	80	92	100	
N 813	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	47	48	20	29	33	56	44	50	
N 814	N1-07 DO YOU ZERO OHMMETERS	85	85	80	86	50	76	92	100	
N 815	N1-08 DO YOU ZERO AMMETERS	51	50	80	43	17	64	48	100	
N 816	N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	49	50	20	43	50	64	45	50	
N 817	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	55	54	80	43	50	64	52	100	
N 818	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	13	14	0	14	0	20	13	0	
N 819	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	11	12	0	0	0	20	11	0	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 820	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	10	10	0	0	0	20	8	0	
N 821	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	10	10	0	0	0	20	8	0	
N 822	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	11	12	0	14	0	20	10	0	
N 823	N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	10	10	0	0	0	20	8	0	
N 824	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	7	7	0	0	0	12	6	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
N	825	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	8	8	0	14	0	20	3	0	
N	826	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS	8	8	0	14	0	16	5	0	
N	827	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS	8	8	0	14	0	16	5	0	
N	828	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	9	9	0	14	0	16	6	0	
N	829	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	4	4	0	0	0	8	3	0	
N	830	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	7	7	0	14	0	8	6	0	
N	831	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	6	6	0	14	0	8	5	0	
N	832	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	5	5	0	14	0	8	3	0	
N	833	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	9	9	0	14	0	16	6	0	
N	834	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	62	62	60	43	33	76	61	50	
N	835	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	32	32	40	29	17	44	29	0	
N	836	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	58	58	60	43	17	76	56	50	WAVESHAPING CIRCUITS
N	837	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	50	49	60	43	17	76	42	50	
N	838	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	50	49	60	43	17	72	44	50	
N	839	N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	50	49	60	43	17	60	46	50	
N	840	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	59	59	60	43	33	72	54	50	
N	841	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	42	41	60	14	17	56	40	50	
N	842	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT AND OUTPUT CONFIGURATION	20	18	60	14	0	20	19	50	
N	843	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	51	50	80	29	33	56	52	100	
N	844	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	42	40	80	14	17	52	40	100	
O	845	01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	2	2	0	0	0	4	2	0	
O	846	01-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
O	847	01-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	4	2	0	SINGLE SIDEBAND SYSTEMS
O	848	01-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	4	2	0	
O	849	01-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
O	850	01-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	0	0	2	0	
O	851	01-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
O	852	01-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
0 853 01-09	DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS	0	0	0	0	0	0	0	0	
0 854 01-10	DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS	1	1	0	0	0	0	2	0	
0 855 01-11	DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	1	1	0	0	0	0	2	0	
0 856 01-12	DO YOU PERFORM TASKS ON SSB LC FILTERS	1	1	0	0	0	0	2	0	
0 857 01-13	DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	1	1	0	0	0	0	2	0	
0 858 01-14	DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	1	1	0	0	0	0	2	0	
0 859 01-15	DO YOU PERFORM TASKS ON SSB OSCILLATORS	1	1	0	0	0	0	2	0	
0 860 01-16	DO YOU PERFORM TASKS ON SSB MIXERS	1	1	0	0	0	0	2	0	
0 861 01-17	DO YOU PERFORM TASKS ON SSB DRIVERS	1	1	0	0	0	0	2	0	
0 862 01-18	DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	1	1	0	0	0	0	2	0	
0 863 01-19	DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	1	1	0	0	0	0	2	0	
0 864 01-20	DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	1	1	0	0	0	0	2	0	
0 865 01-21	DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	1	1	0	0	0	0	2	0	
0 866 01-22	DO YOU PERFORM TASKS ON SSB DEMODULATORS	1	1	0	0	0	0	2	0	
0 867 01-23	DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES	0	0	0	0	0	0	0	0	
0 868 01-24	DO YOU USE OR REFER TO SELECTIVE FADING	1	1	0	0	0	0	2	0	
0 869 01-25	DO YOU USE OR REFER TO PEAK POWER	1	1	0	0	0	0	2	0	
0 870 01-26	DO YOU USE OR REFER TO FREQUENCY STABILITY	1	1	0	0	0	0	2	0	
0 871 01-27	DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	1	1	0	0	0	0	2	0	
0 872 01-28	DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS	0	0	0	0	0	0	0	0	
0 873 01-29	DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS	1	1	0	0	0	0	2	0	
0 874 01-30	DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	1	1	0	0	0	0	2	0	
0 875 02-01	DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	12	13	0	0	0	24	11	0	
0 876 02-02	DO YOU INSPECT PULSE MODULATION SYSTEMS	10	11	0	0	0	20	10	0	
0 877 02-03	DO YOU CLEAN PULSE MODULATION SYSTEMS	10	11	0	0	0	20	10	0	PULSE MODULATION SYSTEMS
0 878 02-04	DO YOU ALIGN PULSE MODULATION SYSTEMS	10	11	0	0	0	24	8	0	
0 879 02-05	DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	11	12	0	0	0	24	10	0	
0 880 02-06	DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	9	9	0	0	0	20	8	0	
0 881 02-07	DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	10	11	0	0	0	24	8	0	
0 882 02-08	DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	9	9	0	0	0	20	6	0	
0 883 02-09	DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	10	10	0	0	0	24	6	0	
0 884 02-10	DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	10	10	0	0	0	24	6	0	
0 885 02-11	DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	8	8	0	0	0	20	5	0	
0 886 02-12	DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	7	7	0	0	0	20	3	0	
0 887 02-13	DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	8	8	0	0	0	20	5	0	
0 888 02-14	DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	5	5	0	0	0	8	5	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	126	127	128	129	130	131	132	133	
U 889	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	10	11	0	0	0	24	8	0	
U 890	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	5	5	0	0	0	16	2	0	
U 891	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	9	9	0	0	0	20	6	0	
U 892	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	10	10	0	0	0	20	8	0	
U 893	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	3	3	0	0	0	8	2	0	
U 894	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	10	10	0	0	0	24	6	0	
U 895	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	3	3	0	0	0	8	2	0	
U 896	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	8	8	0	0	0	20	5	0	
U 897	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	8	8	0	0	0	24	3	0	
U 898	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	9	9	0	0	0	24	5	0	
U 899	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	10	10	0	0	0	24	6	0	
U 900	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	10	11	0	0	0	24	6	0	
U 901	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	10	10	0	0	0	24	6	0	
U 902	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES	5	5	0	0	0	8	5	0	
U 903	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	9	9	0	0	0	24	5	0	
U 904	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	9	9	0	0	0	24	5	0	
U 905	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	10	11	0	0	0	24	8	0	
U 906	02-32 DO YOU USE OR REFER TO PULSE SHAPE	11	12	0	0	0	24	10	0	
U 907	02-33 DO YOU USE OR REFER TO PEAK POWER	11	12	0	0	0	24	10	0	
U 908	02-34 DO YOU USE OR REFER TO AVERAGE POWER	10	10	0	0	0	24	6	0	
U 909	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	6	6	0	0	0	24	0	0	
U 910	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	9	9	0	0	0	24	5	0	
U 911	02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	6	6	0	0	0	24	0	0	
U 912	02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	7	7	0	0	0	12	6	0	
U 913	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	6	6	0	0	0	8	6	0	
U 914	03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	0	0	0	0	0	0	0	0	ANTENNAS
U 915	03-02 DO YOU INSPECT ANTENNAS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133
0 916	03-03 DO YOU CLEAN ANTENNAS	0	0	0	0	0	0	0	0
0 917	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS	0	0	0	0	0	0	0	0
0 918	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS	0	0	0	0	0	0	0	0
0 919	03-06 DO YOU TROUBLESHOOT TO ANTENNAS	0	0	0	0	0	0	0	0
0 920	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS	0	0	0	0	0	0	0	0
0 921	03-08 DO YOU REMOVE OR INSTALL ANTENNAS	0	0	0	0	0	0	0	0
0 922	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS	0	0	0	0	0	0	0	0
0 923	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES	0	0	0	0	0	0	0	0
0 924	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES	0	0	0	0	0	0	0	0
0 925	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS	0	0	0	0	0	0	0	0
0 926	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS INDUCTIVE LOADS TO THE GENERATOR	0	0	0	0	0	0	0	0
0 927	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS INDUCTIVE LOADS TO THE GENERATOR	0	0	0	0	0	0	0	0
0 928	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS CAPACITIVE LOADS TO THE GENERATOR	0	0	0	0	0	0	0	0
0 929	03-16 DO YOU WORK WITH HERTZ ANTENNAS	0	0	0	0	0	0	0	0
0 930	03-17 DO YOU WORK WITH MARCONI ANTENNAS	0	0	0	0	0	0	0	0
0 931	03-18 DO YOU WORK WITH BROADSIDE ARRAYS	0	0	0	0	0	0	0	0
0 932	03-19 DO YOU WORK WITH END-FIRE ARRAYS	0	0	0	0	0	0	0	0
0 933	03-20 DO YOU WORK WITH CARDIOID ARRAYS	0	0	0	0	0	0	0	0
0 934	03-21 DO YOU WORK WITH COLLINEAR ARRAYS	0	0	0	0	0	0	0	0
0 935	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS	0	0	0	0	0	0	0	0
0 936	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	0	0	0	0	0	0	0	0
0 937	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS	0	0	0	0	0	0	0	0
0 938	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS	0	0	0	0	0	0	0	0
0 939	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION	0	0	0	0	0	0	0	0
0 940	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD	0	0	0	0	0	0	0	0
0 941	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED	0	0	0	0	0	0	0	0
0 942	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED	0	0	0	0	0	0	0	0
0 943	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON	0	0	0	0	0	0	0	0
0 944	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR SPECIFIC WAVELENGTHS	0	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
0 945	03-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	0	0	0	0	0	0	0	0	
0 946	03-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	0	0	0	0	0	0	0	0	
0 947	03-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	0	0	0	0	0	0	0	0	
0 948	03-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	0	0	0	0	0	0	0	0	
0 949	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	0	0	0	0	0	0	0	0	
10 950	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	0	0	0	0	0	0	0	0	
0 951	03-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	0	0	0	0	0	0	0	0	
0 952	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS	0	0	0	0	0	0	0	0	
P 953	P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES (TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS WELL AS HIGH VOLTAGE POWER LINES, ETC. DO NOT CONSIDER WAVEGUIDES AS TRANSMISSION LINES	10	10	20	14	0	16	8	0	TRANSMISSION LINES
P 954	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P 955	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	2	2	0	0	0	4	2	0	
P 956	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	2	2	0	0	0	4	2	0	
P 957	P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P 958	P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	2	2	0	0	0	4	2	0	
P 959	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	7	7	0	14	0	16	3	0	
P 960	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	4	4	0	0	0	8	3	0	
P 961	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	2	2	0	0	0	0	3	0	
P 962	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	10	9	20	14	0	16	6	0	
P 963	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	2	2	0	0	0	4	2	0	
P 964	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	9	8	20	14	0	16	5	0	
P 965	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION (OPEN, SHORTED, CAPACITIVE, INDUCTIVE)	4	4	0	0	0	16	0	0	
P 966	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	1	1	0	0	0	4	0	0	
P 967	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	6	6	0	0	0	12	5	0	
P 968	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES	1	1	0	0	0	4	0	0	
P 969	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 970	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH MATCHING TRANSFORMERS TO MATCH TRANSMISSION LINES TO LOADS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
P 971	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	3	3	0	0	0	8	2	0	
P 972	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	0	0	0	0	0	0	0	0	
P 973	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	1	1	0	0	0	4	0	0	
P 974	P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	1	1	0	14	0	0	0	0	
P 975	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 976	P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 977	P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 978	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES	0	0	0	0	0	0	0	0	
P 979	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES	0	0	0	0	0	0	0	0	
P 980	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF TRANSMISSION LINES REMAIN CONSTANT, THE ELECTRICAL LENGTH INCREASES	1	1	0	0	0	0	2	0	
P 981	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 982	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	2	2	0	0	0	8	0	0	
P 983	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	1	1	0	0	0	4	0	0	
P 984	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	0	0	0	0	0	0	0	0	
P 985	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P 986	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	WAVEGUIDES AND CAVITY RESONATORS
P 987	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P 988	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P 989	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P 990	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P 991	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P 992	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES	0	0	0	0	0	0	0	0	
P 993	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS	0	0	0	0	0	0	0	0	
P 994	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS	0	0	0	0	0	0	0	0	
P 995	P2-12 DO YOU REMOVE OR INSTALL E BENDS	0	0	0	0	0	0	0	0	
P 996	P2-13 DO YOU REMOVE OR INSTALL H BENDS	0	0	0	0	0	0	0	0	
P 997	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS	0	0	0	0	0	0	0	0	
P 998	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS	0	0	0	0	0	0	0	0	
P 999	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS	0	0	0	0	0	0	0	0	
P1000	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS	0	0	0	0	0	0	0	0	
P1001	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS	0	0	0	0	0	0	0	0	
P1002	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	126	127	128	129	130	131	132	133
P1003	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0
P1004	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES	0	0	0	0	0	0	0	0
P1005	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0
P1006	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES	0	0	0	0	0	0	0	0
P1007	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0	0	0
P1008	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0	0	0
P1009	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS	0	0	0	0	0	0	0	0
P1010	P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7 WAVELENGTHS OF THE OPERATING FREQUENCY	0	0	0	0	0	0	0	0
P1011	P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH .35 USED AS AN AVERAGE	0	0	0	0	0	0	0	0
P1012	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF	0	0	0	0	0	0	0	0
P1013	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION	0	0	0	0	0	0	0	0
P1014	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR DIRECTION OF "H" FIELD IN WAVEGUIDES	0	0	0	0	0	0	0	0
P1015	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0
P1016	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0
P1017	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0
P1018	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1019	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1020	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1021	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1022	P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1023	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	0	0
P1024	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
P1025	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	0	0	
P1026	P2-43 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	
P1027	P2-44 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	
P1028	P2-45 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0	
P1029	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING	0	0	0	0	0	0	0	0	
P1030	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING	0	0	0	0	0	0	0	0	
P1031	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING	0	0	0	0	0	0	0	0	
P1032	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER THE METHOD OF TUNING	0	0	0	0	0	0	0	0	
P1033	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS	0	0	0	0	0	0	0	0	
P1034	P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR MAGNETRONS	0	0	0	0	0	0	0	0	MICROWAVE AMPLIFIERS AND OSCILLATORS
P1035	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	0	0	0	0	0	0	0	0	
P1036	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	0	0	0	0	0	0	0	0	
P1037	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE	0	0	0	0	0	0	0	0	
P1038	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY	0	0	0	0	0	0	0	0	
P1039	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION	0	0	0	0	0	0	0	0	
P1040	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING	0	0	0	0	0	0	0	0	
P1041	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS	0	0	0	0	0	0	0	0	
P1042	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS	0	0	0	0	0	0	0	0	
P1043	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS	0	0	0	0	0	0	0	0	
P1044	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)	0	0	0	0	0	0	0	0	
P1045	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	
P1046	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	
P1047	P3-14 DO YOU WORK WITH MAGNETRONS	0	0	0	0	0	0	0	0	
P1048	P3-15 DO YOU INSPECT KLYSTRONS OR TWT	0	0	0	0	0	0	0	0	
P1049	P3-16 DO YOU CLEAN KLYSTRONS OR TWT	0	0	0	0	0	0	0	0	
P1050	P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY	0	0	0	0	0	0	0	0	
P1051	P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY	0	0	0	0	0	0	0	0	
P1052	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT	0	0	0	0	0	0	0	0	
P1053	P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT	0	0	0	0	0	0	0	0	
P1054	P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT	0	0	0	0	0	0	0	0	
P1055	P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS	0	0	0	0	0	0	0	0	
P1056	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	
P1057	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	
P1058	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	126	127	128	129	130	131	132	133
P1059	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0
P1060	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0
P1061	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0
P1062	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER	0	0	0	0	0	0	0	0
P1063	P3-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS	0	0	0	0	0	0	0	0
P1064	P3-31 DO YOU INSPECT MAGNETRONS	0	0	0	0	0	0	0	0
P1065	P3-32 DO YOU CLEAN MAGNETRONS	0	0	0	0	0	0	0	0
P1066	P3-33 DO YOU ADJUST MAGNETRONS	0	0	0	0	0	0	0	0
P1067	P3-34 DO YOU TUNE MAGNETRONS	0	0	0	0	0	0	0	0
P1068	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS	0	0	0	0	0	0	0	0
P1069	P3-36 DO YOU TROUBLESHOOT MAGNETRONS	0	0	0	0	0	0	0	0
P1070	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON	0	0	0	0	0	0	0	0
P1071	P3-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS	0	0	0	0	0	0	0	0
P1072	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES	0	0	0	0	0	0	0	0
P1073	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES	0	0	0	0	0	0	0	0
P1074	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS	0	0	0	0	0	0	0	0
P1075	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS	0	0	0	0	0	0	0	0
P1076	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES	0	0	0	0	0	0	0	0
P1077	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS	0	0	0	0	0	0	0	0
P1078	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES	0	0	0	0	0	0	0	0
P1079	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS	0	0	0	0	0	0	0	0
P1080	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES	0	0	0	0	0	0	0	0
P1081	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES	0	0	0	0	0	0	0	0
P1082	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS	0	0	0	0	0	0	0	0
P1083	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS	0	0	0	0	0	0	0	0
P1084	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES	0	0	0	0	0	0	0	0
P1085	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS	0	0	0	0	0	0	0	0
P1086	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS	0	0	0	0	0	0	0	0
P1087	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES	0	0	0	0	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
P1088	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS	0	0	0	0	0	0	0	0	
P1089	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS	0	0	0	0	0	0	0	0	
P1090	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	0	0	0	0	0	0	0	0	
P1091	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	0	0	0	0	0	0	0	0	
P1092	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	0	0	0	0	0	0	0	0	
P1093	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES	0	0	0	0	0	0	0	0	
P1094	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS	0	0	0	0	0	0	0	0	
P1095	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS	0	0	0	0	0	0	0	0	
P1096	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS	0	0	0	0	0	0	0	0	
P1097	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS	0	0	0	0	0	0	0	0	
P1098	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES	0	0	0	0	0	0	0	0	
P1099	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES	0	0	0	0	0	0	0	0	
P1100	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES	0	0	0	0	0	0	0	0	
P1101	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS	0	0	0	0	0	0	0	0	
P1102	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES	0	0	0	0	0	0	0	0	
P1103	P3-70 DO YOU PERFORM TASKS ON ANODES	0	0	0	0	0	0	0	0	
P1104	P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS	0	0	0	0	0	0	0	0	
P1105	P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS	0	0	0	0	0	0	0	0	
P1106	P3-73 DO YOU PERFORM TASKS ON HEATER LEADS	0	0	0	0	0	0	0	0	
P1107	P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES	0	0	0	0	0	0	0	0	
P1108	P3-75 DO YOU PERFORM TASKS ON CATHODES	0	0	0	0	0	0	0	0	
P1109	P3-76 DO YOU PERFORM TASKS ON MAGNETS	0	0	0	0	0	0	0	0	
Q1110	Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS	86	86	80	57	83	88	89	100	
Q1111	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	86	86	60	57	83	88	89	100	
Q1112	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	82	82	80	57	83	86	82	100	
Q1113	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	81	81	60	57	83	88	81	100	REGISTERS
Q1114	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	78	78	60	57	83	86	7e	100	
Q1115	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	71	72	60	57	67	88	6R	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
Q1116	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES HAVE PASSED	63	64	60	43	50	76	60	100	
Q1117	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB	86	86	80	71	83	80	90	100	
Q1118	Q2-02 DO YOU USE OR REFER TO DELAY LINES	64	63	80	57	67	80	56	100	
Q1119	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	84	84	80	57	67	92	85	100	
Q1120	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	72	72	80	57	67	76	73	100	STORAGE DEVICES
Q1121	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	80	80	80	57	83	92	77	100	
Q1122	Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OF MEMORY SYSTEMS	80	80	80	71	83	84	79	100	
Q1123	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS	81	81	80	71	83	88	79	100	
Q1124	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS	50	51	40	29	67	68	45	50	
Q1125	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	64	63	80	57	67	80	56	100	
Q1126	Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO-ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D) CONVERTERS, OR BINARY-TO-DECIMAL READOUT CONVERTERS	90	91	80	86	83	92	92	100	
Q1127	Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT VOLTAGES	52	51	80	14	67	68	47	100	DIGITAL TO ANALOG CONVERTERS
Q1128	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS IS DETERMINED BY ADDING THE DENOMINATORS OF THE RESISTORS	30	28	60	14	17	36	27	50	
Q1129	Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	48	46	80	14	50	60	44	100	
Q1130	Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	43	41	80	43	50	56	34	100	
Q1131	Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	46	44	80	43	67	56	37	100	
Q1132	Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	43	41	80	29	50	56	35	100	
Q1131	Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	33	32	60	43	50	40	26	50	
Q1134	Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	25	26	0	14	33	20	29	0	
Q1135	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	50	48	80	43	67	68	39	100	
Q1136	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	50	49	80	43	83	68	39	100	
Q1137	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	52	51	80	29	83	72	42	100	
Q1138	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	60	59	80	57	83	80	44	100	
Q1139	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A/D) CONVERTERS	39	40	20	14	33	60	35	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
R1140	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	5	5	0	0	0	16	7	0	PHANTASTRONS
R1141	R2-01 IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	30	31	20	14	0	56	27	50	
R1142	R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	25	25	20	14	0	48	19	50	SCHMITT TRIGGERS
R1143	R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	26	26	20	14	0	48	23	50	
R1144	R3-01 IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	48	49	80	43	67	60	31	100	CABLE FABRICATION
R1145	R3-02 DO YOU FABRICATE COAXIAL CABLES	48	46	80	43	83	52	40	100	
S1146	S1-01 IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	83	83	80	71	67	88	84	100	
S1147	S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	57	58	40	71	67	72	50	0	INPUT/OUTPUT DEVICES
S1148	S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	37	36	60	29	83	40	31	50	
S1149	S2-01 DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	61	60	80	29	50	56	65	100	PHOTO SENSITIVE DEVICES
S1150	S3-01 IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	28	27	43	29	17	24	24	100	
S1151	S3-02 DO YOU MEASURE EXCITATION FREQUENCIES	13	14	0	0	0	24	12	0	
S1152	S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	14	15	0	0	0	24	10	0	
S1153	S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCIES	12	13	0	0	0	20	10	0	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)
S1154	S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	13	13	20	0	0	24	11	0	
S1155	S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	27	26	40	14	17	28	27	100	
S1156	S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	21	21	20	14	17	24	21	50	
S1157	S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	20	20	20	14	17	24	16	50	
S1158	S3-09 DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	23	23	20	14	17	28	23	50	
T1159	T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1160	T1-02 DO YOU INSPECT INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1161	T1-03 DO YOU CLEAN INFRARED SYSTEMS	0	0	0	0	0	0	0	0	INFRARED
T1162	T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1163	T1-05 DO YOU OPERATE INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1164	T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1165	T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1166	T1-08 DO YOU TROUBLESHOOT DOWN TO INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	0	0	0	
T1167	T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS	0	0	0	0	0	0	0	0	
T1168	T1-10 DO YOU REMOVE OR REPLACE INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
T1169	T1-11 DO YOU USE OR REFER TO FAR REGION	0	0	0	0	0	0	0	0	
T1170	T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION	0	0	0	0	0	0	0	0	
T1171	T1-13 DO YOU USE OR REFER TO NEAR REGION	0	0	0	0	0	0	0	0	
T1172	T1-14 DO YOU USE OR REFER TO MICRON	0	0	0	0	0	0	0	0	
T1173	T1-15 DO YOU USE OR REFER TO GRAY BODIES	0	0	0	0	0	0	0	0	
T1174	T1-16 DO YOU USE OR REFER TO BLACK BODIES	0	0	0	0	0	0	0	0	
T1175	T1-17 DO YOU USE OR REFER TO ABSORPTION	0	0	0	0	0	0	0	0	
T1176	T1-18 DO YOU USE OR REFER TO SCATTERING	0	0	0	0	0	0	0	0	
T1177	T1-19 DO YOU USE OR REFER TO ABSOLUTE ZERO	0	0	0	0	0	0	0	0	
T1178	T1-20 DO YOU PERFORM TASKS ON BLITZ	0	0	0	0	0	0	0	0	
T1179	T1-21 DO YOU PERFORM TASKS ON TARGET BUTTONS	0	0	0	0	0	0	0	0	
T1180	T1-22 DO YOU PERFORM TASKS ON ERECTOR LENSES	0	0	0	0	0	0	0	0	
T1181	T1-23 DO YOU PERFORM TASKS ON OCULAR LENSES	0	0	0	0	0	0	0	0	
T1182	T1-24 DO YOU PERFORM TASKS ON CORRECTION LENSES	0	0	0	0	0	0	0	0	
T1183	T1-25 DO YOU PERFORM TASKS ON FILTERS	0	0	0	0	0	0	0	0	
T1184	T1-26 DO YOU PERFORM TASKS ON SPHERICAL MIRRORS	0	0	0	0	0	0	0	0	
T1185	T1-27 DO YOU PERFORM TASKS ON PLANE MIRRORS	0	0	0	0	0	0	0	0	
T1186	T2-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS	0	0	0	0	0	0	0	0	LASERS
T1187	T2-02 DO YOU INSPECT LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1188	T2-03 DO YOU CLEAN LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1189	T2-04 DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1190	T2-05 DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1191	T2-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1192	T2-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1193	T2-08 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1194	T2-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1195	T2-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1196	T2-11 DO YOU USE OR REFER TO ANGSTROMS (A)	0	0	0	0	0	0	0	0	
T1197	T2-12 DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS	0	0	0	0	0	0	0	0	
T1198	T2-13 DO YOU USE OR REFER TO GROUND STATE	1	1	0	0	0	0	2	0	
T1199	T2-14 DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0	0	0	0	
T1200	T2-15 DO YOU USE OR REFER TO PACKET OF RADIATION	0	0	0	0	0	0	0	0	
T1201	T2-16 DO YOU USE OR REFER TO PHOTONS	0	0	0	0	0	0	0	0	
T1202	T2-17 DO YOU USE OR REFER TO SPONTANEOUS EMISSION	0	0	0	0	0	0	0	0	
T1203	T2-18 DO YOU USE OR REFER TO STIMULATED EMISSION	0	0	0	0	0	0	0	0	
T1204	T2-19 DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE	0	0	0	0	0	0	0	0	
T1205	T2-20 DO YOU USE OR REFER TO INVERSION LEVEL	0	0	0	0	0	0	0	0	
T1206	T2-21 DO YOU USE OR REFER TO MONOCHROMATIC	0	0	0	0	0	0	0	0	
T1207	T2-22 DO YOU WORK WITH ACTIVE MATERIALS	0	0	0	0	0	0	0	0	
T1208	T2-23 DO YOU WORK WITH PUMPING SOURCES	0	0	0	0	0	0	0	0	
T1209	T2-24 DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
T1210	T2-25 DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS	0	0	0	0	0	0	0	0	
T1211	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES	0	0	0	0	0	0	0	0	
T1212	T2-27 DO YOU WORK WITH RUBY	0	0	0	0	0	0	0	0	
T1213	T2-28 DO YOU WORK WITH HELIUM-NEON	0	0	0	0	0	0	0	0	
T1214	T2-29 DO YOU WORK WITH HELIUM-XENON	0	0	0	0	0	0	0	0	
T1215	T2-30 DO YOU WORK WITH XENON	0	0	0	0	0	0	0	0	
T1216	T2-31 DO YOU WORK WITH CESIUM-HELIUM	0	0	0	0	0	0	0	0	
T1217	T2-32 DO YOU WORK WITH ARGON	0	0	0	0	0	0	0	0	
T1218	T2-33 DO YOU WORK WITH NEODYMIUM IN GLASS	0	0	0	0	0	0	0	0	
T1219	T2-34 DO YOU WORK WITH GALLIUM ARSENIDE	0	0	0	0	0	0	0	0	
T1220	T3-01 IN YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE MODE STORAGE TUBES (MMST)	59	58	80	14	67	76	55	100	
T1221	T3-02 DO YOU INSPECT DVST OR MMST	53	52	80	0	67	68	50	100	DISPLAY TUBES
T1222	T3-03 DO YOU CLEAN DVST OR MMST	41	40	60	0	50	60	35	50	
T1223	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST	52	51	80	0	50	76	47	100	
T1224	T3-05 DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	58	57	80	14	67	72	55	100	
T1225	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS	51	50	80	0	67	64	48	100	
T1226	T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	50	50	40	0	67	76	44	100	
T1227	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF DVST	37	35	80	0	50	56	29	100	
T1228	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MMST	9	9	0	0	50	16	3	0	
T1229	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS	27	24	80	0	50	36	19	100	
T1230	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS	35	33	80	0	67	36	32	100	
T1231	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS	15	15	20	0	33	20	13	50	
T1232	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS	34	32	80	0	67	36	31	100	
T1233	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS	28	25	80	0	67	32	21	100	
U1234	U1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS	76	76	80	43	67	80	79	100	
U1235	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS	68	67	80	43	67	68	69	100	
U1236	U1-03 DO YOU USE OR REFER TO PROGRAMS	76	76	80	43	67	80	79	100	PROGRAMMING
U1237	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS	62	62	60	0	67	80	61	50	
U1238	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	43	42	60	14	67	52	39	50	
U1239	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS	22	20	60	0	50	24	18	50	
U1240	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS	78	78	80	43	67	84	81	100	
U1241	U1-08 DO YOU USE OR REFER TO TIME-SHARING	43	42	60	29	67	60	34	50	
U1242	U1-09 DO YOU USE OR REFER TO DATA WORDS	75	76	60	43	67	84	77	50	
U1243	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS	78	78	80	43	67	84	81	100	
U1244	U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	68	68	60	29	67	76	69	50	
U1245	U1-12 DO YOU USE OR REFER TO STEERING/INFORMATION	37	35	80	14	50	56	27	100	
U1246	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS	60	59	80	29	50	72	56	100	
U1247	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	56	55	80	29	67	68	52	100	
U1248	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	41	42	20	14	50	60	37	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK	SPC 126	SPC 127	SPC 128	SPC 129	SPC 130	SPC 131	SPC 132	SPC 133	
U1249 U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES	76	76	80	43	67	84	77	100	
U1250 U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	74	74	80	43	67	80	76	100	
U1251 U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	69	63	80	29	67	76	61	100	
U1252 U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	70	70	80	43	67	80	69	100	
U1253 U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	77	77	80	43	67	84	79	100	
U1254 U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	78	78	80	43	67	84	81	100	
U1255 U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	12	13	0	14	0	20	11	0	
U1256 U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	4	4	0	0	0	8	3	0	DB AND POWER RATIOS
U1257 U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	5	5	0	14	0	8	3	0	
U1258 U2-04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	1	1	0	14	0	0	0	0	

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  0 OK      DAVID
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          CC/ER: 00:00:25.595       WAIT: 00:00:01.345
IMAGES  READ:    4          PAGES:  278
START:    07:46:36 AUG 18,1977     FIN:  07:48:44 AUG 18,1977
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AD-A047 545 AIR FORCE OCCUPATIONAL MEASUREMENT CENTER LACKLAND A--ETC F/G 5/9
DIGITAL NAVIGATION/TACTICS TRAINING DEVICES SPECIALIST AFSC 341--ETC(U)
AUG 77 T J O'CONNOR, F B BOWER

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SUPPLEMENTARY

INFORMATION

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Basic electronics	Air Force training
Avionics	Teaching methods
Electronic equipment	Training
Electronic technicians	

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 as Digital Navigation/Tactics Training Devices Specialist (AFSC 34156). 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:

Inspects, installs, operates, maintains, repairs, and modifies digital navigation/tactics training devices and associated subsystems. Performs preventive maintenance on digital navigation/tactics training devices. Installs, troubleshoots, repairs, and modifies digital navigation/tactics training devices. Operates digital navigation/tactics training devices. Supervises digital navigation/tactics training devices personnel.