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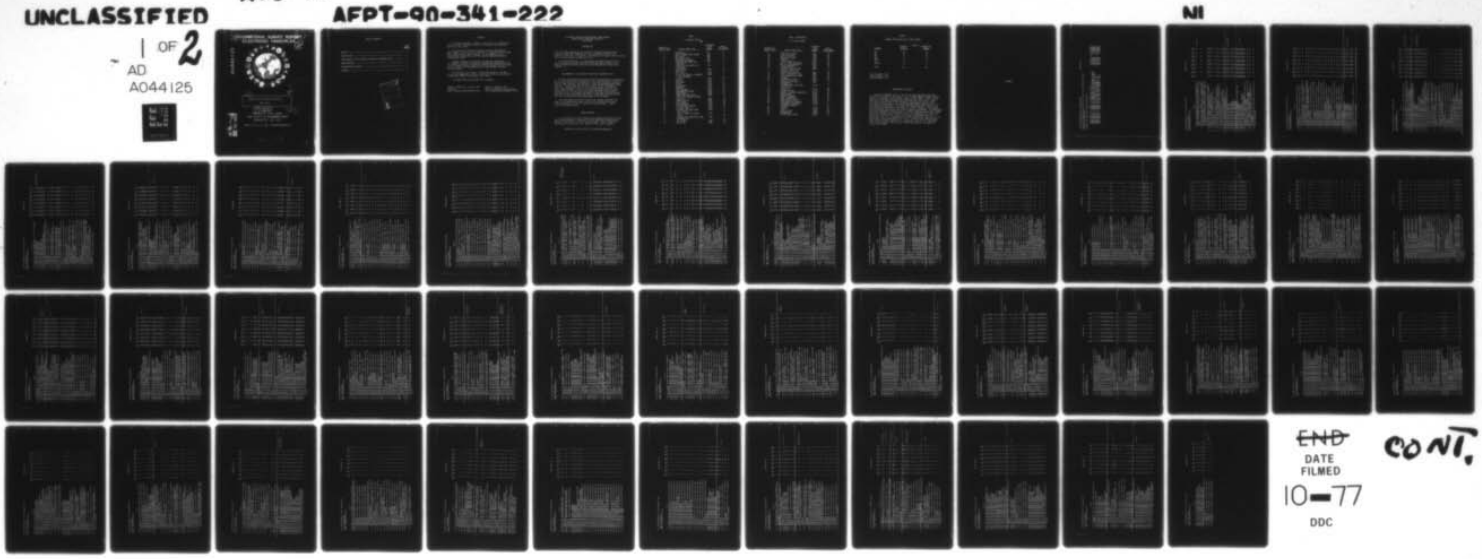

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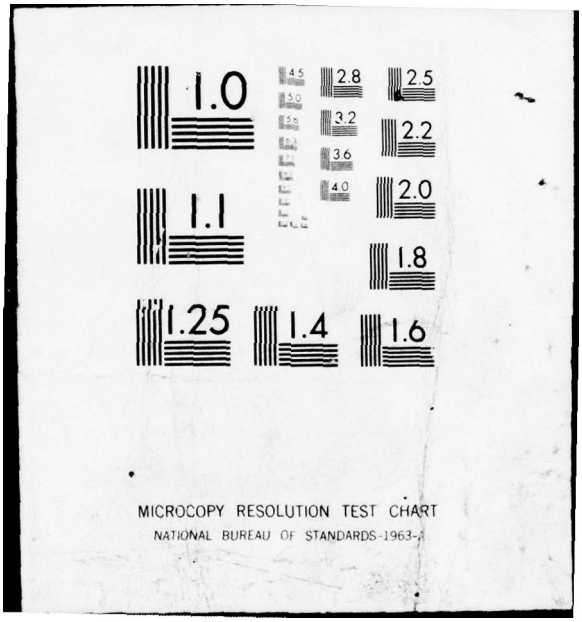
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OCCUPATIONAL SURVEY REPORT
ELECTRONIC PRINCIPLES

ANALOG FLIGHT SIMULATOR SPECIALIST

AFSC 34153

AFPT-90-341-222

22 AUGUST 1977

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 73236

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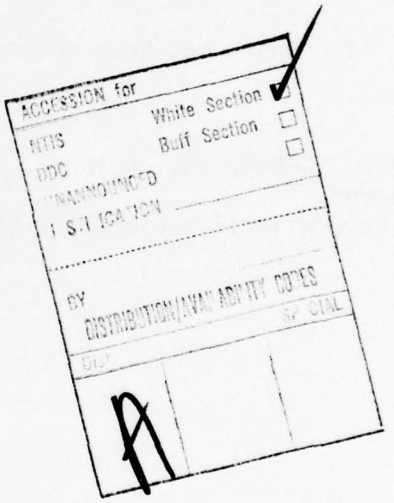


PREFACE

This report presents a summary of the results of a detailed Air Force Electronic Principles Survey of the Analog Flight Simulator Specialist, AFSC 34153.

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 Mr. James B. Keeth. 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
ANALOG FLIGHT SIMULATOR SPECIALIST
AFSC 34153

INTRODUCTION

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned as Analog Flight Simulator Specialists (AFSC 34153). 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 34153 airmen worldwide. Responses from 202 individuals represented 60 percent of the total of all AFSC 34153 personnel. Table 2 shows the percentage distribution by major command of the survey incumbents.

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

	34153	
COMMAND	PERCENT ASSIGNED	PERCENT OF SAMPLE
SAC	58	59
MAC	14	12
TAC	8	11
ADC	8	8
USAFE	5	2
ATC	3	1
OTHERS	4	7
TOTAL	100	100

Total Assigned - 335
Total Sampled - 202
Percent Sampled - 60%

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 page 6 of the GPSUM. The percentage of survey respondents indicating use of specific electronic principles ranged from high in areas such as Resistance (pp. 2-3), Soldering (pp. 11-12), and Motors (pp. 28-29) to low in areas such as AM and FM Systems (pp.23-25), SSB Systems (pp. 30-31), Antennas (pp. 32-34), Transmission Lines (pp. 34-35), Waveguides or Cavity Resonators (pp. 35-37), and Klystrons, Traveling Wave Tubes (TWT), Parametric Amplifiers, or Magnetrons (pp. 37-39). Additional AFSC 34153 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 341X3 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	SPC051	ALL AIRMEN DAFSC 34153	CONTAINING	202 MEMBERS.
GROUP IDENTITY =	SPC052	ALL AIRMEN DAFSC 34153 STATIONED IN CONUS	CONTAINING	185 MEMBERS.
GROUP IDENTITY =	SPC053	ALL AIRMEN DAFSC 34153 STATIONED OVERSEAS	CONTAINING	18 MEMBERS.
GROUP IDENTITY =	SPC054	ALL AIRMEN DAFSC 34153 ASSIGNED TO ADC	CONTAINING	17 MEMBERS.
GROUP IDENTITY =	SPC055	ALL AMN DAFSC 34153 ASSIGNED TO MAC	CONTAINING	25 MEMBERS.
GROUP IDENTITY =	SPC056	ALL AMN DAFSC 34153 ASSIGNED TO SAC	CONTAINING	119 MEMBERS.
GROUP IDENTITY =	SPC057	ALL AMN DAFSC 34153 ASSIGNED TO TAC	CONTAINING	23 MEMBERS.
GROUP IDENTITY =	SPC058	ALL AMN DAFSC 34153 ASSIGNED TO USAFE	CONTAINING	5 MEMBERS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
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.	93	92	94	100	72	95	96	100	MATHEMATICS
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.	51	50	61	65	32	46	78	80	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	62	59	83	65	60	56	70	60	
A	4	A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	31	30	33	35	24	24	57	20	
A	5	A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	63	61	78	65	56	56	78	80	
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	9	9	11	12	8	8	9	20	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	8	8	11	12	8	7	9	20	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	21	21	11	18	20	18	35	20	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	4	4	6	0	4	3	9	0	
A	10	A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	43	43	33	41	40	42	43	40	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	67	65	78	65	72	59	87	60	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	11	10	17	6	12	9	13	20	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	21	21	22	35	20	15	35	20	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	61	60	78	59	56	56	74	80	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	100	99	100	94	100	100	100	100	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	61	62	56	76	40	63	61	60	DIRECT CURRENT AND VOLTAGE
A	17	A2-03 DO YOU USE THE TERM OHM.	99	98	100	94	100	98	100	100	
A	18	A2-04 DO YOU USE THE TERM ION.	16	16	11	24	16	12	13	0	
A	19	A2-05 DO YOU USE THE TERM DYNE.	16	17	6	18	8	16	9	0	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	97	96	100	94	96	96	100	100	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	13	14	6	24	4	12	17	0	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	27	26	33	29	12	29	22	20	
A	23	A2-09 DO YOU USE THE TERM PROTON.	13	14	6	18	8	12	17	0	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	94	95	89	100	96	93	100	80	
A	25	A3-02 DO YOU INSPECT RESISTORS.	100	100	100	100	100	100	100	100	
A	26	A3-03 DO YOU CLEAN RESISTORS.	93	93	94	82	84	95	96	100	RESISTANCE
A	27	A3-04 DO YOU ADJUST RESISTORS.	98	98	94	100	96	97	100	80	
A	28	A3-05 DO YOU CHECK OHMIC VALUE OR RESISTORS.	100	100	100	100	100	100	100	100	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	100	100	100	100	100	100	100	100	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	32	33	22	35	28	30	43	20	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	99	98	100	100	96	98	100	100	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR POTENTIOMETER.	98	97	100	88	100	99	91	100	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	98	98	100	100	92	100	91	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	95	95	100	100	88	96	91	100	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	28	28	22	35	20	25	43	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.	26	24	39	35	4	26	30	60	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	99	99	100	94	100	99	100	100	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	81	80	83	82	56	85	78	80	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	74	74	78	71	48	78	78	80	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	82	81	83	82	68	84	78	80	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	50	49	67	59	28	52	48	60	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	80	79	83	82	56	85	70	80	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	73	73	78	76	48	77	70	80	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	79	79	83	82	68	82	70	80	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	71	71	78	71	44	76	70	80	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	51	50	67	59	28	54	43	60	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	79	78	83	76	60	85	65	80	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	71	71	78	65	48	77	61	80	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	76	76	78	76	68	79	61	80	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	69	68	78	59	44	75	61	80	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	50	49	67	59	28	52	39	60	
B	52	B1-01 DO YOU MEASURE RESISTANCE.	100	100	100	100	100	100	100	100	
B	53	B1-02 DO YOU REPAIR OHMMETERS.	8	7	17	6	0	7	17	0	
B	54	B1-03 DO YOU MEASURE VOLTAGE.	99	99	100	100	100	98	100	100	
B	55	B1-04 DO YOU REPAIR VOLTMETERS.	7	6	11	0	0	6	17	0	MULTIMETER USES
B	56	B1-05 DO YOU REPAIR AMMETERS.	6	6	11	0	0	8	4	0	
B	57	B1-06 DO YOU MEASURE CURRENT.	84	84	83	88	68	84	96	100	
B	58	B1-07 DO YOU USE MULTIMETERS.	99	99	100	100	100	98	100	100	
B	59	B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	9	9	6	18	8	8	0	0	
B	60	B1-09 DO YOU READ SCHEMATICS.	100	100	100	100	100	100	100	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
B	61	B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	89	85	78	94	64	90	74	80	ALTERNATING CURRENT
B	62	B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	86	87	83	94	64	92	74	100	
B	63	B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	74	75	78	94	36	79	74	100	
B	64	B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	56	57	44	65	40	58	57	60	
B	65	B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.	91	91	83	88	80	94	87	100	
B	66	B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	33	35	28	35	20	33	39	40	
B	67	B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	70	70	61	47	68	74	74	80	INDUCTORS AND INDUCTIVE REACTANCE
B	68	B3-02 DO YOU INSPECT INDUCTORS.	68	68	61	41	60	74	70	100	
B	69	B3-03 DO YOU CLEAN INDUCTORS.	45	45	39	35	28	50	43	80	
B	70	B3-04 DO YOU ADJUST INDUCTORS.	37	36	39	24	20	39	57	60	
B	71	B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	69	68	67	47	68	72	70	100	
B	72	B3-06 DO YOU USE OR REFER TO INDUCTANCE.	58	57	61	47	44	63	52	100	
B	73	B3-07 DO YOU USE OR REFER TO HENRIES.	43	42	44	47	40	42	43	60	
B	74	B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	49	48	44	47	48	48	52	60	
B	75	B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	13	14	6	12	16	11	26	0	
B	76	B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	18	18	22	24	20	13	35	40	
B	77	B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS	17	17	17	12	16	13	35	40	
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.	16	17	17	18	8	17	17	20	
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	6	18	4	16	13	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.	15	16	11	24	4	16	13	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.	15	16	11	18	8	15	17	0	
B	82	B3-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	17	16	33	18	4	17	22	40	
B	83	B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	25	25	33	18	16	25	39	40	
B	84	B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	25	24	33	18	16	24	39	40	
B	85	B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	23	23	28	18	16	24	35	40	
B	86	B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	40	39	39	29	24	44	43	60	
B	87	B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	27	27	22	29	20	27	35	40	
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	26	25	33	29	16	27	30	60	
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	49	51	28	41	52	50	57	60	
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	42	43	28	35	48	44	43	40	
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	21	22	11	35	28	18	22	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	95	95	94	94	88	97	91	80
C	93	C1-02 DO YOU INSPECT CAPACITORS.	99	99	94	94	100	99	100	100
C	94	C1-03 DO YOU CLEAN CAPACITORS.	59	59	56	53	36	65	57	60
C	95	C1-04 DO YOU ADJUST CAPACITORS.	40	41	33	65	44	31	61	60
C	96	C1-05 DO YOU TEST CAPACITORS.	89	90	83	88	84	89	100	100
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	87	86	89	76	80	88	91	100
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	100	99	100	100	100	99	100	100
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	20	21	11	18	12	24	13	0
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	4	4	0	6	4	3	4	0
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	87	86	94	88	80	87	87	100
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	93	92	100	94	84	93	91	100
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT	23	24	22	47	32	18	17	20
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS	79	79	78	71	76	79	83	80
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE	47	47	44	53	44	47	43	40
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES	48	49	44	65	56	45	48	60
C	107	C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	94	94	100	100	96	93	87	100
C	108	C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	94	95	89	94	84	98	87	100
C	109	C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC	88	89	78	82	84	91	83	100
C	110	C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	20	18	28	12	16	22	17	20
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	24	23	33	53	16	18	30	40
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	17	18	17	47	0	16	17	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	20	21	17	41	16	19	13	0
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	42	41	50	59	24	40	43	60
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	41	41	50	59	20	40	43	60
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	39	38	50	53	20	38	39	60
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	50	48	67	47	28	50	48	80
C	118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS	48	48	44	59	24	50	43	60
C	119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO FREQUENCY	33	32	44	47	12	33	26	60
C	120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE	32	32	33	53	24	30	30	40

CAPACITORS AND CAPACITIVE REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	30	29	33	35	24	23	65	80	
C 122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	31	30	33	41	32	24	61	80	
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	95	95	94	94	96	94	100	100	
C 124	C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS	86	86	89	88	72	87	83	100	
C 125	C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS	86	85	94	94	92	83	83	100	
C 126	C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	85	85	89	71	92	85	83	100	
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	21	22	22	12	16	23	30	20	
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	86	90	72	88	68	94	87	60	
C 129	C2-02 DO YOU INSPECT TRANSFORMERS	91	92	78	94	84	94	83	80	
C 130	C2-03 DO YOU CLEAN TRANSFORMERS	63	62	72	71	32	70	43	80	
C 131	C2-04 DO YOU ADJUST TRANSFORMERS	41	42	33	59	32	42	39	60	TRANSFORMERS
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS	83	84	67	76	64	91	74	60	
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	93	94	89	88	76	98	87	80	
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	6	6	11	12	0	6	4	0	
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	8	9	0	0	4	12	0	0	
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	11	12	0	0	4	14	13	0	
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	21	22	22	29	8	24	9	20	
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	30	29	28	29	12	32	30	20	
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	13	14	6	0	4	17	17	0	
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	10	11	0	0	4	14	9	0	
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS	50	51	33	53	44	50	70	20	
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS	86	86	83	88	72	88	83	80	
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS	64	64	61	47	72	61	78	60	
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	25	26	22	41	16	25	22	40	
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	24	25	17	35	20	28	17	0	
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	88	88	83	76	68	92	87	80	
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	83	83	83	76	68	85	87	80	
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	70	70	67	53	40	78	70	60	
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	43	43	44	65	24	41	48	40	
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	57	57	67	53	36	60	57	60	
C 151	C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	93	93	89	88	80	96	91	80	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
C 152	C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	79	79	63	71	68	82	83	80	
C 153	C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	85	85	89	82	76	87	83	80	
C 154	C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	89	89	89	88	76	91	87	80	
C 155	C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	52	53	50	59	36	54	57	40	
C 156	C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	61	62	56	71	44	63	65	40	
C 157	C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	73	74	67	88	48	75	78	60	
C 158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING SCHEMATIC SYMBOLS	63	64	56	59	36	73	57	60	
C 159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	29	29	33	35	16	28	39	20	
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	37	35	61	41	16	36	35	60	
C 161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	65	65	72	53	60	69	52	80	
C 162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	34	34	44	35	16	36	26	40	
C 163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	23	23	33	29	8	24	17	40	
C 164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	52	52	39	24	28	62	48	60	
C 165	C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS	41	41	33	18	12	52	39	60	
C 166	C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	27	26	22	0	20	32	30	40	
C 167	C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS	16	17	11	0	16	15	35	40	
C 168	C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	38	38	22	12	24	45	39	40	
C 169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	40	39	28	6	28	47	43	40	
C 170	C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	7	6	11	0	0	8	9	20	
C 171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS	44	43	39	35	48	43	48	40	
C 172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS	44	44	44	41	32	45	57	40	
C 173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	18	18	17	29	20	14	17	0	MAGNETISM
C 174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	20	21	22	29	16	18	17	20	
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	20	20	22	29	16	18	17	20	
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM	25	24	28	29	20	20	39	20	
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX	35	36	28	41	28	34	39	20	
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	8	9	11	6	0	9	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
C 179	C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	9	10	6	12	4	9	9	0	
C 180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	34	35	22	35	28	34	39	20	
C 181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY	21	22	17	29	16	20	22	20	
C 182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	48	49	33	41	32	51	52	60	
C 183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	23	23	22	29	12	22	30	40	
C 184	C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	22	22	22	24	12	20	30	40	
D 185	D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	68	70	50	71	72	71	70	60	
D 186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	33	33	28	35	36	30	39	40	RCL CIRCUITS
D 187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	26	26	22	24	32	24	26	40	
D 188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	47	46	50	59	56	41	57	60	
D 189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	46	45	50	59	52	41	52	60	
D 190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	34	34	28	29	44	29	48	40	
D 191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	36	36	39	41	32	36	35	40	
D 192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	25	24	33	24	24	24	22	40	
D 193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	20	20	28	24	8	21	17	40	
D 194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	21	21	33	24	8	21	22	40	
D 195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	18	18	33	24	8	18	13	40	
D 196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	21	21	28	24	8	24	13	40	
D 197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	40	39	39	53	32	39	48	40	
D 198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	26	26	28	29	28	24	26	40	
D 199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	29	29	28	29	24	29	30	40	
D 200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	36	35	39	47	32	39	39	40	
D 201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	13	13	17	18	4	13	17	20	
D 202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	17	17	22	18	12	18	17	40	
D 203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	13	14	11	24	4	13	17	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	48	48	44	47	48	50	39	60
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	30	29	33	47	16	27	35	40
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	19	20	22	41	12	18	17	20
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	20	21	28	41	8	18	22	40
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	14	14	22	24	4	14	13	40
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	22	22	28	35	16	19	26	40
D 210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	13	13	17	24	4	11	17	20
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	11	11	17	18	0	12	9	20
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	14	15	17	18	12	15	9	20
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	11	11	17	12	0	13	9	20
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	23	24	28	41	16	21	26	40
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	12	12	17	12	0	13	17	20
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	14	14	17	18	0	14	17	20
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	20	20	28	35	12	17	26	40
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	67	69	44	76	56	70	70	60
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	53	54	44	59	36	57	52	40
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	59	61	44	71	56	62	52	60
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	43	43	44	59	28	47	30	40
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	6	7	6	6	4	8	4	0
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	15	15	17	24	16	13	26	20
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	22	28	41	16	19	30	40
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	18	18	33	29	12	17	17	40
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	23	24	28	41	8	24	17	40
D 227	D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q	10	10	17	12	4	11	4	20
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	21	33	35	0	23	22	40

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		D1-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
D	229	D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS	29	30	22	41	20	29	30	20	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)
D	230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	25	26	22	41	12	24	26	20	
D	231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	16	17	17	18	4	17	22	20	
D	232	D2-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	8	8	11	18	0	8	4	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)	18	19	11	35	8	17	22	0	
D	234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	6	6	0	6	0	7	9	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	11	17	12	0	10	22	20	
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	11	11	17	18	4	9	17	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	12	12	17	24	0	11	17	0	
D	238	D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR ZERO) AFTER FIVE (5) TIME CONSTANTS	11	11	11	24	4	9	13	0	
D	239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	54	55	39	47	56	59	52	60	FILTERS
D	240	D3-02 DO YOU INSPECT FILTER CIRCUITS	52	53	39	47	48	58	48	60	
D	241	D3-03 DO YOU CLEAN FILTER CIRCUITS	36	35	39	35	16	41	35	60	
D	242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	31	31	22	41	28	29	48	40	
D	243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	47	48	28	47	36	53	43	60	
D	244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	55	56	33	47	52	61	52	60	
D	245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	40	39	33	41	40	41	39	40	
D	246	D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	54	56	28	47	52	61	52	40	
D	247	D3-09 DO YOU WORK WITH LOW PASS FILTERS	34	34	33	35	32	35	30	40	
D	248	D3-10 DO YOU WORK WITH HIGH PASS FILTERS	29	30	28	35	28	31	22	40	
D	249	D3-11 DO YOU WORK WITH BANDPASS FILTERS	19	18	28	29	16	18	17	40	
D	250	D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	15	15	17	18	8	16	17	20	
D	251	D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	23	24	11	12	28	26	17	20	
D	252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	31	32	22	35	20	36	26	40	
D	253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	30	31	22	29	16	36	26	40	
D	254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	29	30	28	35	20	32	26	40	
D	255	D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	26	27	6	12	28	29	35	0	
D	256	D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	25	25	33	29	8	29	22	60	
D	257	D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	34	34	33	35	16	37	39	60	
D	258	D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	27	26	33	29	8	30	26	60	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 059	
D	259	D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	27	28	6	12	32	30	30	0	
D	260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC FILTERS	13	13	17	29	0	12	22	20	
E	261	E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	69	70	56	71	60	73	61	40	
E	262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC COUPLING	67	68	50	71	56	71	61	40	COUPLING
E	263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH IMPEDANCE COUPLING	54	56	44	53	40	60	48	40	
E	264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH TRANSFORMER COUPLING	68	70	44	65	56	74	61	40	
E	265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	66	67	56	71	52	70	61	40	
E	266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	55	55	50	53	44	58	52	40	
E	267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	67	68	50	65	52	72	61	40	
E	268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	64	65	56	65	48	68	61	40	
E	269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	62	63	56	65	52	66	52	40	
E	270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	47	47	50	59	36	47	43	40	
E	271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	64	66	50	65	48	69	61	40	
E	272	E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	19	21	11	18	8	21	30	0	
E	273	E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	99	98	100	100	100	97	100	100	
E	274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	73	72	78	59	76	74	70	80	SOLDERING
E	275	E2-03 DO YOU ADD FLUX TO CONNECTIONS	72	71	83	94	76	64	91	60	
E	276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	71	70	89	71	60	68	87	80	
E	277	E2-05 DO YOU STRIP INSULATION FROM WIRES	98	98	100	94	96	98	100	100	
E	278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	91	90	94	94	92	90	87	80	
E	279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	98	97	100	94	96	98	96	100	
E	280	E2-08 DO YOU CUT WIRES	98	97	100	94	96	98	96	100	
E	281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	79	79	78	76	84	75	91	80	
E	282	E2-10 DO YOU TIN SOLDERING IRON TIPS	96	96	100	94	92	96	100	100	
E	283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS	98	97	100	94	96	97	100	100	
E	284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	75	75	83	82	64	73	83	80	
E	285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	96	96	100	94	96	95	100	100	
E	286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	98	97	100	94	96	97	100	100	
E	287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	53	54	44	59	40	54	70	20	
E	288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS	93	93	94	88	96	92	100	100	
E	289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	82	81	83	82	72	80	96	80	
E	290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	30	29	28	29	4	31	48	40	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
E 291	E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	95	95	100	100	88	97	91	100	
E 292	E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	69	66	100	100	96	50	96	100	
E 293	E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS	73	70	100	100	96	57	96	100	
E 294	E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS	68	65	94	100	88	53	91	100	
E 295	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	98	98	89	94	96	99	96	100	
E 296	E3-02 DO YOU ADJUST RELAYS	47	44	72	47	48	38	78	60	
E 297	E3-03 DO YOU CLEAN RELAYS	59	58	72	47	72	50	87	80	RELAYS
E 298	E3-04 DO YOU INSPECT RELAYS	89	89	89	71	100	88	96	100	
E 299	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	99	98	100	94	100	99	96	100	
E 300	E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	24	23	28	35	20	19	39	40	
E 301	E3-07 DO YOU TROUBLESHOOT RELAYS	86	85	89	76	92	83	96	100	
E 302	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	64	63	78	59	72	59	78	80	
E 303	E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	51	50	67	65	80	37	74	60	
E 304	E3-10 DO YOU PERFORM TASKS ON RELAY CORES	11	12	17	24	4	12	4	0	
E 305	E3-11 DO YOU PERFORM TASKS ON RELAY COILS	18	19	22	41	12	14	22	0	
E 306	E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	20	20	28	41	20	15	22	20	
E 307	E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	23	23	28	41	24	17	35	20	
E 308	E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS	79	79	67	71	72	80	91	60	
E 309	E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS	77	77	67	71	72	77	87	60	
E 310	E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS	76	77	61	71	68	77	87	60	
E 311	E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS	80	80	72	82	72	80	87	60	
E 312	E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS	87	89	72	82	88	88	96	60	
E 313	E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE	79	79	83	82	68	82	74	100	
F 314	F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES	80	79	83	76	92	75	91	80	
F 315	F1-02 DO YOU INSPECT MICROPHONES	72	71	72	71	92	66	91	60	MICROPHONES
F 316	F1-03 DO YOU CLEAN MICROPHONES	57	56	67	71	68	52	65	60	
F 317	F1-04 DO YOU OPERATE MICROPHONES	79	78	83	76	92	75	87	80	
F 318	F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OR MICROPHONES	68	67	78	65	64	67	74	60	
F 319	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	32	32	22	53	48	27	39	20	
F 320	F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	76	75	83	71	92	71	83	80	
F 321	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	31	30	28	47	56	24	35	20	
F 322	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	47	46	56	53	64	41	52	60	
F 323	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	9	10	0	0	8	13	4	0	
F 324	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	18	17	22	24	32	13	13	60	
F 325	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	37	36	39	29	48	34	39	20	
F 326	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	3	3	6	0	0	3	4	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
F	327	F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	77	76	78	71	92	71	96	60	
F	328	F2-02 DO YOU INSPECT SPEAKERS	72	72	67	53	92	68	87	60	SPEAKERS
F	329	F2-03 DO YOU CLEAN SPEAKERS	49	48	50	59	20	51	65	60	
F	330	F2-04 DO YOU OPERATE SPEAKERS	74	73	78	53	92	71	87	60	
F	331	F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OF SPEAKERS	69	68	67	41	72	70	78	60	
F	332	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	20	21	17	47	28	16	22	20	
F	333	F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	70	71	61	59	88	67	83	60	
F	334	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS	10	11	6	18	12	8	17	20	
F	335	F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES	10	11	0	18	4	11	13	0	
F	336	F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	4	4	0	12	0	4	4	0	
F	337	F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	6	7	0	6	12	7	4	0	
F	338	F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	6	6	0	0	8	7	9	0	
F	339	F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	7	8	0	0	8	10	4	0	
F	340	F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	6	6	0	0	8	8	4	0	
F	341	F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	4	5	0	0	4	6	4	0	
F	342	F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	96	96	94	100	80	98	100	100	
F	343	F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	90	90	89	94	76	92	91	80	
F	344	F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	92	92	94	100	72	94	96	100	OSCILLOSCOPES
F	345	F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	95	95	94	94	76	98	96	100	
F	346	F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	74	75	67	82	60	77	78	60	
F	347	F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME	47	46	56	71	40	39	74	80	
F	348	F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	40	41	33	65	24	39	39	40	
F	349	F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	77	78	67	82	48	83	74	80	
F	350	F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	38	39	39	65	20	35	57	60	
F	351	F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	90	90	94	100	64	95	83	100	
F	352	F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROLS	68	68	78	82	52	67	78	80	
F	353	F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	87	86	100	94	68	87	91	100	
G	354	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	96	96	100	100	100	95	91	100	
G	355	G1-02 DO YOU INSPECT DIODES	91	91	89	88	92	91	91	100	SEMICONDUCTOR DIODES
G	356	G1-03 DO YOU REMOVE OR REPLACE DIODES	96	95	100	100	100	94	91	100	
G	357	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT	90	89	100	94	92	87	91	100	
G	358	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	7	6	11	0	4	8	4	20	
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	19	19	17	12	4	19	22	20	
G	360	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	20	19	33	12	12	22	22	60	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
G 361	G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	64	63	78	71	48	65	65	80
G 362	G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON THEIR PHYSICAL APPEARANCE	87	86	89	88	88	84	96	100
G 363	G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	13	15	6	18	4	17	9	0
G 364	G1-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	50	50	61	65	40	49	52	60
G 365	G1-12 DO YOU USE OR REFER TO DIODE COLOR CODING	42	42	44	35	40	39	65	60
G 366	G1-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	2	3	0	6	0	3	0	0
G 367	G1-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	4	4	0	12	0	5	0	0
G 368	G1-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	76	74	94	76	76	71	91	100
G 369	G1-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	5	5	6	0	0	6	4	20
G 370	G1-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	5	5	6	0	0	6	4	20
G 371	G1-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	46	45	61	65	32	45	57	60
G 372	G1-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	7	7	6	18	8	5	4	20
G 373	G1-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	4	4	6	6	0	3	4	20
G 374	G1-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	4	4	0	6	0	4	4	0
G 375	G1-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	7	7	6	18	12	5	0	20
G 376	G1-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	5	5	6	6	4	5	0	20
G 377	G1-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	84	82	100	82	88	80	91	100
G 378	G1-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	25	25	39	35	20	24	22	20
G 379	G1-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE INCREASES RESISTANCE DECREASES)	41	42	44	76	32	36	43	60
G 380	G1-27 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)	17	18	17	29	4	17	22	20
G 381	G1-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR INTERPRET CIRCUIT DIAGRAMS	60	60	61	71	56	59	65	40
G 382	G1-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	7	8	6	6	12	7	0	20

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
G 383	G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	6	7	0	6	4	8	0	0	
G 384	G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	9	9	11	6	8	9	4	20	
G 385	G1-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	6	6	6	6	4	7	0	20	
G 386	G1-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	10	10	6	12	12	9	4	20	
G 387	G1-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	21	21	22	18	24	18	17	40	
G 388	G1-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS	8	8	11	18	8	7	0	20	
G 389	G1-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	7	7	11	18	4	6	0	20	
G 390	G1-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	33	31	39	35	44	27	35	60	
G 391	G1-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	33	31	39	35	44	27	35	60	
G 392	G1-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	12	12	11	12	12	11	9	0	
G 393	G1-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	12	12	11	12	12	11	9	0	
G 394	G1-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	10	10	11	6	12	10	0	20	
G 395	G1-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS	9	9	11	6	8	10	0	20	
G 396	G1-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	12	12	11	18	16	10	9	20	
G 397	G1-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	27	27	44	76	8	25	26	20	
G 398	G1-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	4	5	0	0	0	7	0	0	
G 399	G1-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	45	49	44	53	48	41	65	40	
G 400	G1-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	21	20	39	29	12	18	30	60	
G 401	G1-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	16	16	22	18	8	14	26	20	
G 402	G1-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	25	29	33	29	24	21	35	40	
G 403	G1-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	33	33	39	47	32	30	39	40	
G 404	G2-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	63	60	94	94	76	96	100	100	
G 405	G2-02 DO YOU INSPECT TRANSISTORS	61	59	89	88	72	95	100	100	
G 406	G2-03 DO YOU REMOVE OR REPLACE TRANSISTORS	63	60	100	94	80	95	100	100	
G 407	G2-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	55	52	89	88	76	35	100	100	TRANSISTORS
G 408	G2-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	43	41	78	88	52	25	83	100	
G 409	G2-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	42	39	78	88	52	24	83	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
G 410	G2-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	41	38	78	88	56	22	78	100	
G 411	G2-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	16	17	11	41	16	11	30	20	
G 412	G2-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	15	16	6	41	20	10	26	20	
G 413	G2-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	28	26	50	71	20	18	48	60	
G 414	G2-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	13	12	22	29	16	8	22	20	
G 415	G2-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	61	58	100	88	68	45	100	100	
G 416	G2-13 DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	59	56	94	88	60	45	96	100	
G 417	G2-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	44	42	56	76	44	34	70	40	
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)	18	18	22	29	16	13	39	20	
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	30	28	50	53	20	22	61	40	
G 420	G2-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	15	14	33	24	8	11	26	40	
G 421	G2-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	15	15	22	24	12	9	39	40	
G 422	G2-19 DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	13	13	17	29	8	10	17	0	
G 423	G2-20 DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	11	11	17	29	4	9	13	0	
G 424	G2-21 DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	11	12	11	29	4	9	17	0	
G 425	G2-22 DO YOU CALCULATE BETA TRANSISTOR GAINS	7	6	11	12	0	6	13	0	
G 426	G2-23 DO YOU CALCULATE ALPHA TRANSISTOR GAINS	6	6	11	12	0	5	13	0	
G 427	G2-24 DO YOU CALCULATE GAMMA TRANSISTOR GAINS	6	6	6	12	0	5	13	0	
G 428	G3-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	41	38	67	53	36	29	87	60	
G 429	G3-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS	39	36	67	47	36	27	83	60	TRANSISTOR AMPLIFIERS
G 430	G3-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	35	32	61	41	28	24	83	60	
G 431	G3-04 DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	38	35	67	47	32	25	87	60	
G 432	G3-05 DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	37	34	61	47	36	24	83	60	
G 433	G3-06 DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	36	33	72	47	36	22	87	60	
G 434	G3-07 DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	37	35	61	53	36	25	78	60	
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	14	14	22	18	12	9	30	20	
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	7	6	17	0	4	5	17	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
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	13	13	22	24	4	9	30	20
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	10	9	17	6	8	7	22	20
G 439	G3-12	DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	13	13	17	18	12	10	22	20
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	10	10	11	6	8	8	22	20
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)	2	2	6	0	0	2	9	20
G 442	G3-15	DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	6	5	17	6	4	4	13	40
G 443	G3-16	DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	2	2	6	0	0	1	9	20
G 444	G3-17	DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	25	23	44	29	20	19	52	40
G 445	G3-18	DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	16	15	22	6	20	12	39	40
G 446	G3-19	DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	13	13	22	6	12	11	30	40
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	5	4	11	0	4	3	13	20
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	4	4	11	0	4	3	13	20
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	3	2	11	0	0	3	4	20
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)	6	6	6	6	0	6	17	20
G 451	G3-24	DO YOU COMPUTE THE STATIC OPERATING POINT [Q] OF A TRANSISTOR AT DIFFERENT TEMPERATURES	1	1	0	0	0	2	0	0
G 452	G3-25	DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH EMITTER (SWAMPING) RESISTOR STABILIZATION	20	19	28	24	12	16	43	40
G 453	G3-26	DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-BIAS STABILIZATION	17	16	28	18	8	13	39	40

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY TASK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
G 454	G3-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH THERMISTOR STABILIZATION	13	13	22	12	4	12	30	40
G 455	G3-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH FORWARD BIAS DIODE STABILIZATION	16	16	22	18	16	13	35	40
G 456	G3-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH REVERSE BIAS DIODE STABILIZATION	16	16	22	18	16	12	39	40
G 457	G3-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH DOUBLE DIODE STABILIZATION	15	15	22	12	8	13	35	40
G 458	G3-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	20	19	28	18	16	14	52	60
G 459	G3-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	20	19	28	18	12	14	57	60
G 460	G3-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	15	15	22	12	8	12	39	60
G 461	G3-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	19	18	22	18	16	14	43	60
G 462	G3-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	19	18	22	18	16	14	43	60
G 463	G3-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	15	15	22	12	8	13	35	60
G 464	G3-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	21	20	28	29	24	13	48	40
G 465	G3-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	25	23	39	35	24	18	48	40
G 466	G3-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	18	17	28	29	12	15	35	40
G 467	G3-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	16	16	28	18	16	14	26	40
G 468	G3-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	17	16	28	18	12	16	26	40
G 469	G3-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	18	17	22	24	12	15	30	40
G 470	G3-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR TRANSISTOR AMPLIFIERS IN THE COMMON COLLECTOR CONFIGURATION	10	9	22	18	8	7	22	40
G 471	G3-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	13	13	17	29	4	10	35	20
G 472	G3-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	20	19	22	29	8	16	43	40
G 473	G3-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	30	29	39	35	32	23	65	40
G 474	G3-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	16	15	28	12	4	13	39	40
G 475	G3-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	17	17	22	18	12	13	48	40

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
G 476	G3-49 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	19	18	28	24	12	13	48	40	
H 477	H1-01 DO YOU USE OR REFER TO VARACTORS	12	12	6	12	8	13	17	20	
H 478	H1-02 DO YOU USE OR REFER TO TUNNEL DIODES	18	16	22	24	12	16	30	40	SOLID-STATE
H 479	H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	23	21	44	29	24	13	57	80	SPECIAL PURPOSE
H 480	H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	17	16	28	24	16	11	39	40	DEVICES
H 481	H1-05 DO YOU USE OR REFER TO ZENER DIODES	58	56	83	59	52	53	78	80	
H 482	H1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS	47	44	78	41	52	40	61	80	
H 483	H2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	93	94	89	100	92	92	100	100	
H 484	H2-02 DO YOU INSPECT POWER SUPPLIES	91	91	89	94	88	91	96	80	
H 485	H2-03 DO YOU CLEAN POWER SUPPLIES	78	78	78	76	60	81	83	100	
H 486	H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES	87	88	78	94	84	86	96	60	POWER SUPPLIES
H 487	H2-05 DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	88	88	89	94	76	88	96	80	
H 488	H2-06 DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	86	87	72	94	72	87	100	80	
H 489	H2-07 DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	84	84	89	94	92	78	100	100	
H 490	H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	86	87	78	94	80	87	96	100	
H 491	H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS	73	75	50	71	48	81	78	40	
H 492	H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	72	75	39	71	52	80	74	40	
H 493	H2-11 DO YOU WORK WITH BRIDGE RECTIFIERS	76	78	50	65	52	84	83	40	
H 494	H2-12 DO YOU WORK WITH THREE-PHASE RECTIFIERS	55	57	28	29	36	65	65	40	
H 495	H2-13 DO YOU USE OR REFER TO INPUT VOLTAGE	82	84	50	76	68	87	91	40	
H 496	H2-14 DO YOU USE OR REFER TO INPUT FREQUENCY	59	62	33	59	44	62	70	40	
H 497	H2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	69	71	39	65	56	75	74	40	
H 498	H2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	68	70	44	71	44	71	87	40	
H 499	H2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE	55	57	39	59	36	60	65	40	
H 500	H2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY	46	48	33	41	36	47	61	40	
H 501	H2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	45	45	39	53	32	47	52	40	
H 502	H2-20 DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	68	70	39	59	28	82	70	40	
H 503	H2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	70	73	39	65	52	78	74	40	
H 504	H2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS	63	64	44	47	44	70	65	60	
H 505	H2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS	53	54	39	41	36	61	48	60	
H 506	H2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	50	50	39	35	40	55	48	60	
H 507	H2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	45	45	39	35	32	50	43	60	
H 508	H2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	37	37	33	35	32	39	35	60	
H 509	H2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	47	48	39	41	32	53	39	60	
H 510	H2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER	45	45	44	47	48	43	39	60	
H 511	H2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	5	5	11	6	0	8	0	0	
H 512	H3-01 DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	45	46	28	59	64	41	52	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
H 513	H3-02 DO YOU INSPECT OSCILLATORS	44	45	28	53	56	41	57	40	OSCILLATORS
H 514	H3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	39	39	33	47	32	39	52	40	
H 515	H3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	34	35	28	41	44	31	48	40	
H 516	H3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	38	38	33	47	48	36	39	40	
H 517	H3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	41	42	33	47	52	39	48	40	
H 518	H3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	38	39	33	47	48	37	39	40	
H 519	H3-08 DO YOU USE OR REFER TO FEEDBACK	42	43	39	53	56	40	39	40	
H 520	H3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)	20	21	17	35	20	18	22	20	
H 521	H3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	28	29	28	47	32	26	26	40	
H 522	H3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	30	30	33	47	28	29	30	40	
H 523	H3-12 DO YOU USE OR REFER TO DAMPING	31	30	39	35	36	29	35	40	
H 524	H3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	38	38	33	41	48	37	39	40	
H 525	H3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	8	9	6	18	8	8	4	0	
H 526	H3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	12	13	11	18	8	14	9	20	
H 527	H3-16 DO YOU USE OR REFER TO UNDER DAMPING	15	15	11	18	16	14	17	20	
H 528	H3-17 DO YOU USE OR REFER TO OVER DAMPING	15	15	11	18	16	14	17	20	
H 529	H3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD	26	26	28	35	32	24	26	40	
H 530	H3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD	29	29	28	35	40	27	30	40	
H 531	H3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD	8	8	11	0	16	7	9	20	
H 532	H3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD	18	18	17	35	16	18	17	0	
H 533	H3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS	14	15	6	24	28	12	9	0	
H 534	H3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	13	14	6	24	28	11	9	0	
H 535	H3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	13	14	6	24	28	9	13	0	
H 536	H3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	4	4	0	0	4	5	4	0	
H 537	H3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	3	4	0	0	4	5	0	0	
H 538	H3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS	27	26	39	35	36	24	26	40	
I 539	I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	29	27	44	53	28	18	65	60	
I 540	I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS	23	23	33	41	16	16	52	20	
I 541	I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS	21	21	33	47	4	15	48	20	MULTIVIBRATORS
I 542	I1-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS	19	18	28	29	4	15	48	20	
I 543	I1-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS	23	23	33	41	20	15	52	20	
I 544	I1-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS	22	22	28	41	12	16	52	20	
I 545	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS	19	19	33	47	16	10	48	20	
I 546	I1-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS	22	23	28	47	12	16	52	20	
I 547	I1-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS	12	12	17	24	12	9	17	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
I 548	I1-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	16	16	22	24	16	13	22	20	
I 549	I1-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	4	4	6	0	8	3	4	20	
I 550	I1-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDO	11	10	22	29	4	8	26	0	
I 551	I1-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	15	15	28	29	24	10	26	20	
I 552	I1-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	16	15	28	29	24	10	30	20	
I 553	I1-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	17	17	28	29	24	12	35	20	
I 554	I1-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS	12	11	11	18	0	8	39	0	
I 555	I2-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	49	48	56	65	32	45	61	60	LIMITERS AND CLAMPERS
I 556	I2-02 DO YOU WORK WITH SERIES DIODE LIMITERS	39	39	50	47	24	39	39	60	
I 557	I2-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	36	36	44	47	20	34	39	60	
I 558	I2-04 DO YOU WORK WITH LIMITERS WITH BIAS	30	30	33	41	12	30	30	60	
I 559	I2-05 DO YOU WORK WITH ZENER DIODE LIMITERS	31	31	33	41	20	28	43	60	
I 560	I2-06 DO YOU WORK WITH TRANSISTOR LIMITERS	21	21	28	35	12	17	39	60	
I 561	I2-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	17	16	22	18	8	13	35	40	
I 562	I2-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	28	28	28	41	20	27	35	40	
I 563	I2-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	24	24	22	35	16	23	26	40	
I 564	I2-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT	15	15	17	18	12	13	22	0	
I 565	I3-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	96	96	94	94	84	100	91	100	
I 566	I3-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	94	94	94	100	80	96	91	100	ELECTRON TUBES
I 567	I3-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	93	93	94	100	80	97	78	100	
I 568	I3-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	52	54	44	47	44	56	43	80	
I 569	I3-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	51	54	39	53	24	61	39	40	
I 570	I3-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	84	83	94	82	80	84	78	100	
I 571	I3-07 DO YOU USE OR REFER TO CUTOFF	51	54	33	47	44	58	43	40	
I 572	I3-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	26	27	22	29	12	30	22	20	
I 573	I3-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	26	28	22	35	12	29	22	20	
I 574	I3-10 DO YOU USE OR REFER TO TRANSIT TIME	17	18	17	18	0	21	17	20	
I 575	I3-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	20	21	17	24	8	23	17	20	
I 576	I3-12 DO YOU USE OR REFER TO SATURATION	66	68	56	76	64	70	52	60	
I 577	I3-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	30	32	22	29	28	34	22	20	
I 578	I3-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	10	11	11	6	4	10	17	0	
I 579	I3-15 DO YOU USE OR REFER TO PLATE VOLTAGE	81	81	72	88	68	84	74	80	
I 580	I3-16 DO YOU USE OR REFER TO PLATE CURRENT	58	59	56	53	56	61	48	60	
I 581	I3-17 DO YOU USE OR REFER TO GRID VOLTAGE	75	76	67	76	68	78	65	80	
I 582	I3-18 DO YOU USE OR REFER TO GRID CURRENT	55	56	50	53	52	57	43	60	
I 583	I3-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	75	76	67	76	60	80	65	80	
I 584	I3-20 DO YOU USE OR REFER TO CATHODE CURRENT	55	57	50	53	48	58	48	60	
I 585	I3-21 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)	23	24	22	29	8	27	17	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
I	586	I3-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	13	14	0	12	4	15	13	0	
I	587	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	22	23	17	24	20	24	17	40	
I	588	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	10	11	0	6	8	11	4	0	
I	589	I3-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	8	9	0	0	0	10	9	0	
I	590	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	18	19	0	12	8	22	17	0	
I	591	I3-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	11	12	0	0	0	14	13	0	
I	592	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	25	26	28	41	12	27	17	20	
I	593	I3-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	18	19	11	24	8	18	26	0	
I	594	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	9	10	6	0	4	11	9	20	
I	595	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	8	9	6	0	4	10	4	20	
I	596	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	14	14	17	0	12	16	9	20	
I	597	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	14	14	17	0	12	16	13	20	
I	598	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	75	75	83	71	72	77	70	100	
I	599	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	36	36	39	53	24	35	35	80	
I	600	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	65	68	56	82	52	71	52	60	
I	601	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	57	57	61	47	44	63	52	40	
I	602	I3-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	59	59	72	41	24	71	43	60	
I	603	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	14	15	17	6	8	15	17	40	
I	604	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	9	10	0	0	4	12	4	0	
I	605	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	89	89	89	94	72	92	87	80	
I	606	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	94	94	89	94	76	98	91	100	
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	10	10	11	6	8	10	4	20	
I	608	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	49	49	56	71	32	45	65	60	
J	609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB	94	95	89	94	84	97	91	80	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	29	30	22	29	16	34	26	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
J 611	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	47	50	22	35	28	53	52	40	
J 612	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	66	67	56	53	56	71	61	60	
J 613	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	42	43	28	24	40	42	57	40	
J 614	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	42	42	39	29	40	40	57	40	
J 615	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	41	42	28	35	24	45	43	40	
J 616	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE)	70	72	50	82	44	82	43	80	
J 617	J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	49	49	44	88	28	45	78	60	SPECIAL PURPOSE ELECTRON TUBES
J 618	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	17	17	22	12	12	18	22	40	
J 619	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	30	31	22	24	24	32	39	40	
J 620	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS	27	28	17	29	12	31	22	20	
J 621	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	38	39	28	41	16	45	22	60	
J 622	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	27	26	39	47	20	20	48	60	
J 623	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)	28	28	33	59	20	23	39	40	
J 624	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)	21	22	17	29	16	19	26	40	
J 625	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	27	28	22	35	16	24	57	0	
J 626	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	14	15	11	24	4	14	22	20	
J 627	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	9	10	6	0	4	10	17	20	
J 628	J2-13 DO YOU USE OR REFER TO PERSISTENCE	20	19	28	29	8	14	57	20	
J 629	J2-14 DO YOU USE OR REFER TO DECAY TIMES	15	15	17	24	4	14	22	20	
J 630	J2-15 DO YOU USE OR REFER TO FLUORESCENCE	17	17	11	18	4	15	39	40	
J 631	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	18	18	6	18	4	16	48	20	
J 632	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	12	12	11	6	12	13	9	0	
J 633	J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	4	4	0	6	4	5	0	0	HETERODYNING, MODULATION, AND DEMODULATION
J 634	J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	3	4	0	0	4	5	0	0	
J 635	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	2	3	0	0	0	4	0	0	
J 636	J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	2	3	0	0	0	4	0	0	
J 637	J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	4	5	0	6	0	7	0	0	
K 638	K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	3	3	6	0	4	3	0	0	
K 639	K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	4	3	0	0	AM SYSTEMS
K 640	K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	1	2	0	0	0	3	0	0	
K 641	K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	4	3	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
K 642	K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	4	3	0	0	
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	2	2	0	0	4	3	0	0	
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	4	3	0	0	
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	2	2	0	0	4	3	0	0	
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	0	1	0	0	4	0	0	0	
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	1	1	0	0	4	1	0	0	
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	1	2	0	0	4	2	0	0	
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	1	1	0	0	4	1	0	0	
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	0	1	0	0	0	1	0	0	
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	0	1	0	0	0	1	0	0	
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	0	0	0	0	0	0	0	0	
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	0	0	0	0	0	0	0	0	
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	1	1	0	0	0	2	0	0	
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	1	1	0	0	0	2	0	0	
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	0	0	0	0	0	0	0	0	
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	0	0	0	0	0	0	0	0	
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	0	0	0	0	0	0	0	0	
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	0	1	0	0	4	0	0	0	
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	0	0	0	0	0	0	0	0	
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	0	0	0	0	0	0	0	0	
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	0	0	0	0	0	0	0	0	
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	0	0	0	0	0	0	0	0	
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	2	2	0	0	4	3	0	0	
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	1	1	0	0	0	2	0	0	
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	2	2	6	0	0	3	4	0	
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	2	0	0	FM SYSTEMS
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	2	0	0	
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	2	0	0	
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	2	0	0	
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	0	2	0	0	
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	1	2	0	0	0	3	0	0	
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	0	2	0	0	
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	1	1	0	0	0	2	0	0	
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	0	1	0	0	0	1	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
K	676	K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	0	1	0	0	0	1	0	0	
K	677	K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	0	1	0	0	0	1	0	0	
K	678	K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	0	1	0	0	0	1	0	0	
K	679	K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	0	1	0	0	0	1	0	0	
K	680	K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	0	0	0	0	0	0	0	0	
K	681	K2-16 DO YOU PERFORM TASKS ON LIMITERS	0	1	0	0	0	1	0	0	
K	682	K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	0	1	0	0	0	1	0	0	
K	683	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	1	1	0	0	0	2	0	0	
K	684	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	0	1	0	0	0	1	0	0	
K	685	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	9	9	6	6	20	5	26	0	
K	686	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	10	10	0	0	24	6	30	0	NUMBERING SYSTEMS
K	687	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	9	9	6	6	20	5	26	0	
K	688	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	8	8	0	0	20	5	22	0	
K	689	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	10	10	0	0	24	6	30	0	
K	690	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	8	8	0	0	20	5	26	0	
K	691	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	8	8	0	0	24	5	22	0	
K	692	K3-08 DO YOU SUBRRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD	8	8	0	0	20	5	22	0	
K	693	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	8	8	0	0	24	4	22	0	
K	694	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	8	8	0	0	20	5	22	0	
L	695	L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	15	15	6	12	24	13	26	0	
L	696	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	9	9	0	6	20	6	22	0	LOGIC FUNCTIONS
L	697	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	9	9	0	6	20	6	22	0	
L	698	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	8	8	0	6	16	6	17	0	
L	699	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	7	8	0	0	20	6	13	0	
L	700	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	10	10	0	6	24	7	22	0	
L	701	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	10	10	0	6	24	7	22	0	
L	702	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	9	9	0	0	20	7	22	0	
L	703	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	9	9	0	0	24	7	17	0	
L	704	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	10	10	0	6	20	8	26	0	
L	705	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	10	10	0	6	20	8	26	0	
L	706	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	10	10	0	6	20	8	26	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
L 707	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	10	10	0	0	24	8	22	0	
L 708	L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC CIRCUITS	5	5	6	0	12	3	9	0	BOOLEAN EQUATIONS
L 709	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	5	5	0	0	8	4	13	0	
L 710	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	4	4	0	0	8	4	9	0	
L 711	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	6	6	0	0	16	4	13	0	
L 712	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	7	6	0	0	16	4	22	0	
L 713	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	6	6	0	0	16	4	13	0	
L 714	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	5	5	0	0	12	4	13	0	
L 715	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	5	5	0	0	8	4	13	0	
L 716	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	4	4	0	0	8	4	9	0	
L 717	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	6	6	0	0	16	4	13	0	
L 718	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	4	4	0	0	12	4	4	0	
L 719	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	5	5	0	0	12	4	9	0	
L 720	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	6	6	0	0	16	5	13	0	
L 721	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	7	7	0	0	16	5	22	0	
L 722	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	7	7	0	0	16	5	17	0	
L 723	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	5	5	0	0	12	3	17	0	
L 724	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	5	5	0	0	12	3	13	0	
L 725	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	6	5	0	0	12	3	22	0	
L 726	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	5	5	0	0	12	3	13	0	
L 727	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	5	5	0	0	12	3	17	0	
L 728	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	5	5	0	0	12	3	17	0	
L 729	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	5	5	0	0	12	3	13	0	
L 730	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	6	6	0	0	16	3	22	0	
L 731	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	6	6	0	0	16	3	22	0	
L 732	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	4	4	0	0	12	3	13	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
L 733	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	8	8	6	0	24	5	17	20	COUNTERS
L 734	L3-02 DO YOU USE OR REFER TO UP-COUNTERS	8	7	6	0	24	4	17	20	
L 735	L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS	8	7	6	0	24	4	17	20	
L 736	L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS	6	5	0	0	16	3	17	0	
L 737	L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS	5	5	0	0	16	3	13	0	
L 738	L3-06 DO YOU USE OR REFER TO RING COUNTERS	3	3	0	0	8	3	9	0	
L 739	L3-07 DO YOU USE OR REFER TO DECADE COUNTERS	6	6	0	0	16	4	13	0	
L 740	L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	5	5	0	0	12	3	13	0	
L 741	L3-09 DO YOU USE OR REFER TO DOWN CLOCKS	7	6	0	0	20	4	17	0	
L 742	L3-10 DO YOU USE OR REFER TO UP CLOCKS	7	6	0	0	20	4	17	0	
L 743	L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	5	4	0	0	12	3	13	0	
L 744	L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS	3	3	0	0	4	3	13	0	
L 745	L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	3	3	0	0	8	3	9	0	
L 746	L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	2	2	0	0	4	2	9	0	
L 747	L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	4	4	0	0	12	3	13	0	
L 748	L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	5	4	0	0	16	3	13	0	
L 749	L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	3	3	6	0	8	2	9	20	
L 750	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	4	4	0	0	8	3	9	0	
L 751	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS	4	4	0	0	8	3	9	0	
L 752	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTERS	3	3	0	0	8	3	9	0	
L 753	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	2	2	0	0	4	2	9	0	
L 754	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	2	2	0	0	4	2	9	0	
L 755	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	2	2	0	0	4	2	9	0	
L 756	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	3	3	0	0	8	3	9	0	
M 757	M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	24	24	22	76	20	13	61	20	
M 758	M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	6	6	6	12	0	7	9	0	
M 759	M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	15	16	17	35	16	11	26	20	TIMING CIRCUITS
M 760	M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	12	12	17	35	8	9	17	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
M 761	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS	10	10	11	24	8	8	13	0	
M 762	M1-06 DO YOU USE OR REFER TO RISE TIME	15	15	22	47	4	10	35	20	
M 763	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME	13	13	17	41	0	9	30	20	
M 764	M1-08 DO YOU USE OR REFER TO SWEEP TIME	22	23	22	47	12	17	52	20	
M 765	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	19	20	17	65	8	11	52	20	
M 766	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	18	19	17	65	4	12	43	20	
M 767	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	18	18	22	53	4	10	57	20	
M 768	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	16	16	17	53	4	8	52	20	
M 769	M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	16	16	11	41	4	14	30	20	
M 770	M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	15	15	11	41	4	12	30	20	USE OF SIGNAL GENERATORS
M 771	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL GENERATORS	15	15	17	29	4	14	26	40	
M 772	M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	14	15	11	29	4	13	26	20	
M 773	M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	13	13	11	29	4	12	22	20	
M 774	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS	11	11	6	12	4	11	26	20	
M 775	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	9	9	6	12	4	8	26	20	
M 776	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH	5	5	0	6	0	7	9	0	
M 777	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	2	3	0	0	0	4	0	0	
M 778	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS	8	8	11	12	4	7	17	20	
M 779	M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR GENERATORS	95	96	89	100	88	97	100	100	MOTORS AND GENERATORS
M 780	M3-02 DO YOU INSPECT MOTORS	92	92	89	100	84	94	91	80	
M 781	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS	89	90	83	100	88	89	91	100	
M 782	M3-04 DO YOU OPERATE MOTORS	86	86	78	94	76	87	96	80	
M 783	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS	94	94	94	100	84	95	100	100	
M 784	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS	60	61	50	82	76	55	61	60	
M 785	M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	95	95	94	100	88	97	100	100	
M 786	M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	53	55	39	76	68	52	39	40	
M 787	M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS	28	29	22	35	20	30	22	40	
M 788	M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES	38	39	33	53	52	34	35	60	
M 789	M3-11 DO YOU PERFORM ANY TASKS ON ROTORS	37	37	39	53	32	36	30	80	
M 790	M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES	57	58	50	82	72	53	52	100	
M 791	M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS	94	94	94	65	90	91	93	80	
M 792	M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS	94	94	39	65	98	91	93	80	
M 793	M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES	27	28	17	29	24	29	22	20	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
M 794	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	16	17	6	12	0	22	9	20	
M 795	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	31	32	33	47	20	34	26	20	
M 796	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	25	25	22	29	8	28	22	40	
M 797	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	68	69	56	41	56	71	83	80	
M 798	M3-20 DO YOU WORK WITH INDUCTION MOTORS	69	70	61	71	72	68	74	60	
M 799	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	55	57	44	47	64	55	52	60	
M 800	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	65	66	56	65	60	65	83	80	
M 801	M3-23 DO YOU INSPECT GENERATORS	89	90	78	94	80	92	91	60	
M 802	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	81	83	67	94	76	84	83	60	
M 803	M3-25 DO YOU OPERATE GENERATORS	80	81	67	88	72	82	83	60	
M 804	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	88	88	89	94	76	91	87	80	
M 805	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	58	60	39	71	76	56	52	40	
M 806	M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS	89	89	89	94	80	92	83	80	
M 807	M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	50	52	39	71	68	50	35	20	
N 808	N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	87	86	94	100	88	87	74	100	
N 809	N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	20	21	17	24	12	23	13	0	METER MOVEMENTS
N 810	N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	21	22	17	24	16	24	13	0	
N 811	N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	21	22	17	24	12	23	17	0	
N 812	N1-05 DO YOU READ METER SCALES	88	87	94	94	88	89	74	100	
N 813	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	36	36	33	47	32	37	35	60	
N 814	N1-07 DO YOU ZERO OHMMETERS	86	85	94	94	84	87	74	100	
N 815	N1-08 DO YOU ZERO AMMETERS	39	38	39	53	36	36	43	60	
N 816	N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	53	53	61	47	56	54	57	80	
N 817	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	63	63	72	88	56	66	43	60	
N 818	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	26	25	39	76	56	8	52	20	
N 819	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	26	24	44	71	48	8	52	40	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 820	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	18	17	33	53	28	5	43	20	
N 821	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	23	22	39	53	48	7	52	40	
N 822	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	26	24	44	71	52	8	52	40	
N 823	N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	24	23	39	65	44	8	52	20	
N 824	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	18	17	28	59	20	7	43	40	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
N	825	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	4	4	11	6	0	3	9	20	
N	826	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS	6	6	11	18	4	3	17	20	
N	827	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS	9	8	22	24	8	3	22	40	
N	828	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	8	8	11	24	0	3	30	20	
N	829	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	3	3	0	6	0	2	13	0	
N	830	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	4	5	0	18	0	2	13	0	
N	831	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	5	5	0	24	4	1	13	0	
N	832	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	7	8	0	18	8	4	17	0	
N	833	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	15	15	17	59	24	5	26	20	
N	834	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	24	24	28	65	8	17	48	60	
N	835	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	12	12	17	29	0	10	30	20	WAVESHAPING CIRCUITS
N	836	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	16	15	28	41	0	10	48	60	
N	837	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	16	15	28	41	0	10	43	60	
N	838	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	15	14	28	41	0	9	43	60	
N	839	N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	18	18	22	47	4	13	39	40	
N	840	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	20	20	22	59	4	14	39	40	
N	841	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	12	12	28	41	4	8	22	60	
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	7	6	17	12	0	5	13	60	
N	843	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	13	12	22	29	0	8	43	60	
N	844	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	8	8	11	18	0	5	26	20	
O	845	O1-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	0	1	0	6	0	0	0	0	SINGLE SIDEBAND SYSTEMS
O	846	O1-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	
O	847	O1-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	
O	848	O1-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	
O	849	O1-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	
O	850	O1-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	0	0	0	0	0	0	0	0	
O	851	O1-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	0	0	0	0	0	0	0	0	
O	852	O1-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
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	0	0	0	0	0	0	0	0	
0 855	01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	0	0	0	0	0	0	0	0	
0 856	01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS	0	1	0	0	4	0	0	0	
0 857	01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	0	0	0	0	0	0	0	0	
0 858	01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	0	0	0	0	0	0	0	0	
0 859	01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS	0	1	0	0	4	0	0	0	
0 860	01-16 DO YOU PERFORM TASKS ON SSB MIXERS	0	0	0	0	0	0	0	0	
0 861	01-17 DO YOU PERFORM TASKS ON SSB DRIVERS	0	0	0	0	0	0	0	0	
0 862	01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	0	1	0	0	4	0	0	0	
0 863	01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	0	1	0	0	4	0	0	0	
0 864	01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	0	0	0	0	0	0	0	0	
0 865	01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	0	0	0	0	0	0	0	0	
0 866	01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS	0	1	0	0	4	0	0	0	
0 867	01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES	0	1	0	0	4	0	0	0	
0 868	01-24 DO YOU USE OR REFER TO SELECTIVE FADING	0	0	0	0	0	0	0	0	
0 869	01-25 DO YOU USE OR REFER TO PEAK POWER	0	0	0	0	0	0	0	0	
0 870	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY	0	0	0	0	0	0	0	0	
0 871	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	0	0	0	0	0	0	0	0	
0 872	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	0	0	0	0	0	0	0	0	
0 874	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	0	0	0	0	0	0	0	0	
0 875	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	7	8	6	29	0	6	13	0	
0 876	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS	7	8	6	29	0	6	13	0	PULSE MODULATION SYSTEMS
0 877	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	7	8	6	24	0	6	13	0	
0 878	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS	7	8	6	29	0	6	13	0	
0 879	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	8	9	6	29	0	6	17	0	
0 880	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	8	9	6	29	0	6	17	0	
0 881	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	8	9	6	29	0	6	17	0	
0 882	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	7	8	6	29	0	6	13	0	
0 883	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	6	6	6	29	0	5	4	0	
0 884	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	6	6	6	29	0	5	4	0	
0 885	02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	5	5	0	12	0	6	4	0	
0 886	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	4	4	0	6	0	5	4	0	
0 887	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	4	5	0	12	0	5	4	0	
0 888	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	4	5	0	6	0	4	13	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
0 889	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	7	8	6	29	0	4	17	0	
0 890	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	4	4	0	12	0	4	4	0	
0 891	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	6	6	0	18	0	5	13	0	
0 892	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	5	6	0	12	0	5	13	0	
0 893	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	5	5	6	24	0	5	0	0	
0 894	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	6	6	6	24	0	5	9	0	
0 895	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	3	3	6	12	0	3	4	0	
0 896	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	4	4	6	24	0	3	4	0	
0 897	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	6	7	6	29	0	5	9	0	
0 898	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	5	6	6	29	0	3	9	0	
0 899	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	5	6	6	29	0	3	9	0	
0 900	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	6	6	6	29	0	3	13	0	
0 901	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	5	6	6	29	0	3	9	0	
0 902	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES	4	4	6	18	0	2	13	0	
0 903	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	7	8	6	29	0	6	13	0	
0 904	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	7	8	6	29	0	6	13	0	
0 905	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	7	8	6	29	0	6	13	0	
0 906	02-32 DO YOU USE OR REFER TO PULSE SHAPE	7	8	6	29	0	6	13	0	
0 907	02-33 DO YOU USE OR REFER TO PEAK POWER	6	6	6	18	0	5	13	0	
0 908	02-34 DO YOU USE OR REFER TO AVERAGE POWER	6	6	6	18	0	5	13	0	
0 909	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	4	5	6	18	0	3	9	0	
0 910	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	6	7	6	29	0	4	13	0	
0 911	02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	2	3	0	6	0	3	0	0	
0 912	02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	6	6	6	24	0	4	13	0	
0 913	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	4	4	0	6	0	5	4	0	
0 914	03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	0	0	0	0	0	0	0	0	ANTENNAS
0 915	03-02 DO YOU INSPECT ANTENNAS	0	0	0	0	0	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DT-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
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-TASK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
O 945	O3-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	0	0	0	0	0	0	0	0	
O 946	O3-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	0	0	0	0	0	0	0	0	
O 947	O3-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	0	0	0	0	0	0	0	0	
O 948	O3-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	0	0	0	0	0	0	0	0	
O 949	O3-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	0	0	0	0	0	0	0	0	
O 950	O3-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	0	0	0	0	0	0	0	0	
O 951	O3-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	0	0	0	0	0	0	0	0	
O 952	O3-39 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	3	4	0	12	8	1	9	0	TRANSMISSION LINES
P 954	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 955	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 956	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 957	P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 958	P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 959	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	3	3	0	12	4	1	9	0	
P 960	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	2	2	0	12	0	0	9	0	
P 961	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	0	1	0	0	0	0	4	0	
P 962	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	3	4	0	12	8	1	9	0	
P 963	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 964	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	2	3	0	12	4	0	9	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)	1	2	0	6	4	0	4	0	
P 966	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	0	0	0	0	0	0	0	0	
P 967	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	1	2	0	6	4	0	4	0	
P 968	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 969	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
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 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
P 971	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	1	1	0	0	4	0	4	0	
P 972	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	0	1	0	0	4	0	0	0	
P 973	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	0	0	
P 974	P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	0	0	0	0	0	0	0	0	
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	0	0	0	0	0	0	0	0	
P 981	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 982	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	0	0	0	0	0	0	0	0	
P 983	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	0	0	0	0	0	0	0	0	
P 984	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	0	0	0	0	0	0	0	0	WAVEGUIDES AND CAVITY RESONATORS
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	
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	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
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 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
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	
P1035	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	0	0	0	0	0	0	0	0	MICROWAVE AMPLIFIERS AND OSCILLATORS
P1036	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	0	0	0	0	0	0	0	0	
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	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058
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 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
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	1	0	6	0	0	0	0	
P1090	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	0	1	0	6	0	0	0	0	
P1091	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	0	1	0	6	0	0	0	0	
P1092	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	0	1	0	6	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	5	5	0	0	20	3	9	0	
Q1111	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	5	5	0	0	20	3	9	0	
Q1112	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	5	5	0	0	20	3	9	0	REGISTERS
Q1113	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	5	5	0	0	20	3	9	0	
Q1114	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	4	4	0	0	20	2	4	0	
Q1115	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	4	4	0	0	20	2	4	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 05A	SPC 057	SPC 058	
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	3	3	0	0	12	3	4	0	
Q1117	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB	8	8	0	0	28	4	17	0	
Q1118	Q2-02 DO YOU USE OR REFER TO DELAY LINES	6	5	0	0	12	4	17	0	
Q1119	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	5	5	0	0	8	4	17	0	STORAGE DEVICES
Q1120	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	6	5	0	0	12	4	17	0	
Q1121	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	6	5	0	0	12	4	17	0	
Q1122	Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OR MEMORY SYSTEMS	6	6	0	0	16	4	13	0	
Q1123	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS	7	6	0	0	24	3	17	0	
Q1124	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS	4	4	0	0	8	4	4	0	
Q1125	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	4	4	0	0	4	4	13	0	
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	12	12	6	0	40	7	26	20	
Q1127	Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT VOLTAGES	6	5	6	0	20	3	13	20	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	4	3	6	0	4	3	9	20	
Q1129	Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	6	5	6	0	16	3	13	20	
Q1130	Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	3	3	0	0	12	3	4	0	
Q1131	Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	3	3	0	0	8	3	4	0	
Q1132	Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	3	3	0	0	12	3	4	0	
Q1131	Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	3	3	0	0	12	3	0	0	
Q1134	Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	4	4	0	0	12	3	13	0	
Q1135	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	4	4	0	0	12	3	4	0	
Q1136	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	4	4	0	0	12	3	4	0	
Q1137	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	4	4	0	0	12	3	9	0	
Q1138	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	5	5	0	0	16	3	9	0	
Q1139	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A/D) CONVERTERS	8	8	0	0	24	5	17	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		TASK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
R1140	R1-01	DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	0	1	0	0	4	0	0	0	PHANTASTRONS
R1141	R2-01	IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	3	4	6	18	4	1	9	0	SCHMITT TRIGGERS
R1142	R2-02	DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	2	2	6	12	0	1	4	0	
R1143	R2-03	DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	2	3	6	12	0	2	4	0	
R1144	R3-01	IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	33	32	39	53	20	29	48	40	CABLE FABRICATION
R1145	R3-02	DO YOU FABRICATE COAXIAL CABLES	26	25	28	47	16	22	43	20	
S1146	S1-01	IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	33	34	28	59	24	32	48	0	INPUT/OUTPUT DEVICES
S1147	S1-02	DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	24	25	6	12	4	32	26	0	
S1148	S1-03	DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	6	6	0	6	4	8	9	0	
S1149	S2-01	DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	20	20	17	6	4	24	26	20	PHOTO SENSITIVE DEVICES
S1150	S3-01	IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	43	42	61	88	76	22	78	60	
S1151	S3-02	DO YOU MEASURE EXCITATION FREQUENCIES	14	14	22	35	4	9	30	40	
S1152	S3-03	DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	14	14	22	35	8	10	22	40	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)
S1153	S3-04	DO YOU USE OR REFER TO EXCITATION FREQUENCIES	13	13	22	35	0	9	30	40	
S1154	S3-05	DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	13	13	22	29	8	10	22	40	
S1155	S3-06	DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	44	42	61	82	76	23	83	60	
S1156	S3-07	DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	28	27	44	47	44	13	65	40	
S1157	S3-08	DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	23	23	39	47	20	12	61	40	
S1158	S3-09	DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	29	28	44	41	40	16	65	60	
T1159	T1-01	DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	0	0	6	0	0	0	0	0	INFRARED
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	
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

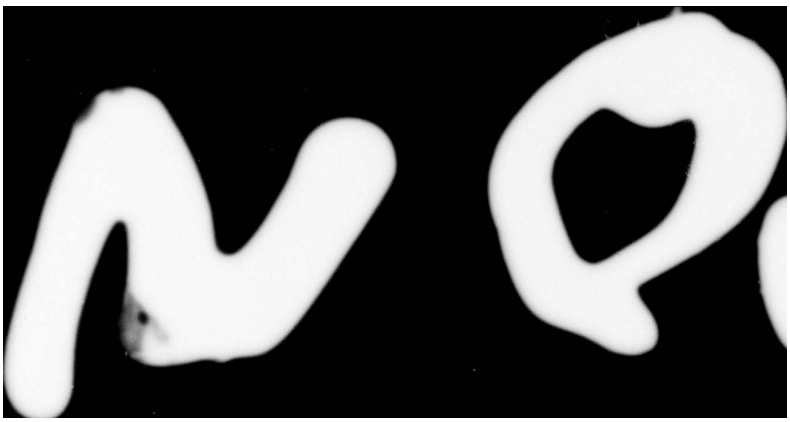
BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
T1169 T1-11 DO YOU USE OR REFER TO FAR REGION	0	0	0	0	0	0	0	0	
T1170 T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION	0	0	0	0	0	0	0	0	
T1171 T1-13 DO YOU USE OR REFER TO NEAR REGION	0	0	0	0	0	0	0	0	
T1172 T1-14 DO YOU USE OR REFER 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	
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	LASERS
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	0	0	0	0	0	0	0	0	
T1199 T2-14 DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0	0	0	0	
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	

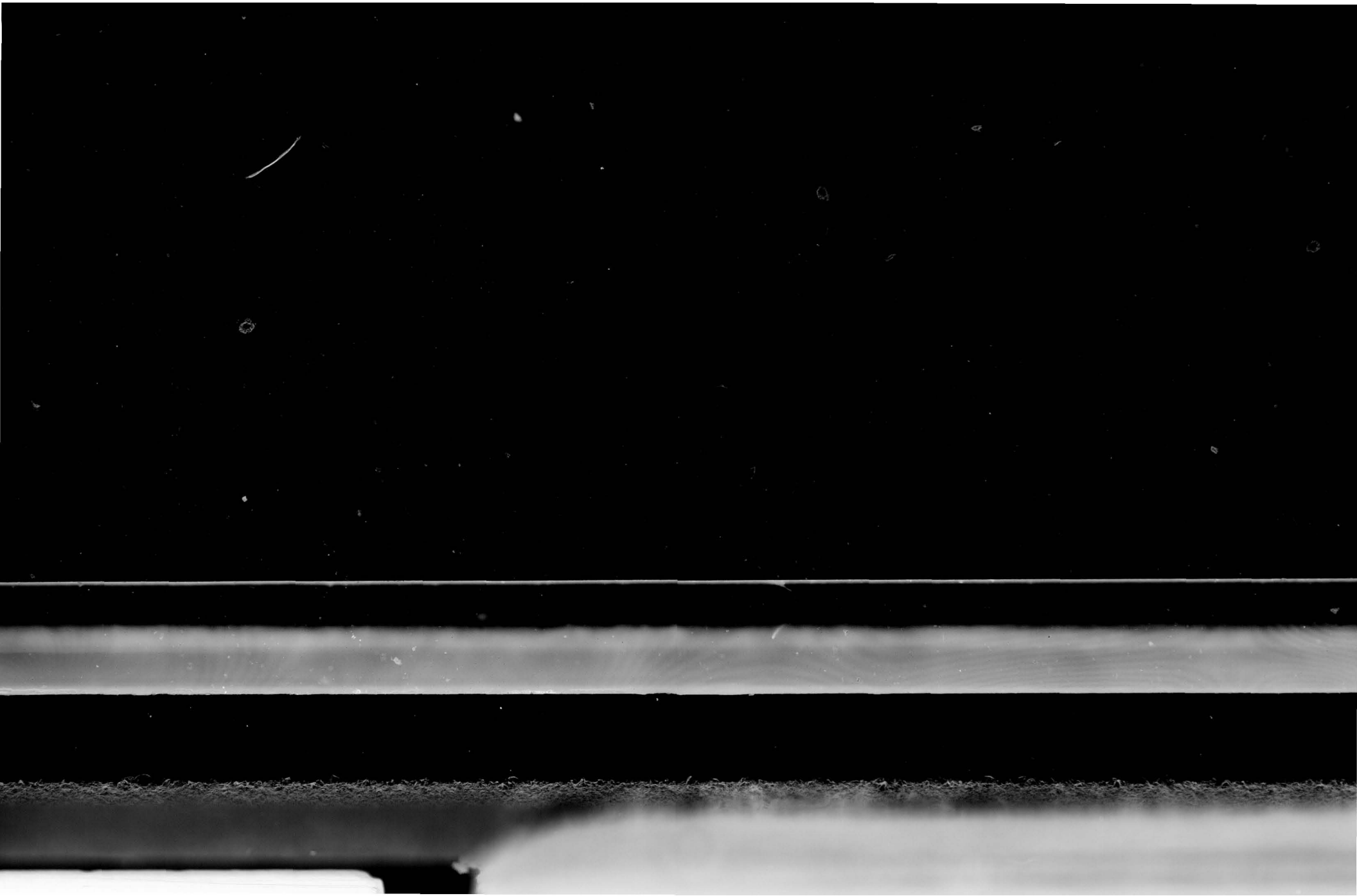
TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

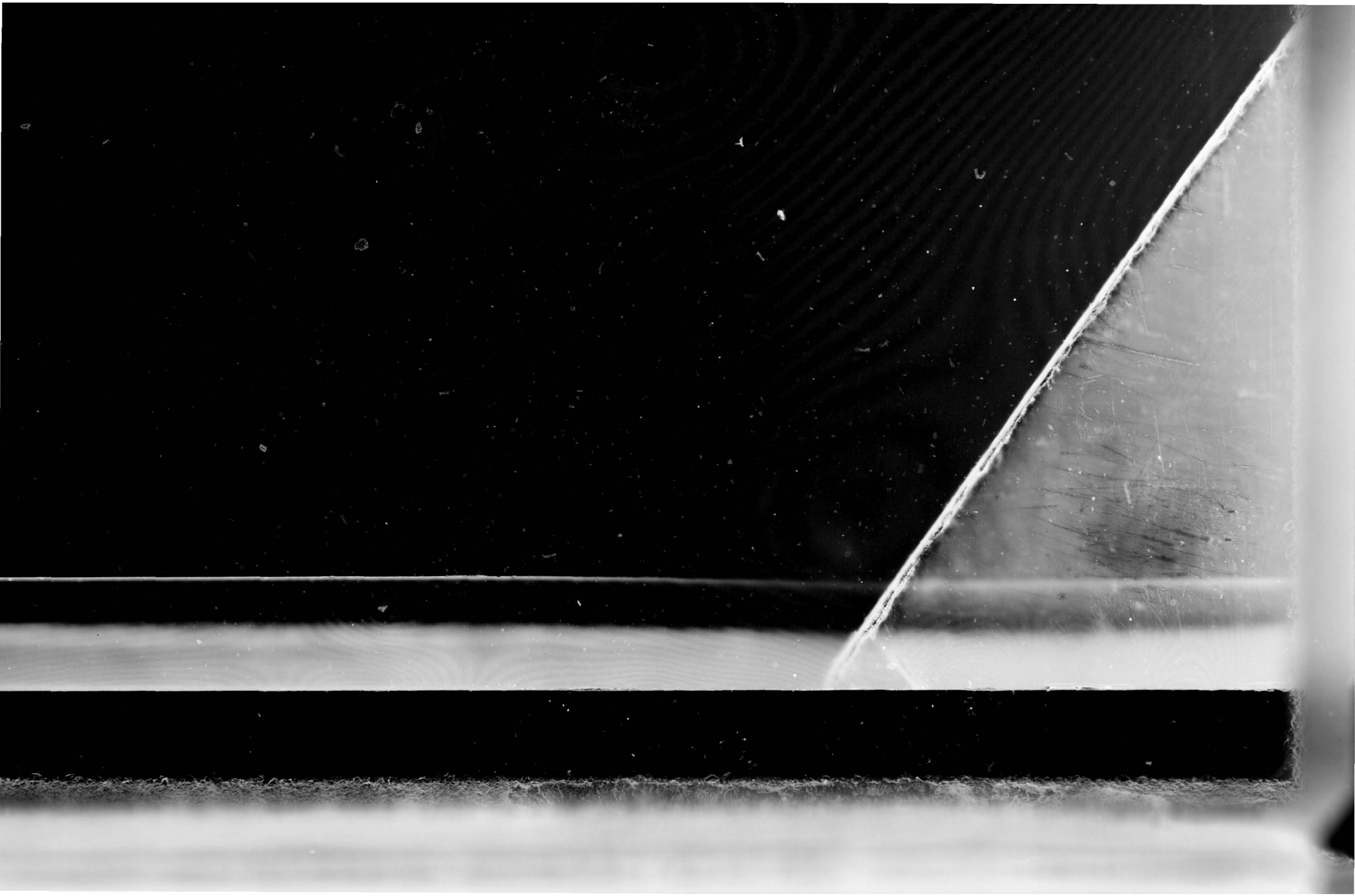
	DY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
T1210	T2-25 DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS	0	0	0	0	0	0	0	0	
T1211	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES	0	0	0	0	0	0	0	0	
T1212	T2-27 DO YOU WORK WITH RUBY	0	0	0	0	0	0	0	0	
T1213	T2-28 DO YOU WORK WITH 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)	12	11	28	71	0	2	30	60	
T1221	T3-02 DO YOU INSPECT DVST OR MMST	11	11	28	71	0	2	30	40	
T1222	T3-03 DO YOU CLEAN DVST OR MMST	7	6	22	47	0	1	17	40	DISPLAY TUBES
T1223	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST	8	8	22	53	0	0	26	40	
T1224	T3-05 DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	11	11	22	71	0	2	30	40	
T1225	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS	9	9	22	47	0	2	30	40	
T1226	T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	8	8	17	41	0	2	22	40	
T1227	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF DVST	3	2	17	12	0	0	13	40	
T1228	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MMST	2	2	6	24	0	0	0	0	
T1229	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS	2	1	11	6	0	0	4	40	
T1230	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS	2	1	11	6	0	0	4	40	
T1231	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS	2	3	6	24	0	0	4	0	
T1232	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS	2	2	6	12	0	0	9	20	
T1233	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS	2	2	11	12	0	0	4	40	
U1234	U1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS	6	6	0	0	20	3	17	0	
U1235	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS	6	6	0	0	20	3	17	0	PROGRAMMING
U1236	U1-03 DO YOU USE OR REFER TO PROGRAMS	6	6	0	0	20	3	17	0	
U1237	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS	4	4	0	0	12	3	9	0	
U1238	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	2	3	0	0	4	3	0	0	
U1239	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS	2	2	0	0	0	3	0	0	
U1240	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS	6	6	0	0	20	3	17	0	
U1241	U1-08 DO YOU USE OR REFER TO TIME-SHARING	4	4	0	0	4	3	13	0	
U1242	U1-09 DO YOU USE OR REFER TO DATA WORDS	5	5	0	0	16	3	13	0	
U1243	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS	5	5	0	0	16	3	13	0	
U1244	U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	5	5	0	0	16	3	13	0	
U1245	U1-12 DO YOU USE OR REFER TO STEERING/INFORMATION	4	4	0	0	8	3	9	0	
U1246	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS	5	5	0	0	16	3	13	0	
U1247	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	5	5	0	0	8	3	17	0	
U1248	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	4	4	0	0	8	3	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 051	SPC 052	SPC 053	SPC 054	SPC 055	SPC 056	SPC 057	SPC 058	
U1249	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES	5	5	0	0	16	3	13	0	
U1250	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	4	4	0	0	12	3	9	0	
U1251	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	4	4	0	0	16	3	9	0	
U1252	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	4	4	0	0	16	3	9	0	
U1253	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	5	5	0	0	16	3	13	0	
U1254	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	4	4	0	0	12	3	13	0	
U1255	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	7	8	6	12	4	6	17	20	
U1256	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	2	2	6	0	0	3	4	20	DB AND POWER RATIOS
U1257	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	2	2	6	0	0	2	4	20	
U1258	U2-04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	0	0	0	0	0	0	0	0	







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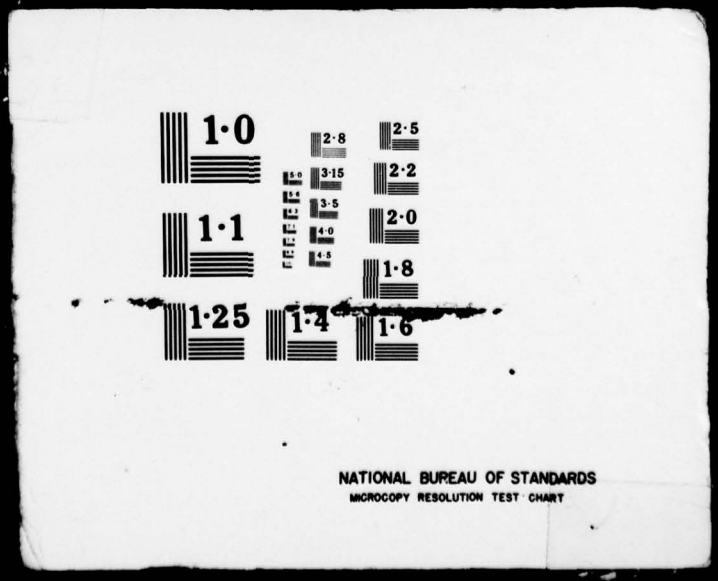

SUPPLEMENTARY

INFORMATION

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report summarized the results of the administration of the Electronic Principles Inventory to airmen assigned as Analog Flight Simulator Specialists (AFSC 34153). 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:

Installs, maintains, repairs, inspects, operates and modifies analog flight simulators, motion systems, and associated electronic equipment. Performs preventive maintenance on analog flight simulators. Installs, repairs, adjusts, and modifies analog flight simulators. Operates analog flight simulators and simulator equipment. Supervises analog flight simulator personnel.