OCCUPATIONAL SURVEY REPORT

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ELECTRONICS PRINCIPLES OCCUPATIONAL SURVEY REPORT, SPACE SYSTEMS COMMAND AND CONTROL OPERATOR/ TECHNICIAN CAREER LADDER, AFSC's 30830, 30850, 30870, AND 30890.

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OCCUPATIONAL SURVEY BRANCH
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PREFACE

This report presents a summary of the results of a detailed Air Force Electronics Principles survey of the Space Systems Command and Control Operator/Technician career ladder, AFSC's 30830, 30850, 30870, and 30890.

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

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

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

This report has been reviewed and is approved.

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ELECTRONICS PRINCIPLES OCCUPATIONAL SURVEY REPORT
SPACE SYSTEMS COMMAND AND CONTROL OPERATOR/TECHNICIAN CAREER LADDER
AFS 308X0

INTRODUCTION

This report summarizes the results of the first full-scale operational electronics principles survey of an Air Force electronics specialty. The survey was directed by HQ ATC/TT, Major General C. G. Cleveland, in a letter dated 11 February 1975. In that letter General Cleveland asked the USAF Occupational Measurement Center to review the use of electronics training by personnel on the job. The Space Systems Command and Control specialty (AFS 308X0) was selected to be surveyed after consultation with HQ ATC personnel.

This report presents a brief summary of (a) the development of the Electronics Principles Inventory (EPI) which was used to collect the data, (b) the administration of the EPI to AFS 308X0 job incumbents, and (c) the data resulting from the survey.

DEVELOPMENT OF THE ELECTRONICS PRINCIPLES INVENTORY

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

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

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

The EPI used in the 308X0 survey contained 1266 items covering all electronics principles training given at the five ATC technical training centers.

ADMINISTRATION

The EPI was administered in person and by mail to 174 DAFS 308X0 airmen worldwide. This total represents approximately 70 percent of all airmen assigned to the career ladder. However, due to personnel being in student status, classified locations, etc., only 200 airmen were eligible to be surveyed. Therefore, 87 percent of the eligible incumbents were surveyed.

There were no differences in the responses to the survey by airmen completing the EPI under supervision and airmen completing the booklet after receiving it through the mail. For purposes of analysis, data from both groups were combined.

RESULTS

Airmen in the 308X0 career ladder were found to specialize in either operations or maintenance, but did not perform both functions. The job groups identified during the EPI analysis of this ladder were found to be essentially the same as those reported in the Occupational Survey Report (AFPT 90-308-071, 16 Sep 75); that is, clusters of airmen were virtually identical regardless of whether those clusters were based on similarity of tasks performed or similarity of knowledges required to perform them. Evidently specific jobs require specific knowledge. This, of course, could be assumed, but it is rewarding to obtain objective support for such an assumption, at least in one career field.

The fact that knowledge inventories and task inventories are part of the same dimension has three major implications. First, it argues for expanding the knowledge inventory program into other fields. It also further validates the use of task inventory results in developing Specialty Knowledge Tests (SKT). Finally, it further supports the idea that task inventories are, in fact, measuring what a person does on the job and what knowledge he should be given during his training.

The data which reflect the percent of various groups of incumbents answering "yes" to each item of the EPI are presented in the appendix to this report. In the appendix, group summary three (GPSUM3), contains data for all DAFSC 308X0, 30830, 30870, and 30890 personnel. GPSUM7 contains data for all DAFSC 308X0, 30830, and 30870 maintenance personnel. GPSUM8 contains data for all DAFSC 308X0, 30830, and 30870 operator personnel. The 62 electronics subject areas are separated by heavy lines, and the corresponding modules from Keesler course 3AQR30020-1 are annotated along the right-hand side.

APPENDIX

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TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUPS IN THE 30&X0 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	SPC001	ALL 30&X0 AIRMEN	CONTAINING 174 MEMBERS.
GROUP IDENTITY =	SPC002	ALL AIRMEN DAFSC 30&30	CONTAINING 58 MEMBERS.
GROUP IDENTITY =	SPC003	ALL AIRMEN DAFSC 30&70	CONTAINING 99 MEMBERS.
GROUP IDENTITY =	SPC004	ALL AIRMEN DAFSC 30&90	CONTAINING 16 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DUTY	308X0 SPC 001	30830 SPC 002	308?0 SPC 003	30890 SPC 009
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	86	86	89	94
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	76	78	75	81
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	56	64	58	38
D	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	50	60	46	31
E	COUPLING, SOLDERING, AND RELAYS	53	60	51	38
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	71	84	68	44
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	53	62	49	38
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	58	66	56	44
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	48	53	46	31
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	42	47	43	13
K	AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	79	76	82	69
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	55	62	55	25
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	57	67	55	31
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	52	62	51	19
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	50	57	46	31
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	40	43	40	25
Q	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	60	72	57	38
R	PHANTASTRONS, SCHMITT TRIGGERS, AND CABLE FABRICATION	40	50	37	19
S	INPUT\OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	48	55	46	31
T	INFRARED, LASERS, AND DISPLAY TUBES	16	10	19	6
U	PROGRAMMING, DB AND POWER RATIOS	58	62	60	31

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	30830 SPC 001	30830 SPC 002	30830 SPC 003	30890 SPC 004	
A	1	A1-01 DO YOU USE AN INSTRUMENT, SUCH AS METER OR AN OSCILLOSCOPE, IN WHICH IT IS NECESSARY TO AMPLIFY OR	48	66	40	25	
A	2	A1-02 DO YOU USE A PUBLICATION, SUCH AS A TECHNICAL ORDER OR MAINTENANCE MANUAL, IN WHICH IT IS NECESSARY	36	38	34	31	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	24	28	23	13	
A	4	A1-04 DO YOU FIND THE SQUARE ROOT OF A QUANTITY.	17	14	19	6	
A	5	A1-05 DO YOU SOLVE FOR AN UNKNOWN QUANTITY.	29	33	26	25	MODULE 3 - ELECTRONIC MATHEMAT...
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	8	5	9	13	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	10	9	10	13	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	4	0	7	0	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS (THIS IS THE LOGARITHM SYSTEM WHICH USES THE NUMBER 2.718 AS	4	0	6	6	
A	10	A1-10 DO YOU WORK WITH VECTOR QUANTITIES, SUCH AS ADDING OR SUBTRACTING TWO VECTORS.	19	19	20	13	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	18	16	20	19	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES, SUCH AS AREAS OF CIRCLES OR TRIANGLES.	8	2	11	13	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	6	7	10	0	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	21	21	20	19	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT.	82	83	81	88	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	37	40	36	31	
A	17	A2-03 DO YOU USE THE TERM OHM.	69	71	66	81	
A	18	A2-04 DO YOU USE THE TERM ION.	23	19	24	25	MODULE 4 - DIRECT CURRENT AND VOLTAGE
A	19	A2-05 DO YOU USE THE TERM DYNE.	13	14	12	13	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	77	72	78	88	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	21	19	23	19	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	19	22	18	13	
A	23	A2-09 DO YOU USE THE TERM PROTON.	25	19	28	25	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	52	62	47	38	
A	25	A3-02 DO YOU INSPECT RESISTORS.	51	52	37	25	
A	26	A3-03 DO YOU CLEAN RESISTORS.	33	47	30	0	
A	27	A3-04 DO YOU ADJUST RESISTORS.	41	55	36	13	
A	28	A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.	43	56	37	31	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	43	57	36	25	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS IN YOUR PRESENT JOB.	25	29	23	25	MODULE 5 - RESISTANCE, RESISTORS, AND SCHEMATIC SYMBOLS
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS, SUCH AS FOR FIXED RESISTORS OR FOR TAPPED RESISTORS.	49	60	43	38	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT OR	46	55	39	38	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	302X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE OHMIC VALUE OF RESISTANCE.	47	57	41	38
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE TOLERANCE OF RESISTORS.	44	53	40	31
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE FAILURE RATE OF RESISTORS.	10	17	7	6
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	18	19	19	13
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT ANY OF THE FOLLOWING COMPONENTS: BATTERY,	49	59	45	31
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	28	33	26	13
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	27	33	26	6
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	29	34	27	13
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	24	29	23	6
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	27	31	26	13
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	25	28	26	6
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	27	31	26	13
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	23	29	29	6
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	22	29	22	6
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	26	29	26	13
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	26	29	26	6
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	25	26	26	13
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	23	29	29	6
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	22	29	23	6
B	52	B1-01 DO YOU MEASURE RESISTANCE.	41	55	35	25
B	53	B1-02 DO YOU REPAIR AN OHMMETER.	4	5	4	0
B	54	B1-03 DO YOU MEASURE VOLTAGE.	45	60	38	25
B	55	B1-04 DO YOU REPAIR A VOLTMETER.	3	3	4	0
B	56	B1-05 DO YOU REPAIR AN AMMETER.	4	3	5	0
B	57	B1-06 DO YOU MEASURE CURRENT.	39	53	33	19
B	58	B1-07 DO YOU USE A MULTIMETER.	41	55	36	19

MODULE 6 - MULTIMETER USES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	308X0 SPC U01	30830 SPC U02	30870 SPC U03	30890 SPC U04	
B	59	B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	4	3	4	6	
B	60	B1-09 DO YOU READ SCHEMATICS.	63	60	64	69	
B	61	B2-01 DO YOU USE OR REFER THE TERM EFFECTIVE VOLTAGE (RMS).	54	55	52	63	
B	62	B2-02 DO YOU USE OR REFER THE TERM PEAK TO PEAK VOLTAGE.	57	66	54	50	
B	63	B2-03 DO YOU USE OR REFER THE TERM AVERAGE VOLTAGE (DC).	51	59	47	38	MODULE 11 - AC COMPUTATIONS AND FREQUENCY RESPONSE
B	64	B2-04 DO YOU USE OR REFER THE TERM WAVE LENGTH.	39	43	37	25	
B	65	B2-05 DO YOU USE OR REFER THE TERM FREQUENCY.	68	74	65	69	
B	66	B2-06 DO YOU USE OR REFER THE TERM INSTANTANEOUS VALUE.	24	24	25	13	
B	67	B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	47	62	40	25	
B	68	B3-02 DO YOU INSPECT INDUCTORS.	36	45	33	19	
B	69	B3-03 DO YOU CLEAN INDUCTORS.	29	41	26	0	
B	70	B3-04 DO YOU ADJUST INDUCTORS.	31	47	25	6	
B	71	B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	37	52	31	19	
B	72	B3-06 DO YOU USE OR REFER TO INDUCTANCE.	37	48	33	13	
B	73	B3-07 DO YOU USE OR REFER TO HENRIES.	27	36	24	6	
B	74	B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	28	34	27	6	
B	75	B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	8	9	8	6	
B	76	B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	16	16	18	6	
B	77	B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS.	14	12	15	13	
B	78	B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE	6	3	7	0	
B	79	B3-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	4	2	5	0	MODULE 14 - INDUCTORS AND INDUCTIVE REACTANCE
B	80	B3-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO	5	3	5	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	6	7	6	0	
B	82	B3-16 DO YOU CALCULATE INDUCTANCE FOR A PARTICULAR INDUCTOR USING FORMULAS.	6	7	4	6	
B	83	B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES.	9	9	9	6	
B	84	B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	10	10	10	6	
B	85	B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	8	10	7	6	
B	86	B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	18	17	18	19	
B	87	B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	11	12	10	6	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO	14	17	19	6
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	23	24	23	13
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	24	24	23	19
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	39	50	33	31
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS ON YOUR PRESENT JOB.	51	62	46	38
C	93	C1-02 DO YOU INSPECT CAPACITORS.	40	52	35	19
C	94	C1-03 DO YOU CLEAN CAPACITORS.	28	40	45	0
C	95	C1-04 DO YOU ADJUST CAPACITORS.	36	52	31	6
C	96	C1-05 DO YOU TEST CAPACITORS.	34	48	29	6
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	33	40	33	0
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	41	55	35	19
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	14	12	15	6
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	1	0	2	0
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	45	53	42	25
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	49	47	43	31
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT.	7	9	7	6
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS.	33	33	36	13
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE.	20	21	20	6
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES.	20	19	23	6
C	107	C1-16 THE CAPACITORS YOU WORK WITH IN DC CIRCUITS.	39	52	36	13
C	108	C1-17 THE CAPACITORS YOU WORK WITH ARE IN AC CIRCUITS.	36	48	33	13
C	109	C1-18 THE CAPACITORS YOU WORK WITH ARE IN CIRCUITS WITH BOTH DC AND AC.	46	53	42	31
C	110	C1-19 THE CAPACITORS YOU WORK WITH ARE DON'T REMEMBER WHICH CIRCUITS.	2	2	1	6
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR A PARTICULAR CAPACITOR USING FORMULAS.	5	3	5	6
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL	5	5	5	0
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL	6	5	6	6
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES.	17	14	20	6
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL.	17	12	20	6
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS.	14	14	14	6
C	117	C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY	21	26	19	6

MODULE 12 - CAPACITORS AND CAPACITIVE REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
C 118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS.	17	14	19	13
C 119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	17	14	20	0
C 120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE.	10	9	11	6
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR CAPACITORS (VARIABLE).	28	38	24	13
C 122	C1-31 DO YOU WORK WITH COMPRESSION TRIMMER) CAPACITORS.	34	43	31	13
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC CAPACITORS (FIXED).	46	50	44	38
C 124	C1-33 DO YOU WORK WITH PAPER CAPACITORS (FIXED).	37	41	35	25
C 125	C1-34 DO YOU WORK WITH MICA CAPACITORS (FIXED).	43	41	44	31
C 126	C1-35 DO YOU WORK WITH CERAMIC CAPACITORS (FIXED).	44	45	45	31
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS.	3	7	2	0
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS ON YOUR PRESENT JOB.	47	53	45	31
C 129	C2-02 DO YOU INSPECT TRANSFORMERS.	39	48	35	19
C 130	C2-03 DO YOU CLEAN TRANSFORMERS.	27	40	24	0
C 131	C2-04 DO YOU ADJUST TRANSFORMERS.	22	31	21	0
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS.	34	48	29	6
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS.	37	48	34	13
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING.	5	5	5	0
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (MI.	2	2	3	0
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M.	5	3	6	0
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS.	5	5	5	6
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS.	7	3	9	6
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS.	5	5	5	6
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS.	3	2	4	6
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS.	19	17	20	13
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS.	43	43	43	31
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS.	27	28	26	25
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS.	34	34	35	25
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMER.	4	7	3	0
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE.	37	47	35	13
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE.	33	40	32	6
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES.	27	33	26	6
C 149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	10	9	11	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
C 150	C2-23	DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	15	12	17	6
C 151	C2-24	DO YOU REFER TO THE BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS.	45	52	43	25
C 152	C2-25	DO YOU REFER TO THE MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS.	37	40	37	19
C 153	C2-26	DO YOU REFER TO THE MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	39	43	39	15
C 154	C2-27	DO YOU REFER TO THE CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	41	47	40	19
C 155	C2-28	DO YOU REFER TO THE AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	29	29	22	13
C 156	C2-29	DO YOU REFER TO THE IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	26	33	23	13
C 157	C2-30	DO YOU REFER TO THE COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	29	36	26	19
C 158	C2-31	DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	21	24	18	13
C 159	C2-32	DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH.	10	5	11	13
C 160	C2-33	DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE	8	7	9	0
C 161	C2-34	DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS.	20	14	24	6
C 162	C2-35	DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	6	7	5	6
C 163	C2-36	DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	3	2	4	6
C 164	C2-37	DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH 3 PHASE TRANSFORMERS.	20	22	19	13
C 165	C2-38	DO YOU INSPECT 3 PHASE TRANSFORMERS.	22	26	21	19
C 166	C2-39	DO YOU CLEAN OR LUBRICATE 3 PHASE TRANSFORMERS.	14	17	15	0
C 167	C2-40	DO YOU ADJUST 3 PHASE TRANSFORMERS.	10	19	7	0
C 168	C2-41	DO YOU TROUBLESHOOT 3 PHASE TRANSFORMERS.	18	29	18	0
C 169	C2-42	DO YOU REMOVE OR REPLACE COMPLETE 3 PHASE TRANSFORMER.	19	21	19	6
C 170	C2-43	DO YOU REMOVE OR REPLACE 3 PHASE TRANSFORMER PARTS, SUCH AS A WINDING.	3	5	2	0
C 171	C3-01	DO YOU USE OR REFER TO PERMANENT MAGNETS.	21	26	20	0
C 172	C3-02	DO YOU USE OR REFER TO TEMPORARY MAGNETS.	20	28	18	0
C 173	C3-03	DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS.	7	7	9	0
C 174	C3-04	DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS.	5	5	6	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK		308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS.	7	7	9	0
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM.	14	16	15	0
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX.	21	16	28	0
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM.	2	2	3	0
C 179	C3-09 DO YOU USE OR REFER TO THE DOMAIN THEORY OF MAGNETISM.	6	7	6	0
C 180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION.	11	5	16	0
C 181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY.	11	7	16	0
C 182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES	16	14	19	0
C 183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES.	8	5	11	0
C 184	C3-14 DO YOU USE THE LEFT THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL.	7	5	10	0
D 185	D1-01 DO YOU WORK WITH RC, LR, OR RCL CIRCUITS ON YOUR PRESENT JOB.	37	46	35	13
D 186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS.	7	5	8	6
D 187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS.	5	3	5	0
D 188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS.	7	7	8	6
D 189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS.	7	7	8	6
D 190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH DRCL CIRCUITS.	7	5	8	6
D 191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS.	20	24	20	6
D 192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS.	13	14	13	6
D 193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS.	13	14	13	6
D 194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS.	14	16	14	6
D 195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS.	9	5	11	6
D 196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS.	7	9	7	6
D 197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	24	24	26	6
D 198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS.	31	34	31	13
D 199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS.	25	24	27	13

MODULE 7 - SERIES RESISTIVE CIRCUIT

MODULE 8 - PARALLEL RESISTIVE CIRCUITS

MODULE 9 - SERIES-PARALLEL RESISTIVE CIRCUITS

MODULE 21 - SERIES RCL CIRCUITS

MODULE 22 - PARALLEL RCL CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK		308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
D 200	B1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS.	29	33	29	6
D 201	B1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS.	17	14	28	6
D 202	B1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS.	25	24	26	6
D 203	B1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS.	10	7	12	6
D 204	B1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	25	28	25	13
D 205	B1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS: SINE OF AN ANGLE = OPPOSITE SIDE	5	2	6	6
D 206	B1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS.	3	3	4	0
D 207	B1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS.	6	7	5	6
D 208	B1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS.	3	0	3	6
D 209	B1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS.	6	7	9	6
D 210	B1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS.	2	2	2	6
D 211	B1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS.	3	0	4	6
D 212	B1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS.	5	3	5	6
D 213	B1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS.	3	0	4	6
D 214	B1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS.	5	3	5	6
D 215	B1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS.	2	0	2	6
D 216	B1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD.	4	5	3	6
D 217	B1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW.	4	5	3	6
D 218	B1-34 DO YOU CHECK CAPACITORS USING OHMMETERS.	30	41	27	6
D 219	B1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION.	21	22	22	6
D 220	B1-36 DO YOU CHECK INDUCTORS USING OHMMETERS.	20	30	24	0
D 221	B1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION.	17	17	19	0
D 222	B1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA=0, PF=1, AND PA=PT FOR RESONANT CIRCUITS.	2	2	2	0
D 223	B1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS.	9	7	10	6
D 224	B1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE	13	10	15	6

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK		308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
B 225	B1-01 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT	10	9	11	6
B 226	B1-02 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK	16	17	16	6
B 227	B1-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q.	11	12	11	6
B 228	B1-04 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT	9	7	10	6
B 229	B2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANCE CIRCUITS OR	29	21	28	6
B 230	B2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS.	20	19	23	0
B 231	B2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE.	10	9	13	0
B 232	B2-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS.	9	3	14	0
B 233	B2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE	14	12	16	0
B 234	B2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS.	6	3	7	6
B 235	B2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUITS CURRENT OR COMPONENT VOLTAGES AFTER A	9	9	8	6
B 236	B2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT	9	5	11	6
B 237	B2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	6	5	7	6
B 238	B2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR	8	7	9	0
B 239	B3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS ON YOUR PRESENT JOB.	45	57	41	25
B 240	B3-02 DO YOU INSPECT FILTER CIRCUITS.	33	41	30	19
B 241	B3-03 DO YOU CLEAN FILTER CIRCUITS.	25	33	23	0
B 242	B3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS.	14	28	18	0
B 243	B3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT.	28	41	24	0
B 244	B3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF FILTER CIRCUITS.	29	40	27	0
B 245	B3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT.	28	40	23	0

MODULE 24 - SERIES RESONANCE

MODULE 25 - PARALLEL RESONANCE

MODULE 26 - TIME CONSTANTS

MODULE 27 - FILTERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK		308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
D 246	D3-08 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF FILTER CIRCUITS.	29	43	29	6
D 247	D3-09 DO YOU WORK ON LOW PASS FILTERS.	36	40	36	13
D 248	D3-10 DO YOU WORK ON HIGH PASS FILTERS.	35	41	38	6
D 249	D3-11 DO YOU WORK ON BANDPASS FILTERS.	41	50	39	13
D 251	D3-13 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF FILTER	24	22	26	6
D 250	D3-12 DO YOU WORK ON BAND-REJECT FILTERS.	5	9	3	6
D 252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATIONS.	28	28	30	6
D 253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATIONS.	29	31	29	13
D 254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATIONS.	30	34	30	6
D 255	D3-17 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF FILTER CONFIGURATIONS.	13	22	8	13
D 256	D3-18 ARE PARALLEL RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	25	29	27	6
D 257	D3-19 ARE SERIES-PARALLEL CIRCUITS USED IN FILTERS YOU WORK WITH.	27	26	28	13
D 258	D3-20 ARE SERIES RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	23	21	26	6
D 259	D3-21 ARE DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT USED IN FILTERS YOU WORK WITH.	15	26	9	13
D 260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	5	3	5	6
E 261	E1-01 DO YOU WORK WITH COUPLING DEVICES ON YOUR PRESENT JOB.	41	53	38	13
E 262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	40	48	39	13
E 263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	33	33	36	13
E 264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	39	43	39	13
E 265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE RC COUPLING FUNCTIONS.	32	43	28	6
E 266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE IMPEDANCE COUPLING FUNCTIONS.	25	29	25	6
E 267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE TRANSFORMER COUPLING FUNCTIONS.	29	38	27	6
E 268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS.	36	45	33	13
E 269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS.	34	38	34	13
E 270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS.	27	26	29	13
E 271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS.	32	34	33	13
E 272	E1-12 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUIT.	5	12	2	0

MODULE 28 - COUPLING

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 009	
E	273	E2-01 ON YOUR PRESENT JOB DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS.	44	53	40	25	
E	274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE.	36	48	31	19	
E	275	E2-03 DO YOU ADD FLUX TO CONNECTIONS.	36	52	28	19	
E	276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS.	40	52	34	25	
E	277	E2-05 DO YOU STRIP INSULATION FROM WIRES.	41	55	35	25	
E	278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS.	40	52	35	25	
E	279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS.	41	55	35	25	
E	280	E2-08 DO YOU CUT WIRES.	41	53	36	25	MODULE 76 - SOLDERING TOOLS AND MATERIALS
E	281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS.	36	47	30	25	
E	282	E2-10 DO YOU TIN SOLDERING IRON TIPS.	40	52	35	25	
E	283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS.	40	52	35	25	
E	284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS.	40	53	34	19	MODULE 77 - SOLDERING AND DESOLDERING PROCEDURES
E	285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS.	41	53	36	25	
E	286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS.	44	53	40	25	
E	287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING.	38	53	30	25	
E	288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS.	37	45	34	25	
E	289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS.	37	47	34	19	
E	290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL.	13	10	14	6	
E	291	E2-19 DO YOU MAKE HARDWIRE TURRET CONNECTIONS.	29	38	25	19	
E	292	E2-20 DO YOU MAKE HARDWIRE BIFURCATED CONNECTIONS.	21	29	17	13	
E	293	E2-21 DO YOU MAKE PRINTED CIRCUIT BOARD TURRET CONNECTIONS.	34	43	30	25	
E	294	E2-22 DO YOU MAKE PRINTED CIRCUIT BOARD BIFURCATED CONNECTIONS.	25	34	19	19	
E	295	E2-23 DO YOU MAKE PRINTED CIRCUIT BOARD TERMINAL PADS.	34	45	29	25	
E	296	E2-24 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS.	41	53	36	25	
E	297	E2-25 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS.	41	55	35	25	
E	298	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB.	49	59	46	31	
E	299	E3-02 DO YOU ADJUST RELAYS.	17	22	16	0	
E	300	E3-03 DO YOU CLEAN RELAYS.	30	47	25	0	
E	301	E3-04 DO YOU INSPECT RELAYS.	39	52	35	13	
E	302	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAY.	39	53	32	19	
E	303	E3-06 DO YOU REMOVE OR REPLACE PARTS OF RELAY.	9	9	10	6	MODULE 16 - RELAYS
E	304	E3-07 DO YOU TROUBLESHOOT RELAYS.	35	53	29	0	
E	305	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS.	21	31	17	0	
E	306	E3-09 DO YOU PERFORM ANY TASKS ON RELAY CONTACTS.	21	29	17	6	
E	307	E3-10 DO YOU PERFORM ANY TASKS ON RELAY CORE.	2	3	2	0	
E	308	E3-11 DO YOU PERFORM ANY TASKS ON RELAY COIL.	4	4	3	0	
E	309	E3-12 DO YOU PERFORM ANY TASKS ON RELAY ARMATURE.	5	7	3	0	
E	310	E3-13 DO YOU PERFORM ANY TASKS ON RELAY SPRING.	8	10	7	0	
E	311	E3-14 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPEN (NO) SCHEMATIC SYMBOLS	44	52	42	19	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		CY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
E	312	E3-15 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS	43	50	42	19
E	313	E3-16 DO YOU USE OR REFER TO THE SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS.	41	48	39	19
E	314	E3-17 DO YOU USE OR REFER TO THE DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS.	41	50	39	19
E	315	E3-18 DO YOU USE OR REFER TO THE OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS.	30	33	28	25
E	316	E3-19 DO YOU CHECK THE ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE.	30	36	29	13
F	317	F1-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH MICROPHONES.	30	29	31	25
F	318	F1-02 DO YOU INSPECT MICROPHONES.	9	9	9	6
F	319	F1-03 DO YOU CLEAN MICROPHONES.	6	3	7	6
F	320	F1-04 DO YOU OPERATE (HAVE A JOB IN WHICH YOU USE MICROPHONES).	25	22	26	25
F	321	F1-05 DO YOU TROUBLESHOOT MICOPHONES AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	5	9	4	0
F	322	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONES COMPONENTS.	5	5	5	0
F	323	F1-07 DO YOU REMOVE OR REPLACE THE COMPLETE MICROPHONE.	7	9	7	0
F	324	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS.	3	2	5	0
F	325	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES.	9	9	10	0
F	326	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES.	1	2	0	0
F	327	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES.	2	2	3	0
F	328	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES.	2	2	3	0
F	329	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES.	0	0	0	0
F	330	F2-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH SPEAKERS, SUCH AS LISTENING TO AUDIO OUTPUTS, ETC.	40	34	44	25
F	331	F2-02 DO YOU INSPECT SPEAKERS.	10	7	12	0
F	332	F2-03 DO YOU CLEAN SPEAKERS.	6	7	7	0
F	333	F2-04 DO YOU OPERATE (HAVE A JOB IN WHICH SPEAKERS ARE USED).	29	24	32	25
F	334	F2-05 DO YOU TROUBLESHOOT SPEAKERS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	10	9	12	0
F	335	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER COMPONENTS.	6	5	7	0
F	336	F2-07 DO YOU REMOVE OR REPLACE THE COMPLETE SPEAKER.	13	9	16	0
F	337	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS.	1	2	1	0
F	338	F2-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER CONES.	1	0	1	0
F	339	F2-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SPIDERS.	0	0	0	0
F	340	F2-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER FIELD COILS.	1	0	0	0

MODULE 17 - MICROPHONES AND SPEAKER

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004	
F 341	F2-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER VOICE COILS.	1	0	1	0	
F 342	F2-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS.	2	2	1	0	
F 343	F2-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS.	1	0	1	0	
F 344	F2-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES.	1	0	1	0	
F 345	F3-01 DO YOU USE OSCILLOSCOPES ON YOUR PRESENT JOB.	56	71	52	25	
F 346	F3-02 DO YOU USE AN OSCILLOSCOPETO PERFORM OPERATIONAL CHECKS.	53	71	48	19	
F 347	F3-03 DO YOU USE AN OSCILLOSCOPE TO PERFORM ALIGNMENT OR ADJUSTMENTS.	40	53	36	6	
F 348	F3-04 DO YOU USE AN OSCILLOSCOPE TO PERFORM TROUBLESHOOT ELECTRONIC CIRCUITS.	40	55	36	6	MODULE 20 - OSCILLOSCOPE USE
F 349	F3-05 DO YOU USE AN OSCILLOSCOPE TO MEASURE FREQUENCY.	37	55	31	0	
F 350	F3-06 DO YOU USE AN OSCILLOSCOPE TO MEASURE TIME.	35	47	33	0	
F 351	F3-07 DO YOU USE AN OSCILLOSCOPE TO OBSERVE LISSAJOUS PATTERNS.	17	21	18	0	
F 352	F3-08 DO YOU USE AN OSCILLOSCOPE TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES.	38	53	33	6	
F 353	F3-09 DO YOU USE AN OSCILLOSCOPE TO MAKE FREQUENCY OR TIME MEASUREMENTS USING THE DELAY TIME MULTIPLIER.	28	38	26	0	
F 354	F3-10 DO YOU USE AN OSCILLOSCOPE TO MEASURE AC VOLTAGE.	39	55	35	0	
F 355	F3-11 DO YOU USE AN OSCILLOSCOPE TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL	37	43	37	13	
G 356	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES ON YOUR PRESENT JOB.	48	57	45	31	
G 357	G1-02 DO YOU INSPECT DIODES.	39	48	37	13	
G 358	G1-03 DO YOU REMOVE OR REPLACE DIODES.	39	50	34	19	
G 359	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT.	39	50	35	19	MODULE 29 - PN JUNCTIONS AND DIOD
G 360	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES.	4	5	4	0	
G 361	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE	5	3	5	6	
G 362	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES.	6	5	7	6	
G 363	G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF THE DIODE.	32	36	32	19	
G 364	G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS.	37	47	34	19	
G 365	G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW.	5	3	7	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
G	366 61-11 DO YOU USE OR REFER TO A MEASUREMENT OF FORWARD BIAS RESISTANCE.	33	91	31	6
G	367 61-12 DO YOU USE OR REFER TO DIODE COLOR CODING.	24	19	28	13
G	368 61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0	0
G	369 61-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0	0
G	370 61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538.	36	70	35	19
G	371 61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0	0
G	372 61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0	0
G	373 61-18 DO YOU USE OR REFER TO A MEASUREMENT OR REVERSE BIAS RESISTANCE.	32	36	31	13
G	374 61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT.	1	0	2	0
G	375 61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0	0
G	376 61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0	0
G	377 61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL).	2	0	3	0
G	378 61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM).	2	0	3	0
G	379 61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END.	34	36	33	25
G	380 61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES, SUCH AS GERMANIUM OR	17	16	18	13
G	381 61-26 IS IT IMPORTANT FOR YOU TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS	22	28	21	6
G	382 61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT	10	3	14	6
G	383 61-28 DO YOU DETERMINE WHETHER A PN JUNCTION DIODE IS FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	38	47	37	6
G	384 61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS.	1	0	2	0
G	385 61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS.	1	0	2	0
G	386 61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS.	1	0	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
		BY-TSK				
G	387	61-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS.	1	0	1	0
G	388	61-33 DO YOU USE OR REFER TO ELECTRON - HOLE PAIR CREATED IN SEMICONDUCTORS.	2	3	1	0
G	389	61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS.	5	3	6	0
G	390	61-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS.	1	0	1	0
G	391	61-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS.	1	0	1	0
G	392	61-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL.	14	14	16	0
G	393	61-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL.	14	14	16	0
G	394	61-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS.	3	2	5	0
G	395	61-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS.	3	2	5	0
G	396	61-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS.	1	2	1	0
G	397	61-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS.	7	5	9	0
G	398	61-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL.	5	3	7	0
G	399	61-44 DO YOU USE OR REFER TO THE 10 TO 1 BACK TO FRONT RESISTANCE RATIO FOR DIODES.	34	41	32	19
G	400	61-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS.	1	0	1	0
G	401	61-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION.	32	29	34	25
G	402	61-47 DO YOU USE OR REFER TO THE MAXIMUM AVERAGE FORWARD CURRENT DIODE RATING.	18	14	21	13
G	403	61-48 DO YOU USE OR REFER TO THE PEAK RECURRENT FORWARD CURRENT DIODE RATING.	15	12	16	13
G	404	61-49 DO YOU USE OR REFER TO THE MAXIMUM SURGE CURRENT DIODE RATING.	17	9	21	13
G	405	61-50 DO YOU USE OR REFER TO THE PEAK REVERSE (INVERSE) VOLTAGE DIODE RATING.	22	19	25	13
G	406	62-01 DO YOU WORK WITH TRANSISTORS ON YOUR PRESENT JOB.	49	60	45	31
G	407	62-02 DO YOU INSPECT TRANSISTORS.	42	53	38	19
G	408	62-03 DO YOU REMOVE OR REPLACE TRANSISTORS.	40	55	34	19
G	409	62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT.	40	53	35	19
G	410	62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	41	55	36	19
G	411	62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	41	56	36	19
G	412	62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS.	41	53	36	19

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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DY-TSK		SPC 001	SPC 002	SPC 003	SPC 009	
G 413 62-08	DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION.	10	12	11	0	
G 414 62-09	DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION.	8	9	9	0	
G 415 62-10	DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER).	16	19	17	0	
G 416 62-11	DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR.	7	3	10	0	
G 417 62-12	DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS.	45	55	42	19	
G 418 62-13	DO YOU USE OR REFER TO TRANSISTOR NOTATIONS, SUCH AS Q1, Q2, Q3, ETC.	46	57	43	19	
G 419 62-14	DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION.	34	40	36	19	
G 420 62-15	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY	18	19	19	6	
G 421 62-16	DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE	25	26	25	13	
G 422 62-17	DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE	13	10	15	6	
G 423 62-18	DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES.	7	2	10	6	
G 424 62-19	DO YOU USE OR REFER TO THE BETA TRANSISTOR GAINS.	9	3	12	6	
G 425 62-20	DO YOU USE OR REFER TO THE ALPHA TRANSISTOR GAINS.	6	3	8	6	
G 426 62-21	DO UOU USE OR REFER TO THE GAMMA TRANSISTOR GAINS.	4	2	5	6	
G 427 62-22	DO YOU CALCULATE THE BETA TRANSISTOR GAINS.	2	0	2	6	
G 428 62-23	DO YOU CALCULATE THE ALPHA TRANSISTOR GAINS.	2	2	2	6	
G 429 62-24	DO YOU CALCULATE THE GAMMA TRANSISTOR GAINS.	1	0	0	6	
G 430 63-01	DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB.	44	57	40	13	
G 431 63-02	DO YOU INSPECT TRANSISTER AMPLIFIERS.	37	50	32	13	MODULE 31 - AMPLIFIER PRINCIPLES
G 432 63-03	DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS.	32	41	30	0	
G 433 63-04	DO YOU TROUBLESHOOT TO THE TRANSISTOR AMPLIFIER CIRCUIT LEVEL.	31	43	27	6	MODULE 39 - SOLID STATE WIDEBAND AMPLIFIERS
G 434 63-05	DO YOU TROUBLESHOOT TO COMPONENT PARTS OF TRANSISTER AMPLIFIERS.	37	48	34	6	
G 435 63-06	DO YOU REMOVE OR REPLACE THE COMPLETE TRANSISTOR AMPLIFIERS.	27	41	21	6	
G 436 63-07	DO YOU REMOVE OR REPLACE TRANSISTOR AMPLIFIER COMPONENT PARTS.	35	48	31	6	
G 437 63-08	DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN	21	21	22	6	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
G 438	63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	5	7	4	6
G 439	63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN	20	22	19	6
G 440	63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	4	5	3	6
G 441	63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL.	18	19	18	6
G 442	63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	3	5	2	6
G 443	63-14 IN YOUR CIRCUIT ANALYSIS OF THE COMMON EMITTER, DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS (THIS	3	2	3	6
G 444	63-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR.	9	9	10	6
G 445	63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR.	2	0	3	6
G 446	63-17 DO YOU MEASURE VOLTAGE GAIN (COMMON EMITTER).	24	34	21	0
G 447	63-18 DO YOU MEASURE CURRENT GAIN (COMMON EMITTER).	11	16	11	0
G 448	63-19 DO YOU MEASURE POWER GAIN (COMMON EMITTER).	12	17	10	0
G 449	63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	5	3	5	6
G 450	63-21 DO YOU CALCULATE THE CURRENT GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	4	2	5	6
G 451	63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MULTIPLY	4	2	4	6
G 452	63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS	7	2	11	0
G 453	63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES.	2	2	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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			SPC 001	SPC 002	SPC 003	SPC 004
G	454	63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	25	29	29	6
G	455	63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	21	22	22	6
G	456	63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	21	19	23	6
G	457	63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	22	22	23	6
G	458	63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	21	21	23	6
G	459	63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	18	19	19	6
G	460	63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE EMITTER (SWAMPING) RESISTOR	24	28	24	0
G	461	63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE SELF BIAS STABILIZATION FUNCTIONS.	21	21	23	0
G	462	63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE THERMISTOR STABILIZATION FUNCTIONS.	19	17	22	0
G	463	63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE FORWARD BIAS DIODE STABILIZATION	21	22	22	0
G	464	63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE REVERSE BIAS DIODE STABILIZATION	22	24	23	0
G	465	63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE DOUBLE DIODE STABILIZATION FUNCTIONS.	17	16	19	0
G	466	63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	30	33	31	6
G	467	63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	29	34	29	0
G	468	63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	25	29	25	6
G	469	63-40 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	26	33	26	0
G	470	63-41 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	18	16	22	0
G	471	63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	17	16	21	0
G	472	63-43 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	29	31	30	6

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK			308X0 30830 30870 30890 SPC 001	SPC 002	SPC 003	SPC 004	
G 473	G3-44	DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	26	29	28	0	
G 474	G3-45	DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	22	21	24	6	
G 475	G3-46	DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	21	19	25	0	
G 476	G3-47	DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	17	16	20	0	
G 477	G3-48	DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	16	14	20	0	
G 478	G3-49	THIS QUESTION REFERS TO A TRANSISTOR AMPLIFIER IN THE COMMON COLLECTOR CONFIGURATION. DO YOU NEED TO	10	7	11	6	
G 479	G3-50	DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS.	11	9	13	6	
G 480	G3-51	DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS CIRCUITS.	16	16	19	0	
G 481	G3-52	DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS CIRCUITS.	28	36	27	0	
G 482	G3-53	DO YOU TROUBLESHOOT OR REPAIR COMMPLEMENTARY SYMMETRY CIRCUITS .	21	22	22	0	
G 483	G3-54	DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS CIRCUITS.	15	12	19	0	
G 484	G3-55	DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS CIRCUITS.	28	33	28	0	
H 485	H1-01	DO YOU USE OR REFER TO VARACTORS.	42	41	43	31	
H 486	H1-02	DO YOU USE OR REFER TO TUNNEL DIODES.	34	33	37	19	
H 487	H1-03	DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET).	43	43	46	13	MODULE 33 - SELECTED SOLID STATE DEVICES
H 488	H1-04	DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS.	35	33	39	13	
H 489	H1-05	DO YOU USE OR REFER TO ZENER DIODES.	51	54	48	31	
H 490	H1-06	DO YOU USE OR REFER TO INTERGRATED CIRCUITS.	53	57	53	38	
H 491	H2-01	ON YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES.	49	62	44	31	
H 492	H2-02	DO YOU INSPECT POWER SUPPLIES.	41	53	37	19	
H 493	H2-03	DO YOU CLEAN POWER SUPPLIES.	36	53	30	0	
H 494	H2-04	DO YOU ALIGN OR ADJUST POWER SUPPLIES.	38	53	33	6	
H 495	H2-05	DO YOU TROUBLESHOOT TO THE POWER SUPPLY CIRCUIT.	36	50	30	19	MODULE 34 - SOLID STATE POWER SUPPLY RECTIFIERS AND FILTERS
H 496	H2-06	DO YOU TROUBLESHOOT TO COMPONENT PARTS OF POWER SUPPLIES.	37	48	34	13	
H 497	H2-07	DO YOU REMOVE OR REPLACE THE COMPLETE POWER SUPPLIES.	33	48	27	6	
H 498	H2-08	DO YOU REMOVE OR REPLACE POWER SUPPLY PARTS.	36	47	32	19	MODULE 35 - SOLID STATE POWER SUPPLY REGULATIONS
H 499	H2-09	DO YOU WORK WITH HALF-WAVE RECTIFIERS.	39	45	39	6	
H 500	H2-10	DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS.	41	50	40	6	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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	DY-TSK	SPC 001	SPC 002	SPC 003	SPC 009
M 501	M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS.	43	53	40	13
M 502	M2-12 DO YOU WORK WITH THREE PHASE RECTIFIERS.	21	24	22	0
M 503	M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE.	49	57	41	25
M 504	M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY.	35	41	36	6
M 505	M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE.	40	50	36	19
M 506	M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE.	37	43	35	25
M 507	M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE.	39	47	36	19
M 508	M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY.	35	40	34	19
M 509	M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE.	23	26	23	6
M 510	M2-20 DO YOU USE OR REFER TO SHAPE OF THE OUTPUT WAVEFORM.	36	43	34	19
M 511	M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE.	36	40	36	13
M 512	M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS.	34	38	35	13
M 513	M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS.	29	28	31	13
M 514	M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS.	24	22	26	6
M 515	M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS.	24	22	26	6
M 516	M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS.	27	29	27	13
M 517	M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS.	28	28	29	13
M 518	M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER.	16	33	7	6
M 519	M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER.	5	2	7	0
M 520	M3-01 DO YOU WORK WITH OSCILLATORS ON YOUR PRESENT JOB.	44	53	41	25
M 521	M3-02 DO YOU INSPECT OSCILLATORS.	37	48	32	19
M 522	M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS.	34	45	32	6
M 523	M3-04 DO YOU REMOVE OR REPLACE THE COMPLETE OSCILLATORS CIRCUIT.	30	45	25	0
M 524	M3-05 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF OSCILLATORS.	32	41	29	6
M 525	M3-06 DO YOU TROUBLESHOOT TO THE OSCILLATORS CIRCUIT LEVEL.	32	47	28	0
M 526	M3-07 DO YOU TROUBLESHOOT TO OSCILLATORS COMPONENTS.	32	43	29	6
M 527	M3-08 DO YOU USE OR REFER TO FEEDBACK.	36	45	35	6
M 528	M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD).	31	38	30	6
M 529	M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY.	28	29	29	13
M 530	M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY.	34	34	36	13
M 531	M3-12 DO YOU USE OR REFER TO DAMPING.	20	16	23	6
M 532	M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK.	32	38	31	6

MODULE 42 - PRINCIPLES OF OSCILLATIONS

MODULE 43 - SOLID STATE LC OSCILLATORS

MODULE 44 - SOLID STATE RC OSCILLATORS

MODULE 46 - SOLID STATE PULSED AND BLOCKING OSCILLATORS

PCT MBRS PRFMG DUTIES/TASKS BY OAFSC GPS

308X0 30830 30870 30890

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 001	SPC 002	SPC 003	SPC 009
H 533	H3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT.	11	16	9	0
H 534	H3-15 DO YOU USE OR REFER TO CRITICAL DAMPING.	10	9	11	0
H 535	H3-16 DO YOU USE OR REFER TO UNDER DAMPING.	9	7	11	0
H 536	H3-17 DO YOU USE OR REFER TO OVER DAMPING.	10	7	12	0
H 537	H3-18 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FOD.	28	31	29	6
H 538	H3-19 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FOD.	26	26	28	6
H 539	H3-20 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FOD.	34	34	35	19
H 540	H3-21 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FOD.	8	19	2	6
H 541	H3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS.	11	5	13	13
H 542	H3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS.	10	7	11	13
H 543	H3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS.	14	9	16	13
H 544	H3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS.	7	7	8	0
H 545	H3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS.	6	2	7	6
H 546	H3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF SINUSOIDAL OSCILLATORS.	27	41	21	6
I 547	I1-01 DO YOU WORK WITH MULTIVIBRATORS ON YOUR PRESENT JOB.	41	50	40	13
I 548	I1-02 DO YOU INSPECT WAVE SHAPING OR GENERATING CIRCUITS.	30	36	30	6
I 549	I1-03 DO YOU ALIGN OR ADJUST WAVE SHAPING OR GENERATING CIRCUITS.	26	31	26	0
I 550	I1-04 DO YOU CALIBRATE WAVE SHAPING OR GENERATING CIRCUITS.	22	26	23	0
I 551	I1-05 DO YOU TROUBLESHOOT TO THE WAVE SHAPING OR GENERATING CIRCUITS.	30	40	28	0
I 552	I1-06 DO YOU TROUBLESHOOT TO COMPONENTS WITHIN THE WAVE SHAPING OR GENERATING CIRCUITS.	29	36	28	0
I 553	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE SHAPING OR GENERATING CIRCUITS.	28	36	26	0
I 554	I1-08 DO YOU REMOVE OR REPLACE COMPONENTS OF WAVE SHAPING OR GENERATING CIRCUITS.	29	36	29	0
I 555	I1-09 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FOD.	21	21	22	6
I 556	I1-10 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FOD.	24	21	27	6
I 557	I1-11 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FOD.	30	33	32	6
I 558	I1-12 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FOD.	6	14	2	0
I 559	I1-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS.	30	36	30	6
I 560	I1-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS.	33	38	34	6
I 561	I1-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS.	33	38	33	6
I 562	I1-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF MULTIVIBRATORS.	6	14	3	0

MODULE 47 - SOLID STATE M[illegible]

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			30830	30870	30890		
		DY-TSK	SPC 001	SPC 002	SPC 003	SPC 004	
I	563	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS ON YOUR PRESENT JOB.	35	40	36	6	
I	564	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS.	22	19	27	0	
I	565	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS.	24	19	30	0	
I	566	12-04 DO YOU WORK WITH LIMITERS WITH BIAS.	18	16	20	6	MODULE 50 - SOLID STATE LIMITERS AND CLAMPERS
I	567	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS.	24	26	32	6	
I	568	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS.	26	21	31	6	
I	569	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITER.	6	14	3	0	
I	570	12-08 DO YOU WORK WITH DIODE CLAMPERS.	24	21	29	0	
I	571	12-09 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	19	21	19	6	
I	572	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPER.	9	19	5	0	
I	573	13-01 FOR PURPOSES OF THIS QUESTION DO NOT CONSIDER HIGH FREQUENCY DEVICES, SUCH AS KLYSTRONS, TRAVELING WAVE	19	14	22	13	
I	574	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT.	14	10	15	19	
I	575	13-03 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING TUBE TESTERS.	11	7	11	19	
I	576	13-04 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING MULTIMETERS.	4	5	3	6	MODULE 56 - ELECTRON TUBE CHARACTERISTICS AND DIODES
I	577	13-05 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SCOPES.	5	3	5	6	
I	578	13-06 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SUBSTITUTION.	12	10	12	13	MODULE 57 - TRIODES
I	579	13-07 DO YOU USE OR REFER TO CUTOFF.	5	2	8	0	
I	580	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING.	2	2	2	0	
I	581	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING.	2	2	2	0	
I	582	13-10 DO YOU USE OR REFER TO TRANSIT TIME.	1	0	1	0	MODULE 58 - MULTIGRID ELECTRON TUBES
I	583	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING.	3	0	4	0	
I	584	13-12 DO YOU USE OR REFER TO SATURATION.	5	2	6	0	
I	585	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE.	2	0	2	0	
I	586	13-14 DO YOU COMPUTE THE ACTUAL VALUE OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES.	1	0	0	0	
I	587	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE.	13	7	16	13	
I	588	13-16 DO YOU USE OR REFER TO PLATE CURRENT.	10	5	12	13	
I	589	13-17 DO YOU USE OR REFER TO GRID VOLTAGE.	14	7	17	13	
I	590	13-18 DO YOU USE OR REFER TO GRID CURRENT.	10	5	12	13	
I	591	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE.	13	9	14	13	
I	592	13-20 DO YOU USE OR REFER TO CATHODE CURRENT.	9	7	9	13	
I	593	13-21 THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN	2	0	3	0	
I	594	13-22 DO YOU CALCULATE THE ACTUAL VALUE OF THE TRIODE AMPLIFICATION FACTOR.	1	2	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	30840 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
I	595	J3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC.) AMPLIFICATION FACTORS.	1	0	0	0
I	596	J3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS).	2	0	2	0
I	597	J3-25 DO YOU CALCULATE THE ACTUAL VALUE OF ELECTRON TUBE TRANSCONDUCTANCE.	0	0	0	0
I	598	J3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE.	1	0	1	0
I	599	J3-27 DO YOU CALCULATE THE ACTUAL VALUE OF AC PLATE RESISTANCE.	0	0	0	0
I	600	J3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE.	3	2	2	6
I	601	J3-29 IN YOUR WORK WITH ELECTRON TUBES, DO YOU USE OR REFER TO CHARACTERISTIC CURVES.	0	0	0	0
I	602	J3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS.	0	0	0	0
I	603	J3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS.	0	0	0	0
I	604	J3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF.	0	0	0	0
I	605	J3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION.	0	0	0	0
I	606	J3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN.	9	3	12	6
I	607	J3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY.	3	2	4	0
I	608	J3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	6	5	5	13
I	609	J3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	3	2	3	6
I	610	J3-38 DO YOU USE SCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	6	3	8	6
I	611	J3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0	0
I	612	J3-90 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES, SUCH AS INPUT CAPACITANCE, ETC.	0	0	0	0
I	613	J3-91 DO YOU USE OR REFER TO TUBE SOCKET NOTATION.	11	7	13	13
I	614	J3-92 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS.	13	7	15	13
I	615	J3-93 DO YOU USE OR REFER TO THE TYPE OF MATERIAL AND THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN	0	0	0	0
I	616	J3-99 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL, SUCH AS MANUALS, ETC.	12	7	14	13
J	617	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS ON YOUR PRESENT JOB.	14	7	19	6
J	618	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT	3	2	3	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

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		DY-TSK	SPC 001	SPC 002	SPC 003	SPC 004	
J	619	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS.	4	2	6	0	MODULE 60 - ELECTRON TUBE AUDIO AMPLIFIERS
J	620	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS.	7	2	10	6	MODULE 61 - ELECTRON TUBE RF AMPLIFIERS, CATHODE FOLLOWERS, DC AMPLIFIERS AND TRIODE LIMITERS
J	621	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS.	4	2	6	0	
J	622	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS.	6	3	8	0	
J	623	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF ELECTRON TUBE AMPLIFIER.	3	2	4	0	
J	624	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE).	8	5	10	0	
J	625	J2-02 DO YOU WORK WITH CATHODE RAY TUBES.	22	16	28	6	
J	626	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES.	6	7	6	0	MODULE 59 - SPECIAL PURPOSE ELECTRON TUBES
J	627	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED.	7	9	7	0	
J	628	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS.	3	5	2	6	
J	629	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED.	3	5	3	0	
J	630	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTRON GUN OF THE CATHODE RAY TUBE	15	5	21	6	
J	631	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROMAGNETIC DEFLECTION SYSTEM OF	14	3	21	6	
J	632	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROSTATIC DEFLECTION SYSTEM OF THE	10	2	16	6	
J	633	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS.	14	5	19	13	
J	634	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS.	11	3	14	13	
J	635	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS.	7	2	10	6	
J	636	J2-13 DO YOU USE OR REFER TO PERSISTENCE.	15	5	20	13	
J	637	J2-14 DO YOU USE OR REFER TO DECAY TIMES.	11	3	14	13	
J	638	J2-15 DO YOU USE OR REFER TO FLUORESCENCES.	7	3	9	6	
J	639	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCES.	11	5	13	13	
J	640	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	35	43	34	6	MODULE 63 - HETERODYNING
J	641	J3-02 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	28	34	27	6	MODULE 64 - MODULATION
J	642	J3-03 DO YOU PERFORM ANY TASKS ON FREQUENCY MIXERS.	24	33	28	6	MODULE 65 - DEMODULATION
J	643	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS.	28	29	29	6	
J	644	J3-05 DO YOU PERFORM ANY TASKS ON REACTANCE MODULATORS.	9	10	9	0	
J	645	J3-06 DO YOU PERFORM ANY TASKS ON MODULATED OSCILLATORS.	21	22	23	0	
K	646	K1-01 DO YOU WORK ON AN TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	18	14	21	13	

TASK GNOUP SUMMARY
PERCENT MEMBERS PERFORMING

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	BY-TSK	SPC 001	SPC 002	SPC 003	SPC 004	
K 647	K1-02 DO YOU INSPECT AM SYSTEMS.	16	10	18	13	
K 648	K1-03 DO YOU CLEAN AM SYSTEMS.	13	13	16	0	
K 649	K1-04 DO YOU ALIGN OR ADJUST AM SYSTEMS.	16	12	18	6	
K 650	K1-05 DO YOU TROUBLESHOOT TO AM SYSTEMS.	15	12	18	0	
K 651	K1-06 DO YOU TROUBLESHOOT TO AM COMPONENTS.	14	12	16	0	
K 652	K1-07 DO YOU REMOVE OR REPLACE AM SYSTEMS.	11	10	13	0	
K 653	K1-08 DO YOU REMOVE OR REPLACE AM COMPONENTS.	14	10	17	0	
K 654	K1-09 DO YOU PERFORM ANY TASKS ON RF OSCILLATORS.	13	9	15	6	
K 655	K1-10 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	15	10	17	13	
K 656	K1-11 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.	10	7	11	6	
K 657	K1-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	14	12	14	13	
K 658	K1-13 DO YOU PERFORM ANY TASKS ON LOCAL OSCILLATORS.	15	14	16	6	
K 659	K1-14 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	14	12	16	6	MODULE 68 - AM SYSTEMS
K 660	K1-15 DO YOU PERFORM ANY TASKS ON DETECTORS.	15	12	17	6	
K 661	K1-16 DO YOU PERFORM ANY TASKS ON DON'T REMEMBER WHICH STAGE.	1	2	0	0	
K 662	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS.	7	7	7	6	
K 663	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS.	9	9	9	6	
K 664	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS.	14	12	15	6	
K 665	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS.	14	14	14	6	
K 666	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION.	8	5	9	6	
K 667	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION.	8	7	8	6	
K 668	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION.	2	0	3	0	
K 669	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE.	4	3	5	0	
K 670	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS.	8	5	11	0	
K 671	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS.	5	5	4	6	
K 672	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS.	10	9	11	6	
K 673	K1-28 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS.	12	5	17	0	
K 674	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	35	36	36	19	
K 675	K2-02 DO YOU INSPECT FM SYSTEMS.	29	33	29	6	
K 676	K2-03 DO YOU CLEAN FM SYSTEMS.	25	31	25	0	
K 677	K2-04 DO YOU ALIGN FM SYSTEMS.	24	33	25	0	MODULE 69 - FM SYSTEMS
K 678	K2-05 DO YOU TROUBLESHOOT TO FM SYSTEMS.	26	28	27	6	
K 679	K2-06 DO YOU TROUBLESHOOT TO FM COMPONENTS.	24	29	26	13	
K 680	K2-07 DO YOU REMOVE OR REPLACE FM SYSTEMS.	24	28	22	13	
K 681	K2-08 DO YOU REMOVE OR REPLACE FM COMPONENTS.	27	31	26	13	
K 682	K2-09 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.	15	12	16	13	
K 683	K2-10 DO YOU PERFORM ANY TASKS ON FREQUENCY MULTIPLIERS.	28	33	27	13	
K 684	K2-11 DO YOU PERFORM ANY TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS).	24	28	22	13	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	UY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004	
K 685	K2-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	24	26	24	13	
K 686	K2-13 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	26	28	26	13	
K 687	K2-14 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	26	26	27	13	
K 688	K2-15 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	25	26	26	13	
K 689	K2-16 DO YOU PERFORM ANY TASKS ON LIMITERS.	21	19	23	13	
K 690	K2-17 DO YOU PERFORM ANY TASKS ON FREQUENCY DISCRIMINATORS.	21	16	24	13	
K 691	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS.	24	28	22	13	
K 692	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS.	30	28	32	19	
K 693	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS.	55	41	64	50	
K 694	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS.	57	41	68	50	
K 695	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS.	53	40	63	38	
K 696	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS.	53	36	65	44	MODULE 51 - NUMBERING SYSTEM AND MATHEMATICAL COMPUTATIONS
K 697	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS.	54	40	64	44	
K 698	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS.	56	47	64	44	
K 699	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM.	37	28	46	13	
K 700	K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD.	30	24	37	6	
K 701	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD.	32	22	39	13	
K 702	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM.	38	31	44	19	
L 703	L1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS.	44	48	47	6	
L 704	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	28	33	28	0	
L 705	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	26	33	26	0	
L 706	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	26	33	26	0	
L 707	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES.	26	31	26	0	MODULE 52 - LOGIC FUNCTIONS AND BOOLEAN EQUATIONS
L 708	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	41	48	41	6	
L 709	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	41	48	41	6	
L 710	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	41	48	41	6	
L 711	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS.	40	47	40	6	
L 712	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	46	52	48	6	
L 713	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES.	46	52	48	6	
L 714	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES.	46	52	48	6	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
L 715	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES.	46	52	48	6
L 716	L2-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS OR LOGIC	33	34	36	6
L 717	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS.	14	10	17	6
L 718	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	5	3	7	0
L 719	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS.	17	10	22	0
L 720	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES.	27	24	30	0
L 721	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS.	14	7	19	0
L 722	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA.	17	9	24	0
L 723	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES.	20	16	24	6
L 724	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	9	9	10	0
L 725	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE.	29	26	33	6
L 726	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS.	21	19	24	0
L 727	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS.	24	22	27	6
L 728	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS.	29	33	30	6
L 729	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS.	32	38	31	13
L 730	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS.	31	34	31	13
L 731	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS.	35	38	37	13
L 732	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS.	35	36	37	13
L 733	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS.	36	38	37	13
L 734	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES.	32	31	34	13
L 735	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS.	29	29	31	13
L 736	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS.	29	26	31	13
L 737	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS.	29	33	29	6
L 738	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS.	28	33	28	6
L 739	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS.	26	26	28	6

MODULE 53 - LOGIC CIRCUITS AND DIAGRAMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

		DY-TSK	SPC 001	SPC 002	SPC 003	SPC 004
L	740	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR JK FLIP-FLOP LOGIC SYMBOLS.	22	24	23	6
L	741	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB.	51	59	51	25
L	742	L3-02 DO YOU USE OR REFER TO THE TERM UP-COUNTER.	45	48	46	19
L	743	L3-03 DO YOU USE OR REFER TO THE TERM DOWN-COUNTER.	41	43	43	19
L	744	L3-04 DO YOU USE OR REFER TO THE TERM SERIAL COUNTER.	43	45	45	19
L	745	L3-05 DO YOU USE OR REFER TO THE TERM PARALLEL COUNTER.	36	36	38	19
L	746	L3-06 DO YOU USE OR REFER TO THE TERM RING COUNTER.	33	36	35	0
L	747	L3-07 DO YOU USE OR REFER TO THE TERM DECADE COUNTER.	39	43	40	13
L	748	L3-08 DO YOU USE OR REFER TO THE TERM COUNT DETECT CIRCUIT.	33	31	37	6
L	749	L3-09 DO YOU USE OR REFER TO THE TERM DOWN CLOCK.	42	45	43	19
L	750	L3-10 DO YOU USE OR REFER TO THE TERM UP CLOCK.	42	46	41	19
L	751	L3-11 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTER HAVING COMPLEMENTED FLIP-FLOPS.	29	26	32	13
L	752	L3-12 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTER HAVING COMPLEMENTING	30	28	33	13
L	753	L3-13 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTER.	31	34	32	6
L	754	L3-14 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.	26	28	28	0
L	755	L3-15 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE	28	26	30	6
L	756	L3-16 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTER.	38	40	40	13
L	757	L3-17 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.	18	14	24	0
L	758	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR UP-COUNTER HAVING COMPLEMENTED FLIP-	21	19	24	0
L	759	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP- OR DOWN-COUNTER HAVING	20	19	22	0
L	760	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP-COUNTER FEEDING A PARALLEL	22	26	23	0
L	761	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR OTHER TYPE OF COUNTER.	11	7	16	0
L	762	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS.	13	9	16	0
L	763	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN A RING COUNTER FOR SPECIFIC INPUT PULSES.	21	22	22	0
L	764	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN A COUNT DETECT CIRCUIT TO INDICATE A	24	21	28	6

MODULE 54 - COUNTER, REGISTERS, AND STORAGE DEVICES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
M	765	M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS.	29	31	32	0
M	766	M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS.	16	10	22	0
M	767	M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK.	16	21	14	0
M	768	M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK.	13	16	13	0
M	769	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS.	15	16	16	0
M	770	M1-06 DO YOU USE OR REFER TO RISE TIME.	31	29	36	0
M	771	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME.	25	26	27	0
M	772	M1-08 DO YOU USE OR REFER TO SWEEP TIME.	26	24	31	0
M	773	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS.	16	14	18	0
M	774	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS.	14	16	15	0
M	775	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS.	17	16	19	0
M	776	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS.	17	14	20	0
M	777	M2-01 DO YOU USE SIGNAL GENERATORS ON YOUR PRESENT JOB.	44	57	40	13
M	778	M2-02 DO YOU PERFORM OPERATIONAL OR PERFORMANCE CHECKS WHILE USING SIGNAL GENERATORS.	43	55	39	13
M	779	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING OR CALIBRATING WHILE USING SIGNAL	32	40	31	6
M	780	M2-04 DO YOU PERFORM TROUBLESHOOTING TO AN ASSEMBLY OR SUB-ASSEMBLY WHILE USING SIGNAL GENERATORS.	28	31	28	13
M	781	M2-05 DO YOU PERFORM TROUBLESHOOTING TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS.	25	26	29	0
M	782	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS.	26	29	24	6
M	783	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE OR SPIKE.	24	28	27	13
M	784	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MHZ.	30	38	29	6
M	785	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MHZ.	28	34	26	6
M	786	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS.	24	24	26	6
M	787	M3-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	41	47	40	19
M	788	M3-02 DO YOU INSPECT MOTORS.	36	43	35	13
M	789	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS.	30	41	27	0
M	790	M3-04 DO YOU OPERATE MOTORS.	28	38	25	0
M	791	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS.	29	36	28	0
M	792	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS.	20	28	18	0
M	793	M3-07 DO YOU TROUBLESHOOT MOTORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	15	21	14	0
M	794	M3-08 DO YOU TROUBLESHOOT DOWN TO MOTOR COMPONENT PARTS.	18	24	16	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
N	795	M3-09	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR FIELD COILS.	7	9	7	0
N	796	M3-10	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ARMATURES.	9	9	9	0
N	797	M3-11	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ROTORS.	11	12	12	0
N	798	M3-12	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR BRUSHES.	22	31	20	0
N	799	M3-13	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR SLIP RINGS.	10	10	11	0
N	800	M3-14	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR COMMUTATORS.	10	14	9	0
N	801	M3-15	ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR POLE PIECES.	7	9	6	0
N	802	M3-16	DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR.	3	2	4	6
N	803	M3-17	DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR.	9	9	10	0
N	804	M3-18	DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN A MOTOR.	3	2	4	0
N	805	M3-19	DO YOU WORK WITH SYNCHRONOUS MOTORS.	18	19	18	6
N	806	M3-20	DO YOU WORK WITH INDUCTION MOTORS.	16	19	15	6
N	807	M3-21	DO YOU WORK WITH SPLIT-PHASE MOTORS.	9	10	8	6
N	808	M3-22	DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS.	14	17	14	0
N	809	M3-23	DO YOU INSPECT GENERATORS.	13	14	14	6
N	810	M3-24	DO YOU CLEAN OR LUBRICATE GE[illegible]TORS.	10	12	10	0
N	811	M3-25	DO YOU OPERATE GENERATORS.	11	14	11	6
N	812	M3-26	DO YOU REMOVE OR REPLACE COMPLETE GENERATORS.	5	5	6	0
N	813	M3-27	DO YOU REMOVE OR REPLACE GENERATOR PARTS.	4	3	5	0
N	814	M3-28	DO YOU TROUBLESHOOT GENERATORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	2	5	1	0
N	815	M3-29	DO YOU TROUBLESHOOT DOWN TO GENERATOR COMPONENT PARTS.	5	3	6	0
N	816	M1-01	DO YOU WORK WITH METERS ON YOUR PRESENT JOB.	44	53	44	6
N	817	M1-02	DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER PERMANENT MAGNETS.	10	3	15	0
N	818	M1-03	DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER MOVING COILS.	11	5	16	0
N	819	M1-04	DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER SPIRAL SPRINGS.	9	3	13	0
N	820	M1-05	DO YOU READ METER SCALES.	42	52	41	6
N	821	M1-06	DO YOU EXTEND THE RANGE OF AMMETERS.	19	19	22	0
N	822	M1-07	DO YOU ZERO OHMMETERS.	38	52	35	0
N	823	M1-08	DO YOU ZERO AMMETERS.	25	31	24	0
N	824	M1-09	DO YOU EXTEND THE RANGE OF VOLTMETERS.	20	21	23	0

MODULE 18 - METER MOVEMENTS AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DUTY-TSK	30810 SPC 001	30830 SPC 002	30870 SPC 003	3089- SPC 004	
N	825	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (IT IS EXPRESSED IN UNITS OF OHMS PER VOLT).	20	21	21	0	
N	826	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB.	7	7	7	6	
N	827	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	5	5	4	6	
N	828	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	3	3	3	0	
N	829	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	3	3	3	0	
N	830	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	4	3	5	0	
N	831	N2-06 DO YOU REMOVE OR REPLACE COMPLETE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	4	3	5	0	
N	832	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS COMPONENTS.	5	7	4	0	MODULE 40 - SATURABLE REACTORS AN MAGNETIC AMPLIFIERS
N	833	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS.	3	3	3	0	
N	834	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD	2	2	2	6	
N	835	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD RESISTOR OF A SINGLE WINDING SATURABLE	2	2	3	0	
N	836	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	3	2	4	6	
N	837	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN A SATURABLE REACTOR.	1	0	0	6	
N	838	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN A SATURABLE REACTOR.	2	2	1	6	
N	839	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN A SATURABLE REACTOR.	1	0	0	6	
N	840	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN A SATURABLE REACTOR.	2	0	3	6	
N	841	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS.	3	0	4	6	
N	842	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS ON YOUR PRESENT JOB.	34	45	32	0	
N	843	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS.	16	16	18	0	
N	844	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW).	29	36	28	0	
N	845	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	23	33	20	0	MODULE 48 - SOLID STATE SAWTOOTH GENERATORS
N	846	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	24	33	21	0	
N	847	N3-06 DO YOU USE OR REFER TO DIFFERENTIATION CIRCUITS.	26	29	28	0	
N	848	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS.	29	33	30	0	MODULE 49 - SOLID STATE TRAPEZOIDAL GENERATORS
N	849	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT.	17	16	19	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
N	850	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME	13	9	16	0
N	851	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS.	29	31	31	0
N	852	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS.	18	17	21	0
O	853	01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS ON YOUR PRESENT JOB.	2	3	1	0
O	854	01-02 DO YOU INSPECT SSB SYSTEMS.	1	2	0	0
O	855	01-03 DO YOU CLEAN SSB SYSTEMS.	1	2	0	0
O	856	01-04 DO YOU ALIGN SSB SYSTEMS.	1	2	0	0
O	857	01-05 DO YOU TROUBLESHOOT TO SSB SYSTEMS.	1	2	0	0
O	858	01-06 DO YOU TROUBLESHOOT TO SSB COMPONENTS.	1	2	0	0
O	859	01-07 DO YOU REMOVE OR REPLACE SSB SYSTEMS.	1	2	0	0
O	860	01-08 DO YOU REMOVE OR REPLACE SSB COMPONENTS.	1	2	0	0
O	861	01-09 DO YOU PERFORM ANY TASKS ON SSB AUDIO AMPLIFIERS.	1	2	0	0
O	862	01-10 DO YOU PERFORM ANY TASKS ON SSB BALANCED MODULATORS.	1	2	0	0
O	863	01-11 DO YOU PERFORM ANY TASKS ON SSB CARRIER OSCILLATORS.	1	2	0	0
O	864	01-12 DO YOU PERFORM ANY TASKS ON SSB LC FILTERS.	1	2	0	0
O	865	01-13 DO YOU PERFORM ANY TASKS ON SSB CRYSTAL FILTERS.	1	2	0	0
O	866	01-14 DO YOU PERFORM ANY TASKS ON SSB MECHANICAL FILTERS.	0	0	0	0
O	867	01-15 DO YOU PERFORM ANY TASKS ON SSB OSCILLATORS.	1	2	0	0
O	868	01-16 DO YOU PERFORM ANY TASKS ON SSB MIXERS.	1	3	0	0
O	869	01-17 DO YOU PERFORM ANY TASKS ON SSB DRIVERS.	1	2	0	0
O	870	01-18 DO YOU PERFORM ANY TASKS ON SSB POWER AMPLIFIERS.	1	3	0	0
O	871	01-19 DO YOU PERFORM ANY TASKS ON SSB RF AMPLIFIERS.	1	3	0	0
O	872	01-20 DO YOU PERFORM ANY TASKS ON SSB FREQUENCY CONVERTERS.	1	3	0	0
O	873	01-21 DO YOU PERFORM ANY TASKS ON SSB IF AMPLIFIERS.	1	2	0	0
O	874	01-22 DO YOU PERFORM ANY TASKS ON SSB DEMODULATORS.	1	3	0	0
O	875	01-23 DO YOU PERFORM ANY TASKS ON SSB DON'T REMEMBER WHICH SYSTEM STAGES.	0	0	0	0
O	876	01-24 DO YOU USE OR REFER TO SELECTIVE FADING.	0	0	0	0
O	877	01-25 DO YOU USE OR REFER TO PEAK POWER.	0	0	0	0
O	878	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY.	1	2	0	0
O	879	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS.	0	0	0	0
O	880	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS.	1	2	0	0
O	881	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS.	1	0	2	0
O	882	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS.	1	0	2	0
O	883	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS ON YOUR PRESENT JOB.	32	41	29	13

MODULE 70 - SINGLE SIDEBAND SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 001	SPC 002	SPC 003	SPC 004
0 884	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS.	26	34	23	6
0 885	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS.	24	34	19	6
0 886	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS.	24	33	20	6
0 887	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS.	21	26	21	0
0 888	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS.	23	28	22	6
0 889	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS.	19	22	19	0
0 890	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS.	22	26	22	6
0 891	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS.	9	16	6	0
0 892	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS.	5	5	5	0
0 893	02-11 DO YOU WORK ON PULSE POSITION MODULATION (PPM) SYSTEMS.	5	2	7	0
0 894	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS.	30	36	28	13
0 895	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS.	1	0	1	0
0 896	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF PULSE MODULATION SYSTEM.	2	3	1	0
0 897	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES.	22	29	19	6
0 898	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKE AND CHARGING DIODES.	7	5	9	0
0 899	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS.	14	16	15	0
0 900	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS.	13	14	13	0
0 901	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS.	2	2	3	0
0 902	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS.	9	10	8	0
0 903	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES.	3	2	4	0
0 904	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS.	14	14	12	0
0 905	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS.	14	17	14	0
0 906	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS.	13	14	13	0
0 907	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS.	14	14	15	0
0 908	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS.	9	5	12	0
0 909	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS.	5	2	8	0
0 910	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DONTT REMEMBER WHICH STAGE.	4	7	2	6

MODULE 71 - PULSE MODULATION SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	30890 SPC 001	30891 SPC 002	30870 SPC 003	30890 SPC 004
0	911	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	16	19	15	6
0	912	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	16	17	16	6
0	913	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW).	20	24	19	6
0	914	02-32 DO YOU USE OR REFER TO PULSE SHAPE.	17	20	14	6
0	915	02-33 DO YOU USE OR REFER TO PEAK POWER.	9	12	7	6
0	916	02-34 DO YOU USE OR REFER TO AVERAGE POWER.	10	12	9	6
0	917	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	7	5	7	6
0	918	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	12	14	12	0
0	919	02-37 DO YOU CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEM.	3	5	2	6
0	920	02-38 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS.	2	3	1	6
0	921	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS.	11	12	11	6
0	922	02-40 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS.	20	24	18	6
0	923	03-01 DO YOU WORK WITH ANTENNAS ON YOUR PRESENT JOB.	39	40	40	25
0	924	03-02 DO YOU INSPECT ANTENNAS.	29	34	26	25
0	925	03-03 DO YOU CLEAN ANTENNAS.	24	33	20	6
0	926	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS.	9	12	9	0
0	927	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS.	16	19	16	0
0	928	03-06 DO YOU TROUBLESHOOT TO ANTENNA.	17	21	17	0
0	929	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS.	22	24	24	0
0	930	03-08 DO YOU REMOVE OR INSTALL ANTENNAS.	7	2	11	0
0	931	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OR ANTENNAS.	17	21	16	0
0	932	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E (ELECTRIC FIELD) LINES.	6	3	8	6
0	933	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H (MAGNETIC FIELD) LINES.	6	3	8	6
0	934	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR	3	0	5	6
0	935	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	2	0	3	0
0	936	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS	1	0	2	0
0	937	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS	1	0	2	0
0	938	03-16 DO YOU WORK WITH HERTZ ANTENNAS.	2	0	3	0
0	939	03-17 DO YOU WORK WITH MARCONI ANTENNAS.	3	0	5	0

MODULE 67 - ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
O 940	03-18 DO YOU WORK WITH BROADSIDE ARRAYS.	1	0	2	0
O 941	03-19 DO YOU WORK WITH END-FIRE ARRAYS.	3	3	2	6
O 942	03-20 DO YOU WORK WITH CARDIOID ARRAYS.	1	0	1	0
O 943	03-21 DO YOU WORK WITH COLLINEAR ARRAYS.	0	0	0	0
O 944	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH	2	0	2	6
O 945	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS.	1	0	1	0
O 946	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS.	3	3	3	6
O 947	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS.	1	0	1	0
O 948	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA	1	2	0	6
O 949	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA	1	0	0	6
O 950	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED.	3	3	3	0
O 951	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED.	21	9	29	6
O 952	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON.	2	0	4	0
O 953	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	0	0	0	0
O 954	03-32 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS.	9	5	13	0
O 955	03-33 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS.	5	5	6	0
O 956	03-34 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS.	11	9	14	0
O 957	03-35 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN DONYT REMEMBER.	4	9	1	6
O 958	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS.	21	22	20	13
O 959	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS.	5	3	6	0
O 960	03-38 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF ANTENNAS.	2	2	1	6
O 961	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS.	8	10	7	0
P 962	P1-01 TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS	30	33	32	0
P 963	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I R LOSS IN TRANSMISSION LINES.	3	0	6	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
P 964	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES.	3	3	3	0
P 965	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES.	3	3	9	0
P 966	P1-05 DO YOU REFER TO OR USE DIELECTRIC LOSS IN TRANSMISSION LINES.	2	0	3	0
P 967	P1-06 DO YOU REFER TO OR USE LEAKAGE LOSSES IN TRANSMISSION LINES.	6	3	8	0
P 968	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES.	14	9	19	0
P 969	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES.	9	9	11	0
P 970	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES.	3	2	5	0
P 971	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE.	29	31	31	0
P 972	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE.	20	16	24	0
P 973	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES.	22	26	21	0
P 974	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	1	0	2	0
P 975	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINE TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.	7	9	7	0
P 976	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS.	16	16	17	0
P 977	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	12	17	10	0
P 978	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	2	3	1	0
P 979	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER-	0	0	0	0
P 980	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOAD USING MATCHING TRANSFORMERS.	9	9	11	0
P 981	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING DELTA MATCHING.	1	2	1	0
P 982	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR A PARTICULAR JOB WITHOUT REFERRING TO TECHNICAL	3	3	4	0
P 983	P1-22 DO YOU REFER TO OR USE THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES.	6	2	7	0
P 984	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES.	1	0	1	0
P 985	P1-24 DO YOU REFER TO OR USE THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES.	2	2	2	0
P 986	P1-25 DO YOU REFER TO OR USE THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES.	0	0	0	0
P 987	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES.	1	0	2	0
P 988	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF A PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES.	1	0	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	308X0 SPC 001	3083? SPC 002	3087? SPC 003	30890 SPC 004
P 989	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE PHYSICAL LENGTH OF A TRANSMISSION LINE REMAINS	0	0	0	0
P 990	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES.	4	2	6	0
P 991	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES.	2	3	2	0
P 992	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING STUB MATCHING.	2	0	4	0
P 993	PZ-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS ON YOUR PRESENT JOB.	21	28	20	0
P 994	PZ-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS.	20	29	17	6
P 995	PZ-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS.	15	24	12	0
P 996	PZ-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS.	1	2	1	0
P 997	PZ-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS.	1	0	1	0
P 998	PZ-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS.	10	21	6	0
P 999	PZ-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS.	7	16	3	0
P1000	PZ-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS.	17	29	15	0
P1001	PZ-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDE.	12	22	6	0
P1002	PZ-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS.	17	28	13	0
P1003	PZ-11 DO YOU REMOVE OR INSTALL DUMMY LOADS.	10	16	9	0
P1004	PZ-12 DO YOU REMOVE OR INSTALL E BENDS.	7	16	4	0
P1005	PZ-13 DO YOU REMOVE OR INSTALL H BENDS.	7	16	4	0
P1006	PZ-14 DO YOU REMOVE OR INSTALL OTHER BENDS.	5	10	2	0
P1007	PZ-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS.	5	9	3	0
P1008	PZ-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS.	7	16	4	0
P1009	PZ-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS.	14	17	14	0
P1010	PZ-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS.	10	14	10	0
P1011	PZ-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES.	1	0	2	0
P1012	PZ-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES.	1	0	2	0
P1013	PZ-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES.	6	9	6	0
P1014	PZ-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES.	2	5	1	0
P1015	PZ-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES.	1	2	1	0
P1016	PZ-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS.	1	2	0	0
P1017	PZ-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS.	1	2	0	0
P1018	PZ-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS.	1	2	0	0
P1019	PZ-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7	1	0	1	0
P1020	PZ-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH	1	0	1	0

MODULE 74 - WAVEGUIDES AND CAVITY RESONATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
P1021	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OFF.	1	2	0	0
P1022	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION.	1	0	1	0
P1023	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	1	0	1	0
P1024	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF "EAK "E" AND "H" LINES IN WAVEGUIDES.	1	0	1	0
P1025	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0	0
P1026	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0	0
P1027	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	6	10	4	0
P1028	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	7	5	9	0
P1029	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	3	3	3	0
P1030	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	10	10	11	0
P1031	P1-39 ARE DON'T REMEMBER WHICH ENERGY COUPLING DEVICE USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	9	10	1	0
P1032	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT	0	0	0	0
P1033	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0
P1034	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERATURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT	1	0	1	0
P1035	P2-43 ARE CHOKE JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	9	12	8	0
P1036	P2-44 ARE ROTATING JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	9	12	5	4
P1037	P2-45 ARE DON'T REMEMBER WHICH KIND OF JOINT USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	2	3	2	0
P1038	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING.	6	5	7	0
P1039	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING.	2	2	3	0
P1040	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING.	2	2	3	0
P1041	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER HOW.	5	10	3	0
P1042	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS.	10	12	10	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING 308X0 30830 30970 [illegible]

	DY-TSK	SPC 001	SPC 002	SPC 003	SPC 009
P1043	P3-01 ON YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	28	31	28	19
P1044	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE.	4	5	4	0
P1045	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME.	1	2	1	0
P1046	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE.	2	2	2	0
P1047	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY.	5	5	4	6
P1048	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION.	6	0	9	6
P1049	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING.	5	2	8	0
P1050	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS.	2	2	2	0
P1051	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS.	11	22	5	6
P1052	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS.	10	7	12	13
P1053	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT).	15	24	11	6
P1054	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS.	15	14	16	13
P1055	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS.	8	9	7	13
P1056	P3-14 DO YOU WORK WITH MAGNETRONS.	3	5	2	0
P1057	P3-15 DO YOU INSPECT TWT OR KLYSTRONS.	18	26	16	6
P1058	P3-16 DO YOU CLEAN TWT OR KLYSTRONS.	13	21	11	0
P1059	P3-17 DO YOU TUNE TWT OR KLYSTRONS ELECTRICALLY.	13	19	11	0
P1060	P3-18 DO YOU TUNE TWT OR KLYSTRONS MECHANICALLY.	11	14	11	0
P1061	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF TWT OR KLYSTRONS.	16	26	12	0
P1062	P3-20 DO YOU TROUBLESHOOT TWT OR KLYSTRONS.	16	24	13	0
P1063	P3-21 DO YOU REMOVE OR REPLACE COMPLETE TWT OR KLYSTRON ASSEMBLY.	15	22	13	0
P1064	P3-22 DO YOU REMOVE OR REPLACE TWT OR KLYSTRON COMPONENTS.	12	21	9	0
P1065	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS.	23	37	22	6
P1066	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS.	17	26	16	0
P1067	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS.	21	28	20	0
P1068	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS.	21	28	20	6
P1069	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS.	22	29	21	6
P1070	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS.	21	28	19	6
P1071	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIERS.	20	27	18	0
P1072	P3-30 DO YOU REMOVE OR REPLACE COMPONENTS OF PARAMETRIC AMPLIFIERS.	20	25	19	6
P1073	P3-31 DO YOU INSPECT MAGNETRONS.	1	3	0	0
P1074	P3-32 DO YOU CLEAN MAGNETRONS.	1	3	0	0
P1075	P3-33 DO YOU ADJUST MAGNETRONS.	1	3	0	0
P1076	P3-34 DO YOU TUNE MAGNETRONS.	1	3	0	0
P1077	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS.	1	3	0	0

MODULE 75 - MICROWAVE AMPLIFIERS AND OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30830 30830 30870 30890

	DY-TSK	SPC 001	SPC 002	SPC 003	SPC 004
P1078	P3-36 DO YOU TROUBLESHOOT MAGNETRONS.	1	3	0	0
P1079	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON ASSEMBLY.	1	3	0	0
P1080	P3-38 DO YOU REMOVE OR REPLACE COMPONENTS OF MAGNETRONS.	1	3	0	0
P1081	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON COLLECTOR PLATES.	1	2	1	0
P1082	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER CAVITIES.	1	2	1	0
P1083	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER GRIDS.	1	2	1	0
P1084	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON FEEDBACK LOOPS.	2	2	2	0
P1085	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON DRIFT SPACES.	1	2	1	0
P1086	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER GRIDS.	1	2	1	0
P1087	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER CAVITIES.	1	2	1	0
P1088	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS.	1	2	1	0
P1089	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES.	1	2	1	0
P1090	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES.	6	2	7	13
P1091	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS.	5	2	6	6
P1092	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS.	3	2	3	6
P1093	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES.	5	2	7	6
P1094	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS.	3	2	3	6
P1095	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS.	5	3	5	6
P1096	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES.	5	3	5	6
P1097	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS.	6	5	6	6
P1098	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT FILAMENTS.	7	12	5	0
P1099	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT CATHODES.	6	12	4	0
P1100	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MODULATOR GRIDS.	5	9	4	0
P1101	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ANODES.	6	12	4	0
P.102	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT HELIXES.	4	12	4	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	3089? SPC 004
P1103	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT COLLECTORS.	6	12	9	0
P1104	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MAGNETS.	3	7	1	0
P1105	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ATTENUATORS.	5	10	3	0
P1106	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS.	12	10	14	6
P1107	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES.	6	7	9	6
P1108	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES.	7	3	10	6
P1109	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES.	15	12	16	6
P1110	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS.	7	5	8	6
P1111	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES.	2	2	2	0
P1112	P3-70 DO YOU PERFORM TASKS ON MAGNETRON ANODES.	0	0	0	0
P1113	P3-71 DO YOU PERFORM TASKS ON MAGNETRON ANODE COOLING PINS.	0	0	0	0
P1114	P3-72 DO YOU PERFORM TASKS ON MAGNETRON COUPLING LOOPS.	0	0	0	0
P1115	P3-73 DO YOU PERFORM TASKS ON MAGNETRON HEATER LEADS.	0	0	0	0
P1116	P3-74 DO YOU PERFORM TASKS ON MAGNETRON RESONANT CAVITIES.	0	0	0	0
P1117	P3-75 DO YOU PERFORM TASKS ON MAGNETRON CATHODES.	0	0	0	0
P1118	P3-76 DO YOU PERFORM TASKS ON MAGNETRON MAGNETS.	0	0	0	0
Q1119	Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS.	47	50	47	25
Q1120	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS.	47	52	47	25
Q1121	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOL OF SHIFT REGISTERS.	41	47	41	19
Q1122	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOL OF STORAGE REGISTERS.	41	47	41	19
Q1123	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS.	43	48	43	13
Q1124	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE REGISTER.	32	29	36	6
Q1125	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	35	38	36	13
Q1126	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB.	49	53	49	25
Q1127	Q2-02 DO YOU USE OR REFER TO DELAY LINES.	23	19	28	19
Q1128	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES.	26	19	32	13
Q1129	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS.	10	2	15	6
Q1130	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES.	33	28	38	19
Q1131	Q2-06 DO YOU USE OR REFER TO ACCESS TIMES OR SPEED OF MEMORY SYSTEMS.	29	16	30	13

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30BX0 30830 30870 30890

BY-TSK		SPC 001	SPC 002	SPC 003	SPC 004
Q1132	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS.	37	26	47	13
Q1133	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS.	15	12	18	0
Q1134	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES.	18	16	22	6
Q1135	Q3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DIGITAL-TO-ANALOG (D\A) CONVERTERS, ANALOG-TO-DIGITAL (A\D)	43	47	45	6
Q1136	Q3-02 DO YOU COMPUTE THE OUTPUT VOLTAGE OR AN ELECTRO MECHANICAL DIGITAL-TO-ANALOG (D\A) CONVERTER FOR A	7	10	6	0
Q1137	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN A ELECTROMECHANICAL DIGITAL-TO-ANALOG (D\A)	3	0	6	0
Q1138	Q3-04 DO YOU COMPUTE THE ANALOG VOLTAGE FOR A GIVEN BINARY COUNT IN ELECTRONIC DIGITAL-TO-ANALOG (D\A)	9	7	11	0
Q1139	Q3-05 DO YOU PERFORM ANY TASKS ON THE SAMPLE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	9	9	10	0
Q1140	Q3-06 DO YOU PERFORM ANY TASKS ON THE HOLD FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	9	9	10	0
Q1141	Q3-07 DO YOU PERFORM ANY TASKS ON THE COMPARE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	10	9	11	0
Q1142	Q3-08 DO YOU PERFORM ANY TASKS ON THE DIGITIZE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	10	9	11	0
Q1143	Q3-09 DO YOU PERFORM ANY TASKS ON THE DON'T REMEMBER WHICH FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D)	7	10	6	0
Q1144	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A\D CONVERTERS.	10	9	12	0
Q1145	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A\D CONVERTERS.	10	9	11	0
Q1146	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A\D CONVERTERS.	11	10	13	0
Q1147	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A\D. CONVERTERS.	19	14	16	0
Q1148	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A\D) CONVERTERS.	5	5	6	0
R1149	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY ON YOUR PRESENT JOB.	1	0	2	0
R1150	R2-01 ON YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS.	29	41	25	0

MODULE 55 - DIGITAL, ANALOG CONVERTERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
R1151 R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS.	26	41	21	0
R1152 R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS.	25	34	23	0
R1153 R3-01 ON YOUR PRESENT JOB DO YOU FABRICATE MULTI-CONDUCTOR CABLES.	21	14	24	19
R1154 R3-02 DO YOU FABRICATE COAXIAL CABLES.	20	29	28	19
S1155 S1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS.	41	41	42	31
S1156 S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OF NIXIE LIGHT DECODER SYSTEMS.	32	36	32	6
S1157 S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA.	8	3	11	0
S1158 S2-01 DO YOU WORK WITH PHOTO TUBES ON YOUR PRESENT JOB.	24	26	26	0
S1159 S3-01 ON YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS.	6	5	6	0
S1160 S3-02 DO YOU MEASURE EXCITATION FREQUENCY OF CHOPPER COILS.	2	3	1	0
S1161 S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	1	0	1	0
S1162 S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCY OF CHOPPER COILS.	1	0	1	0
S1163 S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	1	0	1	0
S1164 S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	4	2	5	0
S1165 S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	4	3	4	0
S1166 S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	5	3	5	0
S1167 S3-09 DO YOU USE COMPARISON IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	3	2	4	0
T1168 T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS.	9	2	14	0
T1169 T1-02 DO YOU INSPECT INFRARED SYSTEMS.	2	0	4	0
T1170 T1-03 DO YOU CLEAN INFRARED SYSTEMS.	2	0	3	0
T1171 T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS.	2	0	3	0
T1172 T1-05 DO YOU OPERATE INFRARED SYSTEMS.	3	0	5	0
T1173 T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS.	2	0	3	0
T1174 T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	2	0	3	0
T1175 T1-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF INFRARED SYSTEMS.	2	0	4	0
T1176 T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	2	0	3	0
T1177 T1-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF INFRARED SYSTEMS.	2	0	3	0

MODULE 78 - FABRICATE MULTI-CONDUCTOR AND COAXIAL CABLES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	308X0 SPC 001	30830 SPC 002	30870 SPC 003	30890 SPC 004
T1178	T1-11	DO YOU USE OR REFER TO FAR REGION.	0	0	0	0
T1179	T1-12	DO YOU USE OR REFER TO INTERMEDIATE REGION.	1	0	2	0
T1180	T1-13	DO YOU USE OR REFER TO NEAR REGION.	2	0	4	0
T1181	T1-14	DO YOU USE OR REFER TO MICRON(M).	6	0	9	0
T1182	T1-15	DO YOU USE OR REFER TO GRAY BODIES.	3	0	5	0
T1183	T1-16	DO YOU USE OR REFER TO BLACK BODIES.	4	0	7	0
T1184	T1-17	DO YOU USE OR REFER TO ABSORPTION.	0	0	0	0
T1185	T1-18	DO YOU USE OR REFER TO SCATTERING.	1	0	2	0
T1186	T1-19	DO YOU USE OR REFER TO ABSOLUTE ZERO.	3	0	4	0
T1187	T1-20	DO YOU PERFORM TASKS ON BLITZ.	0	0	0	0
T1188	T1-21	DO YOU PERFORM TASKS ON TARGET BUTTONS.	0	0	0	0
T1189	T1-22	DO YOU PERFORM TASKS ON ERECTOR LENSES.	0	0	0	0
T1190	T1-23	DO YOU PERFORM TASKS ON OCULAR LENSES.	0	0	0	0
T1191	T1-24	DO YOU PERFORM TASKS ON CORRECTION LENSES.	1	0	1	0
T1192	T1-25	DO YOU PERFORM TASKS ON FILTERS.	2	0	3	0
T1193	T1-26	DO YOU PERFORM TASKS ON SPHERICAL MIRRORS.	2	0	3	0
T1194	T1-27	DO YOU PERFORM TASKS ON PLANE MIRRORS.	1	0	1	0
T1195	T2-01	DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS.	1	0	2	0
T1196	T2-02	DO YOU INSPECT LASERS.	0	0	0	0
T1197	T2-03	DO YOU CLEAN LASERS.	0	0	0	0
T1198	T2-04	DO YOU ADJUST OR CALIBRATE LASERS.	0	0	0	0
T1199	T2-05	DO YOU OPERATE LASERS.	0	0	0	0
T1200	T2-06	DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASERS.	0	0	0	0
T1201	T2-07	DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASERS.	0	0	0	0
T1202	T2-08	DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF LASERS.	0	0	0	0
T1203	T2-09	DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASERS.	0	0	0	0
T1204	T2-10	DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASERS.	0	0	0	0
T1205	T2-11	DO YOU USE OR REFER TO ANGSTROMS (A).	0	0	0	0
T1206	T2-12	DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS.	0	0	0	0
T1207	T2-13	DO YOU USE OR REFER TO GROUND STATE.	0	0	0	0
T1208	T2-14	DO YOU USE OR REFER TO EXCITED STATE.	0	0	0	0
T1209	T2-15	DO YOU USE OR REFER TO PACKET OF RADIATION.	0	0	0	0
T1210	T2-16	DO YOU USE OR REFER TO PHOTONS.	0	0	0	0
T1211	T2-17	DO YOU USE OR REFER TO SPONTANEOUS EMISSION.	0	0	0	0
T1212	T2-18	DO YOU USE OR REFER TO STIMULATED EMISSION.	0	0	0	0
T1213	T2-19	DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE.	0	0	0	0
T1214	T2-20	DO YOU USE OR REFER TO INVERSION LEVEL.	0	0	0	0
T1215	T2-21	DO YOU USE OR REFER TO MONOCHROMATIC.	0	0	0	0
T1216	T2-22	DO YOU WORK WITH ACTIVE MATERIALS.	0	0	0	0
T1217	T2-23	DO YOU WORK WITH PUMPING SOURCE.	0	0	0	0
T1218	T2-24	DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS.	0	0	0	0
T1219	T2-25	DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS.	0	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

30870 30830 30870 30870

	DY-TSK	SPC 001	SPC 002	SPC 003	SPC 009
T1220	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES.	0	0	0	0
T1221	T2-27 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH RUBY.	0	0	0	0
T1222	T2-28 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0	0
T1223	T2-29 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-XENON.	0	0	0	0
T1224	T2-30 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH XENON.	0	0	0	0
T1225	T2-31 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH CESIUM-HELIUM.	1	0	1	0
T1226	T2-32 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0	0
T1227	T2-33 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH NEODYMIUM IN GLASS.	0	0	0	0
T1228	T2-34 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH GALLIUM ARSENIDE.	1	0	1	0
T1229	T3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE	9	9	8	6
T1230	T3-02 DO YOU INSPECT DVST OR MMST.	3	5	1	0
T1231	T3-03 DO YOU CLEAN DVST OR MMST.	2	3	1	0
T1232	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST.	1	2	1	0
T1233	T3-05 DO YOU OPERATE (OPERATE A SYSTEM THAT CONTAINS A DVST OR MMST).	4	3	4	0
T1234	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS.	2	3	2	0
T1235	T3-07 DO YOU REMOVE OR REPLACE THE DVST OR MMST TUBE FROM ITS MAJOR ASSEMBLY OR UNIT (YOU ACTUALLY REMOVE	1	3	0	0
T1236	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF DVST.	2	0	3	0
T1237	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF MMST.	1	0	2	0
T1238	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS.	1	0	1	0
T1239	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS.	1	0	1	0
T1240	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS.	0	0	0	0
T1241	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS.	1	0	1	0
T1242	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS.	1	0	1	0
U1243	U1-01 ON YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS.	28	31	25	6
U1244	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS.	18	14	23	0
U1245	U1-03 DO YOU USE OR REFER TO PROGRAMS.	21	21	23	0
U1246	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS.	11	5	14	0
U1247	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS.	6	3	8	0
U1248	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS.	1	0	2	0
U1249	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS.	19	16	23	0
U1250	U1-08 DO YOU USE OR REFER TO TIME-SHARING.	9	2	13	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

308X0 30830 30870 30890

	DY-TSK	SPC 001	SPC 002	SPC 003	SPC 009
U1251	U1-09 DO YOU USE OR REFER TO DATA WORDS.	19	12	28	0
U1252	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS.	23	24	29	6
U1253	U1-11 DO YOU USE OR REFER TO ADDRESS\SUBADDRESS.	14	17	14	0
U1254	U1-12 DO YOU USE OR REFER TO STEERING\INFORMATION.	9	7	11	0
U1255	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS.	12	10	14	0
U1256	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING SYSTEMS.	7	7	8	0
U1257	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING SYSTEMS.	3	3	3	0
U1258	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES.	20	21	20	6
U1259	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES.	16	17	16	6
U1260	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS.	13	10	16	0
U1261	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS.	14	14	16	0
U1262	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES.	17	14	19	6
U1263	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES.	16	22	13	0
U1264	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION.	39	41	39	25
U1265	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS.	7	7	5	13
U1266	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS.	7	7	5	13
U1267	DUMMY QUESTION TO FACILITATE SETCHECK	4	5	4	0

TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUPS IN THE 30830 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	GP0017	STAGE = 17	KPATH ORDER FROM 65 TO 147	CONTAINING	83 MEMBERS.
GROUP IDENTITY =	SPC024	ALL MEMBERS OF GP017 WHO ARE DAFSC 30830		CONTAINING	35 MEMBERS.
GROUP IDENTITY =	SPC025	ALL MEMBERS OF GP017 WHO ARE DAFSC 30870		CONTAINING	43 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DUTY	MAINTENANCE 308X0 6P 0017	30830 SPC 024	3087C SPC 025
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	100	100	100
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	100	100	100
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	100	100	100
D	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	93	97	91
E	COUPLING, SOLDERING, AND RELAYS	100	100	100
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	92	94	91
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	100	100	100
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	100	100	100
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	90	86	93
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	76	66	86
K	AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	94	91	95
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	95	97	98
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	95	94	98
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	89	91	93
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	86	83	88
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	73	66	79
Q	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	93	97	93
R	PHANTASTRONS, SCHMITT TRIGGERS, AND CABLE FABRICATION	84	83	86
S	INPUT/OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	81	80	84
T	INFRARED, LASERS, AND DISPLAY TUBES	19	11	26
U	PROGRAMMING, DB AND POWER RATIOS	81	80	84

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X3 308X2 [illegible]

		DY-TSK	GP 0017	SPC 024	SPC 025	
A	1	A1-01 DO YOU USE AN INSTRUMENT, SUCH AS METER OR AN OSCILLOSCOPE, IN WHICH IT IS NECESSARY TO AMPLIFY OR	81	86	79	
A	2	A1-02 DO YOU USE A PUBLICATION, SUCH AS A TECHNICAL ORDER OR MAINTENANCE MANUAL, IN WHICH IT IS NECESSARY	61	60	60	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	93	96	92	
A	4	A1-04 DO YOU FIND THE SQUARE ROOT OF A QUANTITY.	30	23	37	
A	5	A1-05 DO YOU SOLVE FOR AN UNKNOWN QUANTITY.	96	99	92	MODULE 3 - ELECTRONIC MATHEMATICS
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	13	9	16	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	16	14	16	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	8	0	16	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS (THIS IS THE LOGARITHM SYSTEM WHICH USES THE NUMBER 2.718 AS	6	0	9	
A	10	A1-10 DO YOU WORK WITH VECTOR QUANTITIES, SUCH AS ADDING OR SUBTRACTING TWO VECTORS.	28	29	28	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	30	26	35	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES, SUCH AS AREAS OF CIRCLES OR TRIANGLES.	12	3	19	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	13	9	19	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	34	31	35	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT.	99	100	98	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	63	63	63	
A	17	A2-03 DO YOU USE THE TERM OHM.	99	100	98	MODULE 4 - DIRECT CURRENT AND VOLTAGE
A	18	A2-04 DO YOU USE THE TERM ION.	36	31	40	
A	19	A2-05 DO YOU USE THE TERM DYNE.	22	23	23	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	98	97	98	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	35	31	40	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	35	37	35	
A	23	A2-09 DO YOU USE THE TERM PROTON.	34	31	37	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	88	100	88	
A	25	A3-02 DO YOU INSPECT RESISTORS.	81	83	81	
A	26	A3-03 DO YOU CLEAN RESISTORS.	67	74	70	
A	27	A3-04 DO YOU ADJUST RESISTORS.	83	89	81	MODULE 5 - RESISTANCE, RESISTOR SCHEMATIC SYMBOLS
A	28	A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.	87	89	86	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	87	91	89	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS IN YOUR PRESENT JOB.	48	46	51	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS, SUCH AS FOR FIXED RESISTORS OR FOR TAPPED RESISTORS.	95	97	93	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT OR	89	89	88	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	MAINTENANCE 308X0 GP 0017	30830 SPC 029	30870 SPC 025
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE OHMIC VALUE OF RESISTANCE.	92	91	91
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE TOLERANCE OF RESISTORS.	87	86	88
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE FAILURE RATE OF RESISTORS.	19	26	16
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	39	31	44
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT ANY OF THE FOLLOWING COMPONENTS: BATTERY,	96	94	98
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	58	54	60
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	57	54	60
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	60	57	63
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	51	49	53
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	57	51	60
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	53	46	60
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	57	51	60
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	48	40	56
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	46	40	51
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	55	49	60
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	54	48	60
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	53	43	60
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	48	40	56
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	47	40	53
B	52	B1-01 DO YOU MEASURE RESISTANCE.	84	89	81
B	53	B1-02 DO YOU REPAIR AN OHMMETER.	8	9	9
B	54	B1-03 DO YOU MEASURE VOLTAGE.	87	94	81
B	55	B1-04 DO YOU REPAIR A VOLTMETER.	7	6	9
B	56	B1-05 DO YOU REPAIR AN AMMETER.	8	6	12
B	57	B1-06 DO YOU MEASURE CURRENT.	80	89	74
B	58	B1-07 DO YOU USE A MULTIMETER.	83	89	81

MODULE 6 - MULTIMETER

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		DY-TSK	GP 001	SPC 029	SPC 025	
B	59	81-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	8	6	9	
B	60	81-09 DO YOU READ SCHEMATICS.	96	94	98	
B	61	82-01 DO YOU USE OR REFER THE TERM EFFECTIVE VOLTAGE (RMS).	90	89	91	
B	62	82-02 DO YOU USE OR REFER THE TERM PEAK TO PEAK VOLTAGE.	96	100	93	MODULE [illegible] - AC COMPUTATION AND FREQUENCY SPECTRUM
B	63	82-03 DO YOU USE OR REFER THE TERM AVERAGE VOLTAGE (DC).	83	86	89	
B	64	82-04 DO YOU USE OR REFER THE TERM WAVE LENGTH.	64	63	67	
B	65	82-05 DO YOU USE OR REFER THE TERM FREQUENCY.	95	97	95	
B	66	82-06 DO YOU USE OR REFER THE TERM INSTANTANEOUS VALUE.	93	90	97	
B	67	83-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	93	100	88	
B	68	83-02 DO YOU INSPECT INDUCTORS.	71	74	72	
B	69	83-03 DO YOU CLEAN INDUCTORS.	60	69	60	
B	70	83-04 DO YOU ADJUST INDUCTORS.	65	77	58	MODULE [illegible] - INDUCTOR AND INDUCTIVE REACTANCE
B	71	83-05 DO YOU REMOVE OR REPLACE INDUCTORS.	78	86	72	
B	72	83-06 DO YOU USE OR REFER TO INDUCTANCE.	73	80	72	
B	73	83-07 DO YOU USE OR REFER TO HENRIES.	57	60	56	
B	74	83-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	57	57	58	
B	75	83-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	17	14	19	
B	76	83-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	34	26	42	
B	77	83-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS.	28	20	35	
B	78	83-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE	12	6	16	
B	79	83-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	8	3	12	
B	80	83-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO	10	6	12	
B	81	83-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	12	11	14	
B	82	83-16 DO YOU CALCULATE INDUCTANCE FOR A PARTICULAR INDUCTOR USING FORMULAS.	12	11	9	
B	83	83-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES.	18	14	21	
B	84	83-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	19	17	21	
B	85	83-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	17	17	16	
B	86	83-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	36	29	42	
B	87	83-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	22	20	21	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30840 30830 30870

		BY-TSK	GP 0017	SPC 024	SPC 025
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO	37	29	44
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	42	37	47
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	45	37	49
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	76	80	70
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS ON YOUR PRESENT JOB.	98	100	98
C	93	C1-02 DO YOU INSPECT CAPACITORS.	78	86	77
C	94	C1-03 DO YOU CLEAN CAPACITORS.	58	66	58
C	95	C1-04 DO YOU ADJUST CAPACITORS.	75	86	70
C	96	C1-05 DO YOU TEST CAPACITORS.	71	80	67
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	69	66	77
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	86	91	81
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	29	20	35
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	2	0	5
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	90	89	93
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	86	77	93
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT.	16	14	16
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS.	67	54	79
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE.	39	34	42
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES.	42	31	53
C	107	C1-16 THE CAPACITORS YOU WORK WITH IN DC CIRCUITS.	76	86	72
C	108	C1-17 THE CAPACITORS YOU WORK WITH ARE IN AC CIRCUITS.	70	80	67
C	109	C1-18 THE CAPACITORS YOU WORK WITH ARE IN CIRCUITS WITH BOTH DC AND AC.	87	86	88
C	110	C1-19 THE CAPACITORS YOU WORK WITH ARE DON'T REMEMBER WHICH CIRCUITS.	4	3	2
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR A PARTICULAR CAPACITOR USING FORMULAS.	10	6	12
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL	10	9	12
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL	12	9	14
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES.	36	23	47
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL.	35	20	47
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS.	29	23	33
C	117	C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY	92	90	94

MODULE 12 - CAPACITORS AND CAPACITIVE REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-TSK	GP 0017	SPC 024	SPC 025
C 118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS.	36	23	44
C 119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	35	23	47
C 120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE.	22	14	26
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR CAPACITORS (VARIABLE).	53	63	51
C 122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS.	65	71	65
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC CAPACITORS (FIXED).	89	83	93
C 124	C1-33 DO YOU WORK WITH PAPER CAPACITORS (FIXED).	75	69	79
C 125	C1-34 DO YOU WORK WITH MICA CAPACITORS (FIXED).	84	69	95
C 126	C1-35 DO YOU WORK WITH CERAMIC CAPACITORS (FIXED).	87	74	95
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS.	6	9	5
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS ON YOUR PRESENT JOB.	93	89	98
C 129	C2-02 DO YOU INSPECT TRANSFORMERS.	76	80	77
C 130	C2-03 DO YOU CLEAN TRANSFORMERS.	55	66	53
C 131	C2-04 DO YOU ADJUST TRANSFORMERS.	46	51	47
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS.	70	80	65
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS.	78	80	79
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING.	8	9	9
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M).	5	3	7
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M.	10	6	14
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS.	11	9	12
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS.	14	6	21
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS.	11	9	12
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS.	4	3	7
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS.	39	29	47
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS.	84	73	95
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS.	53	46	58
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS.	66	57	74
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMER.	9	11	7
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE.	78	77	81
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE.	69	66	74
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES.	57	54	60
C 149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	20	14	26

MODULE 15 - TRANSFORMERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		DY-TSK	GP 0017	SPC 024	SPC 025
C	150	C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	31	20	40
C	151	C2-24 DO YOU REFER TO THE BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS.	89	86	93
C	152	C2-25 DO YOU REFER TO THE MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS.	76	66	84
C	153	C2-26 DO YOU REFER TO THE MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	80	71	86
C	154	C2-27 DO YOU REFER TO THE CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	83	77	88
C	155	C2-28 DO YOU REFER TO THE AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	98	99	97
C	156	C2-29 DO YOU REFER TO THE IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	52	54	49
C	157	C2-30 DO YOU REFER TO THE COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	58	60	56
C	158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	92	93	92
C	159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH.	20	9	26
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	17	11	21
C	161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS.	90	23	53
C	162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	13	11	12
C	163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	7	3	9
C	164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH 3 PHASE TRANSFORMERS.	92	37	99
C	165	C2-38 DO YOU INSPECT 3 PHASE TRANSFORMERS.	92	93	99
C	166	C2-39 DO YOU CLEAN OR LUBRICATE 3 PHASE TRANSFORMERS.	30	29	35
C	167	C2-40 DO YOU ADJUST 3 PHASE TRANSFORMERS.	22	31	16
C	168	C2-41 DO YOU TROUBLESHOOT 3 PHASE TRANSFORMERS.	37	40	37
C	169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE 3 PHASE TRANSFORMER.	90	39	99
C	170	C2-43 DO YOU REMOVE OR REPLACE 3 PHASE TRANSFORMER PARTS, SUCH AS A WINDING.	6	9	5
C	171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS.	34	93	28
C	172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS.	35	93	30
C	173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS.	14	11	19
C	174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS.	10	9	12

MODULE 13 - MAGNETISM

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30XX0 30830 30870

	DY-TSK	GP 0017	SPC 024	SPC 025
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS.	14	11	19
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM.	29	26	26
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX.	34	23	47
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM.	5	3	7
C 179	C3-09 DO YOU USE OR REFER TO THE DOMAIN THEORY OF MAGNETISM.	11	11	12
C 180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION.	18	9	25
C 181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY.	19	11	28
C 182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES	25	23	30
C 183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES.	12	9	16
C 184	C3-14 DO YOU USE THE LEFT THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL.	12	9	16
D 185	D1-01 DO YOU WORK WITH RC, LR, OR RCL CIRCUITS ON YOUR PRESENT JOB.	75	71	79
D 186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS.	16	9	19
D 187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS.	10	6	12
D 188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS.	16	11	19
D 189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS.	16	11	19
D 190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS.	14	9	19
D 191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS.	42	40	47
D 192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS.	27	23	30
D 193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS.	27	23	30
D 194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS.	29	26	33
D 195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS.	18	9	26
D 196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS.	16	14	16
D 197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	51	40	60
D 198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS.	64	54	72
D 199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS.	53	40	63

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	BY-TSK	GP 0017	SPC 029	SPC 025
D 200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS.	60	59	67
D 201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS.	36	23	47
D 202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS.	51	90	60
D 203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS.	22	19	28
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	52	93	58
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS; SINE OF AN ANGLE = OPPOSITE SIDE	10	3	19
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS.	7	6	9
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS.	13	11	12
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS.	6	0	7
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS.	12	11	9
D 210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS.	5	3	5
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS.	6	0	9
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS.	10	6	12
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS.	6	0	9
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS.	10	6	12
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PANALLEL RCL CIRCUITS.	4	0	5
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD.	8	9	7
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW.	8	9	7
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS.	64	69	63
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION.	45	37	51
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS.	59	63	60
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION.	36	29	44
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA=0, PF=1, AND PA=PT FOR RESONANT CIRCUITS.	4	3	5
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS.	19	11	23
D 224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE	28	17	35

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308[illegible] 30830 30870

	DY-TSK	GP 0017	SPC 029	SPC 025	
D 225	D1-01 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT	22	19	26	
D 226	D1-02 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK	33	29	37	
D 227	D1-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q.	23	20	26	
D 228	D1-04 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT	19	11	23	
D 229	D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANCE CIRCUITS OR	49	34	63	
D 230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS.	4	31	51	
D 231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE.	20	14	28	
D 232	D2-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS.	18	6	3	
D 233	D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE	28	20	36	
D 234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS.	12	6	16	
D 235	D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUITS CURRENT OR COMPONENT VOLTAGES AFTER A	17	14	16	
D 236	D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT	18	9	23	
D 237	D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	12	9	14	
D 238	D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR	16	11	19	
D 239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS ON YOUR PRESENT JOB.	86	91	81	
D 240	D3-02 DO YOU INSPECT FILTER CIRCUITS.	64	69	63	
D 241	D3-03 DO YOU CLEAN FILTER CIRCUITS.	51	54	53	
D 242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS.	48	63	40	
D 243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT.	59	69	56	
D 244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF FILTER CIRCUITS.	61	66	63	
D 245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT.	58	66	53	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-TSK	GP 0017	SPC 029	SPC 029	
D 244	D3-08 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF FILTER CIRCUITS.	61	71	56	
D 247	D3-09 DO YOU WORK ON LOW PASS FILTERS.	72	66	79	
D 248	D3-10 DO YOU WORK ON HIGH PASS FILTERS.	71	69	77	
D 249	D3-11 DO YOU WORK ON BANDPASS FILTERS.	82	83	84	
D 251	D3-13 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF FILTER	48	37	58	
D 250	D3-12 DO YOU WORK ON BAND-REJECT FILTERS.	7	1.	5	
D 252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATIONS.	58	46	70	
D 253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATIONS.	59	51	65	
D 254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATIONS.	61	57	67	
D 255	D3-17 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF FILTER CONFIGURATIONS.	20	34	9	
D 256	D3-18 ARE PARALLEL RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	52	40	63	
D 257	D3-19 ARE SERIES-PARALLEL CIRCUITS USED IN FILTERS YOU WORK WITH.	57	46	65	
D 258	D3-20 ARE SERIES RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	48	34	60	
D 259	D3-21 ARE DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT USED IN FILTERS YOU WORK WITH.	25	40	14	
D 260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	11	6	12	
E 261	E1-01 DO YOU WORK WITH COUPLING DEVICES ON YOUR PRESENT JOB.	86	89	86	
E 262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	83	80	88	
E 263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	69	54	81	
E 264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	80	71	88	MODULE 28 - COUPLING
E 265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE RC COUPLING FUNCTIONS.	66	71	65	
E 266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE IMPEDANCE COUPLING FUNCTIONS.	53	49	58	
E 267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE TRANSFORMER COUPLING FUNCTIONS.	61	63	63	
E 268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS.	73	74	74	
E 269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS.	70	63	77	
E 270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS.	55	43	65	
E 271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS.	66	57	74	
E 272	E1-12 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUIT.	11	20	5	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		BY-TSK	GP 0017	SPC 024	SPC 025	
E 273	E2-01	ON YOUR PRESENT JOB DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS.	86	89	84	
E 274	E2-02	DO YOU SELECT TYPE OF SOLDER TO USE.	73	80	70	
E 275	E2-03	DO YOU ADD FLUX TO CONNECTIONS.	72	86	63	
E 276	E2-04	DO YOU CLEAN CONNECTIONS USING SOLVENTS.	81	86	77	
E 277	E2-05	DO YOU STRIP INSULATION FROM WIRES.	84	91	79	
E 278	E2-06	DO YOU CONNECT OR DISCONNECT HEAT SINKS.	82	86	79	MODULE 76 - SOLDERING TOOLS AND MATERIALS
E 279	E2-07	DO YOU BEND OR SHAPE WIRES OR LEADS.	84	91	79	
E 280	E2-08	DO YOU CUT WIRES.	83	89	79	
E 281	E2-09	DO YOU FILE OR SHAPE SOLDERING IRON TIPS.	77	77	67	MODULE 77 - SOLDERING AND D[illegible] PROCEDURES
E 282	E2-10	DO YOU TIN SOLDERING IRON TIPS.	82	86	79	
E 283	E2-11	DO YOU CLEAN SOLDERING IRON TIPS.	82	86	79	
E 284	E2-12	DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS.	81	89	77	
E 285	E2-13	DO YOU TIN OR PRE-TIN CONDUCTORS.	83	89	79	
E 286	E2-14	DO YOU INSPECT SOLDERED CONNECTIONS.	86	89	84	
E 287	E2-15	DO YOU DESOLDER CONNECTIONS BY WICKING.	77	89	67	
E 288	E2-16	DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS.	76	74	77	
E 289	E2-17	DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS.	76	77	77	
E 290	E2-18	DO YOU CRUSH COMPONENTS FOR REMOVAL.	25	17	33	
E 291	E2-19	DO YOU MAKE HARDWIRE TURRET CONNECTIONS.	59	63	56	
E 292	E2-20	DO YOU MAKE HARDWIRE BIFURCATED CONNECTIONS.	42	49	37	
E 293	E2-21	DO YOU MAKE PRINTED CIRCUIT BOARD TURRET CONNECTIONS.	70	71	67	
E 294	E2-22	DO YOU MAKE PRINTED CIRCUIT BOARD BIFURCATED CONNECTIONS.	49	57	42	
E 295	E2-23	DO YOU MAKE PRINTED CIRCUIT BOARD TERMINAL PADS.	71	74	67	
E 296	E2-24	DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS.	83	89	79	
E 297	E2-25	DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS.	84	91	79	
E 298	E3-01	DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB.	95	97	93	
E 299	E3-02	DO YOU ADJUST RELAYS.	36	37	37	
E 300	E3-03	DO YOU CLEAN RELAYS.	64	77	58	
E 301	E3-04	DO YOU INSPECT RELAYS.	76	86	74	
E 302	E3-05	DO YOU REMOVE OR REPLACE COMPLETE RELAY.	80	89	72	MODULE 16 - RELAYS
E 303	E3-06	DO YOU REMOVE OR REPLACE PARTS OF RELAY.	19	14	23	
E 304	E3-07	DO YOU TROUBLESHOOT RELAYS.	72	89	65	
E 305	E3-08	DO YOU STRAIGHTEN RELAY CONTACTS.	43	51	40	
E 306	E3-09	DO YOU PERFORM ANY TASKS ON RELAY CONTACTS.	43	49	40	
E 307	E3-10	DO YOU PERFORM ANY TASKS ON RELAY CORE.	5	6	5	
E 308	E3-11	DO YOU PERFORM ANY TASKS ON RELAY COIL.	8	14	5	
E 309	E3-12	DO YOU PERFORM ANY TASKS ON RELAY ARMATURE.	10	11	7	
E 310	E3-13	DO YOU PERFORM ANY TASKS ON RELAY SPRING.	17	17	16	
E 311	E3-14	DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPEN (NO) SCHEMATIC SYMBOLS	88	86	91	

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-YSK	GP D017	SPC 029	SPC 028
E 312	E3-15 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS	87	83	91
E 313	E3-16 DO YOU USE OR REFER TO THE SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS.	83	80	86
E 314	E3-17 DO YOU USE OR REFER TO THE DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS.	84	83	86
E 315	E3-18 DO YOU USE OR REFER TO THE OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS.	60	54	63
E 316	E3-19 DO YOU CHECK THE ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE.	64	60	67
F 317	F1-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH MICROPHONES.	33	31	37
F 318	F1-02 DO YOU INSPECT MICROPHONES.	16	11	19
F 319	F1-03 DO YOU CLEAN MICROPHONES.	11	6	16
F 320	F1-04 DO YOU OPERATE (HAVE A JOB IN WHICH YOU USE MICROPHONES).	23	23	26
F 321	F1-05 DO YOU TROUBLESHOOT MICOPHONES AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	8	9	9
F 322	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONES COMPONENTS.	8	6	12
F 323	F1-07 DO YOU REMOVE OR REPLACE THE COMPLETE MICROPHONE.	13	11	16
F 324	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS.	6	0	12
F 325	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES.	14	9	21
F 326	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES.	1	3	0
F 327	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES.	4	3	5
F 328	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES.	5	3	7
F 329	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES.	0	0	0
F 330	F2-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH SPEAKERS, SUCH AS LISTENING TO AUDIO OUTPUTS, ETC.	48	37	60
F 331	F2-02 DO YOU INSPECT SPEAKERS.	18	9	26
F 332	F2-03 DO YOU CLEAN SPEAKERS.	12	9	16
F 333	F2-04 DO YOU OPERATE (HAVE A JOB IN WHICH SPEAKERS ARE USED).	28	20	35
F 334	F2-05 DO YOU TROUBLESHOOT SPEAKERS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	20	11	28
F 335	F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER COMPONENTS.	12	6	16
F 336	F2-07 DO YOU REMOVE OR REPLACE THE COMPLETE SPEAKER.	25	11	37
F 337	F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS.	2	3	2
F 338	F2-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER CONES.	2	0	2
F 339	F2-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SPIDERS.	0	0	0
F 340	F2-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER FIELD COILS.	1	0	0

MODULE 17 - MICROPHONE AND SPEAK

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 308?0

	DY-TSK	GP U017	SPC 024	SPC 025
F 341	F2-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER VOICE COILS.	2	0	2
F 342	F2-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS.	2	0	2
F 343	F2-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS.	2	0	2
F 344	F2-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES.	1	0	2
F 345	F3-01 DO YOU USE OSCILLOSCOPES ON YOUR PRESENT JOB.	84	86	84
F 346	F3-02 DO YOU USE AN OSCILLOSCOPETO PERFORM OPERATIONAL CHECKS.	87	94	84
F 347	F3-03 DO YOU USE AN OSCILLOSCOPE TO PERFORM ALIGNMENT OR ADJUSTMENTS.	81	89	79
F 348	F3-04 DO YOU USE AN OSCILLOSCOPE TO PERFORM TROUBLESHOOT ELECTRONIC CIRCUITS.	82	91	77
F 349	F3-05 DO YOU USE AN OSCILLOSCOPE TO MEASURE FREQUENCY.	75	89	70
F 350	F3-06 DO YOU USE AN OSCILLOSCOPE TO MEASURE TIME.	72	77	74
F 351	F3-07 DO YOU USE AN OSCILLOSCOPE TO OBSERVE LISSAJOUS PATTERNS.	31	34	33
F 352	F3-08 DO YOU USE AN OSCILLOSCOPE TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES.	78	89	74
F 353	F3-09 DO YOU USE AN OSCILLOSCOPE TO MAKE FREQUENCY OR TIME MEASUREMENTS USING THE DELAY TIME MULTIPLIER.	59	63	60
F 354	F3-10 DO YOU USE AN OSCILLOSCOPE TO MEASURE AC VOLTAGE.	77	89	74
F 355	F3-11 DO YOU USE AN OSCILLOSCOPE TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL	64	63	72
G 356	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES ON YOUR PRESENT JOB.	95	94	95
G 357	G1-02 DO YOU INSPECT DIODES.	77	80	79
G 358	G1-03 DO YOU REMOVE OR REPLACE DIODES.	81	83	79
G 359	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT.	82	83	81
G 360	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES.	8	9	9
G 361	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE	10	6	12
G 362	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES.	13	9	16
G 363	G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF THE DIODE.	67	60	74
G 364	G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS,	78	77	79
G 365	G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW.	11	6	16

MODULE 29 - PN JUNCTIONS AND

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	MAINTENANCE 30840 30830 30870 GP 0017	SPC 024	SPC 025
G	366	61-11 DO YOU USE OR REFER TO A MEASUREMENT OF FORWARD BIAS RESISTANCE.	69	69	72
G	367	61-12 DO YOU USE OR REFER TO DIODE COLOR CODING.	51	31	65
G	368	61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0
G	369	61-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0
G	370	61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538.	75	66	81
G	371	61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0
G	372	61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0
G	373	61-18 DO YOU USE OR REFER TO A MEASUREMENT OR REVERSE BIAS RESISTANCE.	66	60	72
G	374	61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT.	2	0	5
G	375	61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0
G	376	61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0
G	377	61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL).	4	0	7
G	378	61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM).	4	0	7
G	379	61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END.	71	60	77
G	380	61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES, SUCH AS GERMANIUM OR	36	26	42
G	381	61-26 IS IT IMPORTANT FOR YOU TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS	46	43	49
G	382	61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT	20	6	33
G	383	61-28 DO YOU DETERMINE WHETHER A PN JUNCTION DIODE IS FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	78	77	84
G	384	61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS.	2	0	5
G	385	61-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS.	2	0	5
G	386	61-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS.	2	0	5

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	GP 0017	SPC 024	SPC 025
	MAINTENANCE		
G 387 61-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS.	1	0	2
G 388 61-33 DO YOU USE OR REFER TO ELECTRON - HOLE PAIR CREATED IN SEMICONDUCTORS.	4	6	2
G 389 61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS.	10	6	14
G 390 61-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS.	1	0	2
G 391 61-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS.	1	0	2
G 392 61-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL.	29	23	37
G 393 61-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL.	29	23	37
G 394 61-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS.	7	3	12
G 395 61-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS.	7	3	12
G 396 61-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS.	2	3	2
G 397 61-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS.	14	9	21
G 398 61-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL.	11	6	16
G 399 61-44 DO YOU USE OR REFER TO THE 10 TO 1 BACK TO FRONT RESISTANCE RATIO FOR DIODES.	72	69	74
G 400 61-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS.	1	0	2
G 401 61-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION.	67	49	79
G 402 61-47 DO YOU USE OR REFER TO THE MAXIMUM AVERAGE FORWARD CURRENT DIODE RATING.	39	23	49
G 403 61-48 DO YOU USE OR REFER TO THE PEAK RECURRENT FORWARD CURRENT DIODE RATING.	31	20	37
G 404 61-49 DO YOU USE OR REFER TO THE MAXIMUM SURGE CURRENT DIODE RATING.	35	14	49
G 405 61-50 DO YOU USE OR REFER TO THE PEAK REVERSE (INVERSE) VOLTAGE DIODE RATING.	47	31	58
G 406 62-01 DO YOU WORK WITH TRANSISTORS ON YOUR PRESENT JOB.	98	100	95
G 407 62-02 DO YOU INSPECT TRANSISTORS.	81	89	79
G 408 62-03 DO YOU REMOVE OR REPLACE TRANSISTORS.	84	91	79
G 409 62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT.	84	89	81
G 410 62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	87	91	84
G 411 62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	87	91	84
G 412 62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS.	86	89	84

MODULE 30 - TRANSISTORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 3083C 3087C

QY-TSK		6P 0017	SPC 024	SPC 025
6 913	62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION.	22	20	26
6 914	62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION.	17	14	21
6 915	62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER).	34	31	40
6 916	62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR.	16	6	23
6 917	62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS.	93	91	95
6 918	62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATIONS, SUCH AS Q1, Q2, Q3, ETC.	95	94	98
6 919	62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION.	76	66	84
6 920	62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY	39	31	44
6 921	62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE	52	43	58
6 922	62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE	28	17	35
6 923	62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES.	14	3	23
6 924	62-19 DO YOU USE OR REFER TO THE BETA TRANSISTOR GAINS.	19	6	28
6 925	62-20 DO YOU USE OR REFER TO THE ALPHA TRANSISTOR GAINS.	13	6	19
6 926	62-21 DO YOU USE OR REFER TO THE GAMMA TRANSISTOR GAINS.	8	3	12
6 927	62-22 DO YOU CALCULATE THE BETA TRANSISTOR GAINS.	4	0	5
6 928	62-23 DO YOU CALCULATE THE ALPHA TRANSISTOR GAINS.	5	3	5
6 929	62-24 DO YOU CALCULATE THE GAMMA TRANSISTOR GAINS.	1	0	0
6 930	63-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB.	87	94	84
6 931	63-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS.	72	83	67
6 932	63-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS.	65	69	67
6 933	63-04 DO YOU TROUBLESHOOT TO THE TRANSISTOR AMPLIFIER CIRCUIT LEVEL.	65	71	63
6 934	63-05 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF TRANSISTOR AMPLIFIERS.	76	80	77
6 935	63-06 DO YOU REMOVE OR REPLACE THE COMPLETE TRANSISTOR AMPLIFIERS.	57	69	49
6 936	63-07 DO YOU REMOVE OR REPLACE TRANSISTOR AMPLIFIER COMPONENT PARTS.	73	80	72
6 937	63-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN	93	34	51

MODULE 31 - AMPLIFIER PRINCIPLES

MODULE 39 - SOLID STATE WIDEBAND AMPLIFIERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 3083C 308?0

	DY-TSK	6P 0017	SPC 024	SPC 025
G 438	63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	11	11	9
G 439	63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN	41	37	44
G 440	63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	8	9	7
G 441	63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL.	37	31	42
G 442	63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	7	9	5
G 443	63-14 IN YOUR CIRCUIT ANALYSIS OF THE COMMON EMITTER, DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS (THIS	4	3	7
G 444	63-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR.	19	14	23
G 445	63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR.	5	0	7
G 446	63-17 DO YOU MEASURE VOLTAGE GAIN (COMMON EMITTER).	51	57	49
G 447	63-18 DO YOU MEASURE CURRENT GAIN (COMMON EMITTER).	24	26	26
G 448	63-19 DO YOU MEASURE POWER GAIN (COMMON EMITTER).	25	29	23
G 449	63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	11	6	12
G 450	63-21 DO YOU CALCULATE THE CURRENT GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	8	3	12
G 451	63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MULTIPLY	8	3	9
G 452	63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS	16	3	26
G 453	63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES.	4	3	5

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308XC 3083C 30870

	DY-TSK	GP 0017	SPC 029	SPC 025
G 454	63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	52	49	56
G 455	63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	46	37	51
G 456	63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	43	31	53
G 457	63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	46	37	63
G 458	63-29 DO YOU IDENIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	45	34	63
G 459	63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	39	31	44
G 460	63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE EMITTER (SWAMPING) RESISTOR	49	46	56
G 461	63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE SELF BIAS STABILIZATION FUNCTIONS.	43	34	53
G 462	63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE THERMISTOR STABILIZATION FUNCTIONS.	40	29	51
G 463	63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE FORWARD BIAS DIODE STABILIZATION	43	37	51
G 464	63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE REVERSE BIAS DIODE STABILIZATION	46	40	53
G 465	63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE DOUBLE DIODE STABILIZATION FUNCTIONS.	35	26	49
G 466	63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	63	54	72
G 467	63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	60	57	67
G 468	63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	53	49	58
G 469	63-40 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	55	54	60
G 470	63-41 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	37	26	51
G 471	63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	36	26	49
G 472	63-43 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	60	51	70

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30010 30830 30870

		BY-TSK	GP 0017	SPC 024	SPC 025	
G	473	G3-44 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	55	49	65	
G	474	G3-45 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	46	34	56	
G	475	G3-46 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	45	31	58	
G	476	G3-47 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	35	26	47	
G	477	G3-48 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	34	23	47	
G	478	G3-49 THIS QUESTION REFERS TO A TRANSISTOR AMPLIFIER IN THE COMMON COLLECTOR CONFIGURATION. DO YOU NEED TO	20	11	26	
G	479	G3-50 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS.	24	14	30	
G	480	G3-51 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS CIRCUITS.	34	26	44	
G	481	G3-52 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS CIRCUITS.	59	60	63	
G	482	G3-53 DO YOU TROUBLESHOOT OR REPAIR COMMPLEMENTARY SYMMETRY CIRCUITS .	43	37	51	
G	483	G3-54 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS CIRCUITS.	31	20	44	
G	484	G3-55 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS CIRCUITS.	58	54	65	
H	485	H1-01 DO YOU USE OR REFER TO VARACTORS.	77	66	86	
H	486	H1-02 DO YOU USE OR REFER TO TUNNEL DIODES.	65	54	77	
H	487	H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET).	80	69	93	MODULE 33 - SELECTED SOLID STATE DEVICES
H	488	H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS.	65	51	79	
H	489	H1-05 DO YOU USE OR REFER TO ZENER DIODES.	96	94	100	
H	490	H1-06 DO YOU USE OR REFER TO INTERGRATED CIRCUITS.	94	86	100	
H	491	H2-01 ON YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES.	94	94	93	
H	492	H2-02 DO YOU INSPECT POWER SUPPLIES.	81	89	79	
H	493	H2-03 DO YOU CLEAN POWER SUPPLIES.	75	89	70	MODULE 34 - SOLID STATE POWER SUPPLY RECTIFIERS AND FILTERS
H	494	H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES.	80	89	77	
H	495	H2-05 DO YOU TROUBLESHOOT TO THE POWER SUPPLY CIRCUIT.	75	80	70	
H	496	H2-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF POWER SUPPLIES.	78	80	79	
H	497	H2-07 DO YOU REMOVE OR REPLACE THE COMPLETE POWER SUPPLIES.	69	80	63	MODULE 35 - SOLID STATE POWER SUPPLY REGULATIONS
H	498	H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY PARTS.	76	77	74	
H	499	H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS.	80	74	88	
H	500	H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS.	82	80	88	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-TSK	GP 0817	SPC 029	SPC 025
M 501	M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS.	88	86	93
M 502	M2-12 DO YOU WORK WITH THREE PHASE RECTIFIERS.	43	37	51
M 503	M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE.	99	91	95
M 504	M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY.	73	69	84
M 505	M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE.	83	83	84
M 506	M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE.	77	69	81
M 507	M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE.	80	74	84
M 508	M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY.	72	63	79
M 509	M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE.	47	40	53
M 510	M2-20 DO YOU USE OR REFER TO SHAPE OF THE OUTPUT WAVEFORM.	75	69	79
M 511	M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE.	73	63	84
M 512	M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS.	72	63	81
M 513	M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS.	60	46	72
M 514	M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS.	49	37	60
M 515	M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS.	49	37	60
M 516	M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS.	57	49	63
M 517	M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS.	58	46	67
M 518	M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER.	30	49	16
M 519	M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER.	10	3	16
M 520	M3-01 DO YOU WORK WITH OSCILLATORS ON YOUR PRESENT JOB.	87	86	88
M 521	M3-02 DO YOU INSPECT OSCILLATORS.	72	80	70
M 522	M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS.	71	74	72
M 523	M3-04 DO YOU REMOVE OR REPLACE THE COMPLETE OSCILLATORS CIRCUIT.	63	74	58
M 524	M3-05 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF OSCILLATORS.	66	69	67
M 525	M3-06 DO YOU TROUBLESHOOT TO THE OSCILLATORS CIRCUIT LEVEL.	67	77	65
M 526	M3-07 DO YOU TROUBLESHOOT TO OSCILLATORS COMPONENTS.	67	71	67
M 527	M3-08 DO YOU USE OR REFER TO FEEDBACK.	75	74	79
M 528	M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD).	64	63	67
M 529	M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY.	55	40	67
M 530	M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY.	71	57	84
M 531	M3-12 DO YOU USE OR REFER TO DAMPING.	41	26	53
M 532	M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK.	65	63	70

MODULE 42 - PRINCIPLES OF OSCIL...

MODULE 43 - SOLID STATE LC ... ATORS

MODULE 44 - SOLID STATE RC ... LATORS

MODULE 46 - SOLID STATE PULSED AND BLOCKING OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30870 30830 30870

		BY-TSK	GP 0017	SPC 024	SPC 025
M	533	M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT.	23	26	21
M	534	M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING.	20	14	26
M	535	M3-16 DO YOU USE OR REFER TO UNDER DAMPING.	19	11	26
M	536	M3-17 DO YOU USE OR REFER TO OVER DAMPING.	20	11	28
M	537	M3-18 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FDD.	59	51	67
M	538	M3-19 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FDD.	53	43	63
M	539	M3-20 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.	70	57	81
M	540	M3-21 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FDD.	16	29	5
M	541	M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS.	23	9	30
M	542	M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS.	22	11	26
M	543	M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS.	29	14	37
M	544	M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS.	14	11	19
M	545	M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS.	12	3	16
M	546	M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF SINUSOIDAL OSCILLATORS.	55	66	49
I	547	I1-01 DO YOU WORK WITH MULTIVIBRATORS ON YOUR PRESENT JOB.	81	80	84
I	548	I1-02 DO YOU INSPECT WAVE SHAPING OR GENERATING CIRCUITS.	61	60	67
I	549	I1-03 DO YOU ALIGN OR ADJUST WAVE SHAPING OR GENERATING CIRCUITS.	54	51	60
I	550	I1-04 DO YOU CALIBRATE WAVE SHAPING OR GENERATING CIRCUITS.	47	43	53
I	551	I1-05 DO YOU TROUBLESHOOT TO THE WAVE SHAPING OR GENERATING CIRCUITS.	61	66	63
I	552	I1-06 DO YOU TROUBLESHOOT TO COMPONENTS WITHIN THE WAVE SHAPING OR GENERATING CIRCUITS.	60	60	65
I	553	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE SHAPING OR GENERATING CIRCUITS.	58	60	60
I	554	I1-08 DO YOU REMOVE OR REPLACE COMPONENTS OF WAVE SHAPING OR GENERATING CIRCUITS.	61	60	67
I	555	I1-09 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FDD.	43	34	51
I	556	I1-10 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FDD.	48	34	60
I	557	I1-11 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.	69	54	74
I	558	I1-12 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FDD.	11	20	5
I	559	I1-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS.	63	60	67
I	560	I1-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS.	67	63	74
I	561	I1-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS.	66	63	72
I	562	I1-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF MULTIVIBRATORS.	12	20	7

MODULE 47 - SOLID STATE MULTIVIBRATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	BY-TSK	6P 0017	SPC 029	SPC 025	
563	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS ON YOUR PRESENT JOB.	71	63	81	
564	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS.	47	31	63	MODULE 50 - SOLID STATE LIMITERS AND CLAMPERS
565	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS.	49	31	67	
566	12-04 DO YOU WORK WITH LIMITERS WITH BIAS.	37	26	47	
567	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS.	58	43	72	
568	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS.	54	34	72	
569	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITER.	12	20	7	
570	12-08 DO YOU WORK WITH DIODE CLAMPERS.	51	34	67	
571	12-09 DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	40	34	44	
572	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPER.	18	29	12	
573	13-01 FOR PURPOSES OF THIS QUESTION DO NOT CONSIDER HIGH FREQUENCY DEVICES, SUCH AS KLYSTRONS, TRAVELING WAVE	37	20	49	
574	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT.	29	17	33	
575	13-03 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING TUBE TESTERS.	23	11	26	
576	13-04 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING MULTIMETERS.	8	9	7	MODULE 56 - ELECTRON TUBE CHARACTERISTICS AND DIODES
577	13-05 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SCOPES.	10	6	12	
578	13-06 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SUBSTITUTION.	25	17	28	MODULE 57 - TRIODES
579	13-07 DO YOU USE OR REFER TO CUTOFF.	11	3	19	
580	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING.	4	3	5	
581	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING.	4	3	5	
582	13-10 DO YOU USE OR REFER TO TRANSIT TIME.	1	0	2	MODULE 58 - MULTIGRID ELECTRON TUBES
583	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING.	6	0	9	
584	13-12 DO YOU USE OR REFER TO SATURATION.	10	3	14	
585	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE.	4	0	5	
586	13-14 DO YOU COMPUTE THE ACTUAL VALUE OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES.	1	0	0	
587	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE.	28	11	37	
588	13-16 DO YOU USE OR REFER TO PLATE CURRENT.	22	9	28	
589	13-17 DO YOU USE OR REFER TO GRID VOLTAGE.	29	11	40	
590	13-18 DO YOU USE OR REFER TO GRID CURRENT.	22	9	28	
591	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE.	27	14	33	
592	13-20 DO YOU USE OR REFER TO CATHODE CURRENT.	19	11	21	
593	13-21 THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN	5	0	7	
594	13-22 DO YOU CALCULATE THE ACTUAL VALUE OF THE TRIODE AMPLIFICATION FACTOR.	1	3	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30AX0 30830 30870

		BY-TSK	GP 0017	SPC 024	SPC 025
I	595	13-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC.) AMPLIFICATION FACTORS.	1	0	0
I	596	13-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS).	4	0	5
I	597	13-25 DO YOU CALCULATE THE ACTUAL VALUE OF ELECTRON TUBE TRANSCONDUCTANCE.	0	0	0
I	598	13-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE.	1	0	2
I	599	13-27 DO YOU CALCULATE THE ACTUAL VALUE OF AC PLATE RESISTANCE.	0	0	0
I	600	13-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE.	6	3	5
I	601	13-29 IN YOUR WORK WITH ELECTRON TUBES, DO YOU USE OR REFER TO CHARACTERISTIC CURVES.	0	0	0
I	602	13-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS.	0	0	0
I	603	13-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS.	0	0	0
I	604	13-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF.	0	0	0
I	605	13-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION.	0	0	0
I	606	13-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN.	18	6	26
I	607	13-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY.	6	3	9
I	608	13-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	13	9	12
I	609	13-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	6	3	7
I	610	13-38 DO YOU USE SCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	13	6	19
I	611	13-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
I	612	13-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES, SUCH AS INPUT CAPACITANCE, ETC.	0	0	0
I	613	13-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION.	24	11	30
I	614	13-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS.	27	11	35
I	615	13-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL AND THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN	0	0	0
I	616	13-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL, SUCH AS MANUALS, ETC.	25	11	33
J	617	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS ON YOUR PRESENT JOB.	29	9	44
J	618	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT	6	3	7

MODULE 60 - ELECTRON TUBE AUDIO AMPLIFIERS

MODULE 61 - ELECTRON TUBE RF AMPLIFIERS, CATHODE FOLLOWERS, DC AMPLIFIERS AND TRIODE LIMITERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		BY-TSK	GP 0017	SPC 029	SPC 025
J	619	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS.	8	3	14
J	620	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS.	16	3	23
J	621	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS.	8	3	14
J	622	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS.	13	6	19
J	623	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF ELECTRON TUBE AMPLIFIER.	6	3	9
J	624	J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE).	17	9	23
J	625	J2-02 DO YOU WORK WITH CATHODE RAY TUBES.	39	17	56
J	626	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES.	11	9	14
J	627	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED.	14	14	16
J	628	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS.	7	9	5
J	629	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED.	7	9	7
J	630	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTRON GUN OF THE CATHODE RAY TUBE	29	6	47
J	631	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROMAGNETIC DEFLECTION SYSTEM OF	27	3	44
J	632	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROSTATIC DEFLECTION SYSTEM OF THE	19	3	33
J	633	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS.	24	6	35
J	634	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS.	20	3	30
J	635	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS.	13	0	21
J	636	J2-13 DO YOU USE OR REFER TO PERSISTENCE.	27	6	40
J	637	J2-14 DO YOU USE OR REFER TO DECAY TIMES.	20	3	30
J	638	J2-15 DO YOU USE OR REFER TO FLUORESCENCES.	12	3	16
J	639	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCES.	19	6	26
J	640	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	70	66	77
J	641	J3-02 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	58	54	63
J	642	J3-03 DO YOU PERFORM ANY TASKS ON FREQUENCY MIXERS.	59	54	66
J	643	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS.	67	46	87
J	644	J3-05 DO YOU PERFORM ANY TASKS ON REACTANCE MODULATORS.	19	17	21
J	645	J3-06 DO YOU PERFORM ANY TASKS ON MODULATED OSCILLATORS.	45	37	53
K	646	K1-01 DO YOU WORK ON AN TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	87	90	90

MODULE 59 - SPECIAL PURPOSE ELECTRON TUBES

MODULE 63 - HETERODYNING

MODULE 64 - MODULATION

MODULE 65 - DEMODULATION

PCT MBRS ANSWRG YES FOR MAINT DAPSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	MAINTENANCE 30810 GP 0017	30830 SPC 024	30870 SPC 025
K 647	K1-02 DO YOU INSPECT AM SYSTEMS.	31	17	42
K 648	K1-03 DO YOU CLEAN AM SYSTEMS.	28	17	37
K 649	K1-04 DO YOU ALIGN OR ADJUST AM SYSTEMS.	33	20	42
K 650	K1-05 DO YOU TROUBLESHOOT TO AM SYSTEMS.	31	20	42
K 651	K1-06 DO YOU TROUBLESHOOT TO AM COMPONENTS.	29	20	37
K 652	K1-07 DO YOU REMOVE OR REPLACE AM SYSTEMS.	24	17	30
K 653	K1-08 DO YOU REMOVE OR REPLACE AM COMPONENTS.	29	17	40
K 654	K1-09 DO YOU PERFORM ANY TASKS ON RF OSCILLATORS.	27	14	35
K 655	K1-10 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	31	17	40
K 656	K1-11 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.	20	11	26
K 657	K1-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	29	20	33
K 658	K1-13 DO YOU PERFORM ANY TASKS ON LOCAL OSCILLATORS.	31	23	37
K 659	K1-14 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	30	20	37
K 660	K1-15 DO YOU PERFORM ANY TASKS ON DETECTORS.	31	20	40
K 661	K1-16 DO YOU PERFORM ANY TASKS ON DON'T REMEMBER WHICH STAGE.	0	0	0
K 662	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS.	14	11	16
K 663	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS.	19	14	21
K 664	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS.	29	20	35
K 665	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS.	28	20	33
K 666	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION.	17	9	21
K 667	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION.	17	11	19
K 668	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION.	4	0	7
K 669	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE.	8	6	12
K 670	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS.	17	9	26
K 671	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS.	10	9	9
K 672	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS.	22	14	26
K 673	K1-28 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS.	25	9	40
K 674	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	67	54	77
K 675	K2-02 DO YOU INSPECT FM SYSTEMS.	59	54	65
K 676	K2-03 DO YOU CLEAN FM SYSTEMS.	53	51	58
K 677	K2-04 DO YOU ALIGN FM SYSTEMS.	54	54	58
K 678	K2-05 DO YOU TROUBLESHOOT TO FM SYSTEMS.	54	46	63
K 679	K2-06 DO YOU TROUBLESHOOT TO FM COMPONENTS.	56	49	60
K 680	K2-07 DO YOU REMOVE OR REPLACE FM SYSTEMS.	49	46	51
K 681	K2-08 DO YOU REMOVE OR REPLACE FM COMPONENTS.	57	51	60
K 682	K2-09 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.	31	20	37
K 683	K2-10 DO YOU PERFORM ANY TASKS ON FREQUENCY MULTIPLIERS.	59	54	63
K 684	K2-11 DO YOU PERFORM ANY TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS).	49	46	51

MODULE 68 - AM SYSTEMS

MODULE 69 - FM SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		DY-TSK	GP 0017	SPC 024	SPC 025	
K	685	K2-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	51	43	56	
K	686	K2-13 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	54	46	60	
K	687	K2-14 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	54	43	63	
K	688	K2-15 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	53	43	60	
K	689	K2-16 DO YOU PERFORM ANY TASKS ON LIMITERS.	46	31	63	
K	690	K2-17 DO YOU PERFORM ANY TASKS ON FREQUENCY DISCRIMINATORS.	43	26	56	
K	691	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS.	49	46	51	
K	692	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS.	63	46	74	
K	693	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS.	61	54	67	
K	694	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS.	61	49	72	
K	695	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS.	59	54	65	
K	696	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS.	57	49	63	MODULE 51 - NUMBERING SYSTEMS AND MATHEMATICAL COMPUTATIONS
K	697	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS.	60	49	70	
K	698	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS.	60	60	60	
K	699	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM.	51	40	63	
K	700	K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD.	41	31	51	
K	701	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD.	42	29	56	
K	702	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM.	47	46	51	
L	703	L1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS.	81	77	88	
L	704	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	51	54	51	
L	705	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	49	54	49	MODULE 52 - LOGIC FUNCTIONS AND BOOLEAN EQUATIONS
L	706	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	49	54	49	
L	707	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES.	48	51	49	
L	708	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	77	80	79	
L	709	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	77	80	79	
L	710	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	77	80	79	
L	711	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS.	76	77	79	
L	712	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	86	83	93	
L	713	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES.	86	83	93	
L	714	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES.	86	83	93	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-TSK	GP 0017	SPC 029	SPC 025
L 715	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES.	84	83	93
L 716	L2-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS OR LOGIC	69	57	72
L 717	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS.	28	17	35
L 718	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	11	6	16
L 719	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS.	31	17	44
L 720	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES.	54	46	66
L 721	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS.	29	11	44
L 722	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA.	34	14	51
L 723	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES.	39	26	49
L 724	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	16	14	19
L 725	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE.	55	43	67
L 726	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS.	40	31	49
L 727	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS.	48	37	58
L 728	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS.	60	54	67
L 729	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS.	65	63	67
L 730	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS.	63	57	67
L 731	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS.	65	57	72
L 732	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS.	65	57	72
L 733	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS.	66	60	72
L 734	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES.	63	51	72
L 735	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS.	54	46	60
L 736	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS.	53	43	60
L 737	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS.	57	54	60
L 738	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS.	54	54	56
L 739	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS.	51	46	56

MODULE 53 - LOGIC CIRCUITS AND DIAGR

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	BY-TSK	GP 0017	SPC 029	SPC 025
L 740	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS.	45	40	49
L 741	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB.	92	91	95
L 742	L3-02 DO YOU USE OR REFER TO THE TERM UP-COUNTER.	83	77	91
L 743	L3-03 DO YOU USE OR REFER TO THE TERM DOWN-COUNTER.	77	69	86
L 744	L3-04 DO YOU USE OR REFER TO THE TERM SERIAL COUNTER.	81	71	91
L 745	L3-05 DO YOU USE OR REFER TO THE TERM PARALLEL COUNTER.	70	57	81
L 746	L3-06 DO YOU USE OR REFER TO THE TERM RING COUNTER.	65	57	77
L 747	L3-07 DO YOU USE OR REFER TO THE TERM DECADE COUNTER.	75	69	84
L 748	L3-08 DO YOU USE OR REFER TO THE TERM COUNT DETECT CIRCUIT.	63	51	77
L 749	L3-09 DO YOU USE OR REFER TO THE TERM DOWN CLOCK.	78	71	86
L 750	L3-10 DO YOU USE OR REFER TO THE TERM UP CLOCK.	80	77	84
L 751	L3-11 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTER HAVING COMPLEMENTED FLIP-FLOPS.	59	43	72
L 752	L3-12 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTER HAVING COMPLEMENTING	61	46	74
L 753	L3-13 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTER.	65	57	74
L 754	L3-14 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.	53	46	63
L 755	L3-15 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE	58	46	70
L 756	L3-16 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTER.	76	66	86
L 757	L3-17 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.	39	23	56
L 758	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR UP-COUNTER HAVING COMPLEMENTED FLIP-	42	31	53
L 759	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP- OR DOWN-COUNTER HAVING	40	31	49
L 760	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP-COUNTER FEEDING A PARALLEL	47	43	53
L 761	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR OTHER TYPE OF COUNTER.	24	11	37
L 762	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS.	27	14	37
L 763	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN A RING COUNTER FOR SPECIFIC INPUT PULSES.	42	37	49
L 764	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN A COUNT DETECT CIRCUIT TO INDICATE A	51	34	66

MODULE 54 - COUNTER, REGISTERS, AND STORAGE DEVICES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

DY-TSK	GP 0017	SPC 024	SPC 025
M 765 M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS.	59	49	72
M 766 M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS.	34	17	51
M 767 M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK.	33	34	33
M 768 M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK.	28	26	30
M 769 M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS.	31	26	37
M 770 M1-06 DO YOU USE OR REFER TO RISE TIME.	59	49	72
M 771 M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME.	49	43	58
M 772 M1-08 DO YOU USE OR REFER TO SWEEP TIME.	52	37	67
M 773 M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS.	30	23	37
M 774 M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS.	28	26	33
M 775 M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS.	34	26	42
M 776 M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS.	33	23	42
M 777 M2-01 DO YOU USE SIGNAL GENERATORS ON YOUR PRESENT JOB.	84	83	88
M 778 M2-02 DO YOU PERFORM OPERATIONAL OR PERFORMANCE CHECKS WHILE USING SIGNAL GENERATORS.	82	80	86
M 779 M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING OR CALIBRATING WHILE USING SIGNAL	67	66	72
M 780 M2-04 DO YOU PERFORM TROUBLESHOOTING TO AN ASSEMBLY OR SUB-ASSEMBLY WHILE USING SIGNAL GENERATORS.	58	51	65
M 781 M2-05 DO YOU PERFORM TROUBLESHOOTING TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS.	53	43	67
M 782 M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS.	53	49	58
M 783 M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE OR SPIKE.	54	46	60
M 784 M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MHZ.	61	60	65
M 785 M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MHZ.	55	51	60
M 786 M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS.	47	37	58
M 787 M3-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	75	71	79
M 788 M3-02 DO YOU INSPECT MOTORS.	70	71	72
M 789 M3-03 DO YOU CLEAN OR LUBRICATE MOTORS.	61	69	60
M 790 M3-04 DO YOU OPERATE MOTORS.	53	57	53
M 791 M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS.	60	60	65
M 792 M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS.	42	46	42
M 793 M3-07 DO YOU TROUBLESHOOT MOTORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	31	34	33
M 794 M3-08 DO YOU TROUBLESHOOT DOWN TO MOTOR COMPONENT PARTS.	37	40	37

MODULE 19 - MOTORS AND GENERATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		BY-TSK	GP 0017	SPC 024	SPC 025
M	795	M3-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR FIELD COILS.	16	19	16
M	796	M3-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ARMATURES.	18	19	21
M	797	M3-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ROTORS.	29	20	28
M	798	M3-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR BRUSHES.	47	51	47
M	799	M3-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR SLIP RINGS.	22	17	26
M	800	M3-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR COMMUTATORS.	22	23	21
M	801	M3-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR POLE PIECES.	14	14	14
M	802	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR.	7	3	9
M	803	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR.	18	14	23
M	804	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN A MOTOR.	6	3	9
M	805	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS.	37	31	42
M	806	M3-20 DO YOU WORK WITH INDUCTION MOTORS.	34	31	35
M	807	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS.	19	17	19
M	808	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS.	27	26	30
M	809	M3-23 DO YOU INSPECT GENERATORS.	27	23	30
M	810	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS.	20	20	23
M	811	M3-25 DO YOU OPERATE GENERATORS.	19	17	23
M	812	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS.	11	9	14
M	813	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS.	8	6	12
M	814	M3-28 DO YOU TROUBLESHOOT GENERATORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	5	9	2
M	815	M3-29 DO YOU TROUBLESHOOT DOWN TO GENERATOR COMPONENT PARTS.	10	6	14
M	816	M1-01 DO YOU WORK WITH METERS ON YOUR PRESENT JOB.	81	83	86
M	817	M1-02 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER PERMANENT MAGNETS.	20	6	33
M	818	M1-03 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER MOVING COILS.	24	9	37
M	819	M1-04 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER SPIRAL SPRINGS.	19	6	30
M	820	M1-05 DO YOU READ METER SCALES.	76	80	79
M	821	M1-06 DO YOU EXTEND THE RANGE OF AMMETERS.	39	31	49
M	822	M1-07 DO YOU ZERO OHMMETERS.	77	83	79
M	823	M1-08 DO YOU ZERO AMMETERS.	51	51	53
M	824	M1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS.	41	34	51

MODULE 18 - METER MOVEMENTS AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	MAINTENANCE 306X0 4P 0017	30630 SPC 029	30870 SPC 025	
N	826	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (IT IS EXPRESSED IN UNITS OF OHMS PER VOLT).	41	34	49	
N	826	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB.	14	11	16	
N	827	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	8	9	9	
N	828	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	6	6	7	
N	829	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	6	6	7	MODULE 40 - SATURABLE REACTORS MAGNETIC AMPLIFIER
N	830	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	8	6	12	
N	831	N2-06 DO YOU REMOVE OR REPLACE COMPLETE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	8	6	12	
N	832	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS COMPONENTS.	8	9	9	
N	833	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS.	6	6	7	
N	834	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD	5	3	5	
N	835	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD RESISTOR OF A SINGLE WINDING SATURABLE	4	0	7	
N	836	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	7	3	9	
N	837	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN A SATURABLE REACTOR.	1	0	0	
N	838	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN A SATURABLE REACTOR.	4	3	2	
N	839	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN A SATURABLE REACTOR.	1	0	0	
N	840	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN A SATURABLE REACTOR.	5	0	7	
N	841	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS.	6	0	9	
N	842	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS ON YOUR PRESENT JOB.	66	69	70	
N	843	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS.	33	26	40	
N	844	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW).	58	57	63	MODULE 48 - SOLID STATE SAWTOOTH GENERATORS
N	845	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	47	51	47	
N	846	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	48	51	49	MODULE 49 - SOLID STATE TRAPEZOIDAL GENERATORS
N	847	N3-06 DO YOU USE OR REFER TO DIFFERENTIAL ON CIRCUITS.	52	46	60	
N	848	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS.	57	51	65	
N	849	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT.	33	23	42	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 3087C

		BY-TSK	GP 0017	SPC 029	SPC 025
N	860	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME	25	14	35
N	861	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS.	69	51	70
N	862	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS.	39	29	49
O	863	01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS ON YOUR PRESENT JOB.	2	3	2
O	864	01-02 DO YOU INSPECT SSB SYSTEMS.	1	3	0
O	865	01-03 DO YOU CLEAN SSB SYSTEMS.	1	3	0
O	866	01-04 DO YOU ALIGN SSB SYSTEMS.	1	3	0
O	867	01-05 DO YOU TROUBLESHOOT TO SSB SYSTEMS.	1	3	0
O	868	01-06 DO YOU TROUBLESHOOT TO SSB COMPONENTS.	1	3	0
O	869	01-07 DO YOU REMOVE OR REPLACE SSB SYSTEMS.	1	3	0
O	870	01-08 DO YOU REMOVE OR REPLACE SSB COMPONENTS.	1	3	0
O	871	01-09 DO YOU PERFORM ANY TASKS ON SSB AUDIO AMPLIFIERS.	1	3	0
O	872	01-10 DO YOU PERFORM ANY TASKS ON SSB BALANCED MODULATORS.	1	3	0
O	873	01-11 DO YOU PERFORM ANY TASKS ON SSB CARRIER OSCILLATORS.	0	0	0
O	874	01-12 DO YOU PERFORM ANY TASKS ON SSB LC FILTERS.	1	3	0
O	875	01-13 DO YOU PERFORM ANY TASKS ON SSB CRYSTAL FILTERS.	1	3	0
O	876	01-14 DO YOU PERFORM ANY TASKS ON SSB MECHANICAL FILTERS.	0	0	0
O	877	01-15 DO YOU PERFORM ANY TASKS ON SSB OSCILLATORS.	1	3	0
O	878	01-16 DO YOU PERFORM ANY TASKS ON SSB MIXERS.	1	3	0
O	879	01-17 DO YOU PERFORM ANY TASKS ON SSB DRIVERS.	1	3	0
O	880	01-18 DO YOU PERFORM ANY TASKS ON SSB POWER AMPLIFIERS.	1	3	0
O	881	01-19 DO YOU PERFORM ANY TASKS ON SSB RF AMPLIFIERS.	1	3	0
O	882	01-20 DO YOU PERFORM ANY TASKS ON SSB FREQUENCY CONVERTERS.	1	3	0
O	883	01-21 DO YOU PERFORM ANY TASKS ON SSB IF AMPLIFIERS.	1	3	0
O	884	01-22 DO YOU PERFORM ANY TASKS ON SSB DEMODULATORS.	1	3	0
O	885	01-23 DO YOU PERFORM ANY TASKS ON SSB DON'T REMEMBER WHICH SYSTEM STAGES.	0	0	0
O	886	01-24 DO YOU USE OR REFER TO SELECTIVE FADING.	0	0	0
O	887	01-25 DO YOU USE OR REFER TO PEAK POWER.	0	0	0
O	888	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY.	1	3	0
O	889	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS.	0	0	0
O	890	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS.	1	3	0
O	891	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS.	2	0	5
O	892	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS.	2	0	5
O	893	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS ON YOUR PRESENT JOB.	60	66	56

MODULE 70 - SINGLE SIDEBAND SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

		DY-TSK	GP 0017	SPC 029	SPC 025
0	884	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS.	49	57	44
0	885	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS.	48	57	42
0	886	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS.	49	54	47
0	887	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS.	46	43	49
0	888	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS.	48	46	51
0	889	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS.	40	37	44
0	890	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS.	47	43	51
0	891	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS.	18	26	14
0	892	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS.	10	9	12
0	893	02-11 DO YOU WORK ON PULSE POSITION MODULATION (PPM) SYSTEMS.	10	3	16
0	894	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS.	56	40	56
0	895	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS.	1	0	2
0	896	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF PULSE MODULATION SYSTEM.	4	6	2
0	897	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES.	46	49	44
0	898	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKE AND CHARGING DIODES.	16	9	21
0	899	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS.	30	26	35
0	900	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS.	27	23	30
0	901	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS.	5	3	7
0	902	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS.	18	17	19
0	903	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES.	6	3	9
0	904	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS.	25	23	28
0	905	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS.	30	29	33
0	906	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS.	27	23	30
0	907	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS.	29	23	35
0	908	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS.	19	9	28
0	909	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS.	11	3	19
0	910	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH STAGE.	8	11	5

MODULE 71 - PULSE MODULATION SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-TSK	6P 0017	SPC 029	SPC 035
0 911	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	34	31	35
0 912	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	34	29	37
0 913	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW).	92	90	94
0 914	02-32 DO YOU USE OR REFER TO PULSE SHAPE.	36	40	33
0 915	02-33 DO YOU USE OR REFER TO PEAK POWER.	18	20	16
0 916	02-34 DO YOU USE OR REFER TO AVERAGE POWER.	20	20	21
0 917	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	14	9	16
0 918	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	25	23	28
0 919	02-37 DO YOU CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEM.	7	9	5
0 920	02-38 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS.	5	6	2
0 921	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS.	23	20	26
0 922	02-40 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS.	41	40	42
0 923	03-01 DO YOU WORK WITH ANTENNAS ON YOUR PRESENT JOB.	67	57	74
0 924	03-02 DO YOU INSPECT ANTENNAS.	55	57	53
0 925	03-03 DO YOU CLEAN ANTENNAS.	49	54	47
0 926	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS.	19	20	21
0 927	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS.	33	31	37
0 928	03-06 DO YOU TROUBLESHOOT TO ANTENNA.	36	34	40
0 929	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS.	46	40	56
0 930	03-08 DO YOU REMOVE OR INSTALL ANTENNAS.	14	3	26
0 931	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OR ANTENNAS.	36	34	42
0 932	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E (ELECTRIC FIELD) LINES.	11	6	14
0 933	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H (MAGNETIC FIELD) LINES.	11	6	14
0 934	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR	6	0	9
0 935	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	2	0	5
0 936	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS	2	0	5
0 937	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS	2	0	5
0 938	03-16 DO YOU WORK WITH HERTZ ANTENNAS.	2	0	5
0 939	03-17 DO YOU WORK WITH MARCONI ANTENNAS.	6	0	12

MODULE 67 - ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30870 30830 30870

	DY-TSK	GP 0017	SPC 029	SPC 028
O 940	03-18 DO YOU WORK WITH BROADSIDE ARRAYS.	1	0	2
O 941	03-19 DO YOU WORK WITH END-FIRE ARRAYS.	4	3	2
O 942	03-20 DO YOU WORK WITH CARDIOID ARRAYS.	0	0	0
O 943	03-21 DO YOU WORK WITH COLLINEAR ARRAYS.	0	0	0
O 944	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH	2	0	2
O 945	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS.	1	0	2
O 946	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS.	6	6	5
O 947	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS.	1	0	2
O 948	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E AND MAGNETIC (H) COMPONENTS IN THE ANTENNA	2	3	0
O 949	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA	1	0	0
O 950	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED.	6	6	7
O 951	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED.	36	9	58
O 952	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON.	5	0	9
O 953	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	0	0	0
O 954	03-32 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS.	16	6	26
O 955	03-33 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS.	9	6	12
O 956	03-34 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS.	19	11	28
O 957	03-35 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN DON'T REMEMBER.	8	14	2
O 958	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS.	39	31	42
O 959	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS.	8	6	12
O 960	03-38 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF ANTENNAS.	4	3	2
O 961	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS.	14	14	14
P 962	P1-01 TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS	59	49	72
P 963	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I R LOSS IN TRANSMISSION LINES.	7	0	14

MODULE 66 - TRANSMISSION LINES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	DY-TSK	GP 0017	SPC 029	SPC 025
P 964	P1-01 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES.	6	6	7
P 965	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES.	7	6	9
P 966	P1-05 DO YOU REFER TO OR USE DIELECTRIC LOSS IN TRANSMISSION LINES.	4	0	7
P 967	P1-06 DO YOU REFER TO OR USE LEAKAGE LOSSES IN TRANSMISSION LINES.	12	6	19
P 968	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES.	28	11	44
P 969	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES.	17	11	23
P 970	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES.	7	3	12
P 971	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE.	58	49	70
P 972	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE.	41	26	56
P 973	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES.	46	46	49
P 974	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	2	0	5
P 975	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINE TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.	16	14	16
P 976	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS.	33	26	40
P 977	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	25	29	23
P 978	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	4	6	2
P 979	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER-	0	0	0
P 980	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOAD USING MATCHING TRANSFORMERS.	19	14	26
P 981	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING DELTA MATCHING.	2	3	2
P 982	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR A PARTICULAR JOB WITHOUT REFERRING TO TECHNICAL	6	6	7
P 983	P1-22 DO YOU REFER TO OR USE THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES.	12	3	19
P 984	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES.	1	0	2
P 985	P1-24 DO YOU REFER TO OR USE THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES.	4	3	5
P 986	P1-25 DO YOU REFER TO OR USE THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES.	0	0	0
P 987	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES.	2	3	5
P 988	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF A PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES.	2	0	5

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	MAINTENANCE 308X0 GP 001/	30830 SPC 029	30870 SPC 026
P 989	P1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE PHYSICAL LENGTH OF A TRANSMISSION LINE REMAINS	0	0	0
P 990	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES.	8	3	14
P 991	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES.	4	3	5
P 992	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING STUB MATCHING.	5	0	9
P 993	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS ON YOUR PRESENT JOB.	40	46	40
P 994	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS.	37	49	33
P 995	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS.	31	40	28
P 996	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS.	2	3	2
P 997	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS.	1	0	2
P 998	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS.	22	34	14
P 999	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS.	14	26	7
P1000	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS.	35	40	35
P1001	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDE.	25	37	19
P1002	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS.	35	46	30
P1003	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS.	22	26	21
P1004	P2-12 DO YOU REMOVE OR INSTALL E BENDS.	16	26	9
P1005	P2-13 DO YOU REMOVE OR INSTALL H BENDS.	16	26	9
P1006	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS.	10	17	5
P1007	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS.	10	14	7
P1008	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS.	16	26	9
P1009	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS.	29	29	33
P1010	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS.	22	23	23
P1011	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES.	2	0	5
P1012	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES.	2	0	5
P1013	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES.	13	14	14
P1014	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES.	5	9	2
P1015	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES.	2	3	2
P1016	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS.	1	3	0
P1017	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS.	1	3	0
P1018	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS.	1	3	0
P1019	P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7	1	0	2
P1020	P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH	1	0	2

MODULE 74 - WAVEGUIDES AND CAVITY RESONATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	MAINTENANCE 308X0 6P 0017	30830 SPC 029	30870 SPC 025
P1021	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OFF.	1	3	9
P1022	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION.	1	0	2
P1023	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	1	0	2
P1024	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" AND "H" LINES IN WAVEGUIDES.	1	0	2
P1025	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1026	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1027	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	12	17	9
P1028	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	14	9	21
P1029	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	6	6	7
P1030	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	20	17	26
P1031	P2-39 ARE DON'T REMEMBER WHICH ENERGY COUPLING DEVICE USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	8	17	2
P1032	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT	0	0	0
P1033	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0
P1034	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERATURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT	1	0	2
P1035	P2-43 ARE CHOKE JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	18	20	19
P1036	P2-44 ARE ROTATING JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	18	29	12
P1037	P2-45 ARE DON'T REMEMBER WHICH KIND OF JOINT USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	5	6	5
P1038	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING.	12	9	16
P1039	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING.	5	3	7
P1040	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING.	5	3	7
P1041	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER NOW.	11	17	7
P1042	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS.	20	20	23

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
30BX0 30B3X 30B7X

	DY-TSK	GP 0017	SPC 029	SPC 025
P1043	P3-01 ON YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	54	51	56
P1044	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE.	7	9	7
P1045	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME.	2	3	2
P1046	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE.	4	3	5
P1047	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY.	10	9	9
P1048	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION.	11	0	21
P1049	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING.	11	3	19
P1050	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS.	4	3	5
P1051	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS.	20	37	7
P1052	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS.	19	11	26
P1053	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT).	25	40	14
P1054	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS.	30	23	37
P1055	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS.	16	14	14
P1056	P3-14 DO YOU WORK WITH MAGNETRONS.	6	9	5
P1057	P3-15 DO YOU INSPECT TWT OR KLYSTRONS.	34	43	30
P1058	P3-16 DO YOU CLEAN TWT OR KLYSTRONS.	28	34	26
P1059	P3-17 DO YOU TUNE TWT OR KLYSTRONS ELECTRICALLY.	27	31	26
P1060	P3-18 DO YOU TUNE TWT OR KLYSTRONS MECHANICALLY.	23	23	26
P1061	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF TWT OR KLYSTRONS.	33	43	28
P1062	P3-20 DO YOU TROUBLESHOOT TWT OR KLYSTRONS.	33	40	30
P1063	P3-21 DO YOU REMOVE OR REPLACE COMPLETE TWT OR KLYSTRON ASSEMBLY.	31	37	30
P1064	P3-22 DO YOU REMOVE OR REPLACE TWT OR KLYSTRON COMPONENTS.	25	34	21
P1065	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS.	45	49	47
P1066	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS.	40	43	42
P1067	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS.	43	46	47
P1068	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS.	46	46	47
P1069	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS.	46	46	49
P1070	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS.	43	46	44
P1071	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIERS.	42	49	42
P1072	P3-30 DO YOU REMOVE OR REPLACE COMPONENTS OF PARAMETRIC AMPLIFIERS.	41	40	44
P1073	P3-31 DO YOU INSPECT MAGNETRONS.	2	6	0
P1074	P3-32 DO YOU CLEAN MAGNETRONS.	2	6	0
P1075	P3-33 DO YOU ADJUST MAGNETRONS.	2	6	0
P1076	P3-34 DO YOU TUNE MAGNETRONS.	2	6	0
P1077	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS.	2	6	0

MODULE 75 - MICROWAVE AMPLIFIERS AND OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 3087C

	BY-TSK	GP 0017	SPC 029	SPC 025
P1078	P3-36 DO YOU TROUBLESHOOT MAGNETRONS.	2	6	0
P1079	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON ASSEMBLY.	2	6	0
P1080	P3-38 DO YOU REMOVE OR REPLACE COMPONENTS OF MAGNETRONS.	2	6	0
P1081	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON COLLECTOR PLATES.	2	3	2
P1082	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER CAVITIES.	2	3	2
P1083	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER GRIDS.	2	3	2
P1084	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON FEEDBACK LOOPS.	2	3	2
P1085	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON DRIFT SPACES.	2	3	2
P1086	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER GRIDS.	2	3	2
P1087	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER CAVITIES.	2	3	2
P1088	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS.	2	3	2
P1089	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES.	2	3	2
P1090	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES.	11	3	16
P1091	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS.	10	3	14
P1092	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS.	6	3	7
P1093	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES.	11	3	16
P1094	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS.	6	3	7
P1095	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS.	10	6	12
P1096	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES.	10	6	12
P1097	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS.	12	9	14
P1098	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT FILAMENTS.	14	20	12
P1099	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT CATHODES.	13	20	9
P1100	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MODULATOR GRIDS.	11	14	9
P1101	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ANODES.	13	20	9
P1102	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT HELIXES.	13	20	9

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

QV-TSK		GP 0017	SPC 029	SPC 035
P1103	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT COLLECTORS.	13	20	9
P1104	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MAGNETS.	6	11	2
P1105	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ATTENUATORS.	11	17	7
P1106	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS.	24	17	30
P1107	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES.	17	11	21
P1108	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES.	14	6	23
P1109	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES.	28	20	35
P1110	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS.	13	9	16
P1111	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES.	4	3	5
P1112	P3-70 DO YOU PERFORM TASKS ON MAGNETRON ANODES.	0	0	0
P1113	P3-71 DO YOU PERFORM TASKS ON MAGNETRON ANODE COOLING FINS.	0	0	0
P1114	P3-72 DO YOU PERFORM TASKS ON MAGNETRON COUPLING LOOPS.	0	0	0
P1115	P3-73 DO YOU PERFORM TASKS ON MAGNETRON HEATER LEADS.	0	0	0
P1116	P3-74 DO YOU PERFORM TASKS ON MAGNETRON RESONANT CAVITIES.	0	0	0
P1117	P3-75 DO YOU PERFORM TASKS ON MAGNETRON CATHODES.	0	0	0
P1118	P3-76 DO YOU PERFORM TASKS ON MAGNETRON MAGNETS.	0	0	0
Q1119	Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS.	83	80	88
Q1120	Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS.	86	83	91
Q1121	Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOL OF SHIFT REGISTERS.	78	74	84
Q1122	Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOL OF STORAGE REGISTERS.	78	74	84
Q1123	Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS.	83	80	91
Q1124	Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE REGISTER.	63	49	77
Q1125	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	67	60	77
Q1126	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB.	78	77	86
Q1127	Q2-02 DO YOU USE OR REFER TO DELAY LINES.	37	20	51
Q1128	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES.	45	31	58
Q1129	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS.	13	3	23
Q1130	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES.	54	40	70
Q1131	Q2-06 DO YOU USE OR REFER TO ACCESS TIMES OR SPEED OF MEMORY SYSTEMS.	39	26	51

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	BY-TSK	GP 0017	SPC 024	SPC 025
Q1132	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS.	63	40	86
Q1133	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS.	25	17	33
Q1134	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES.	53	26	92
Q1135	Q3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DIGITAL-TO-ANALOG (D\A) CONVERTERS, ANALOG-TO-DIGITAL (A\D)	75	66	86
Q1136	Q3-02 DO YOU COMPUTE THE OUTPUT VOLTAGE OR AN ELECTRO MECHANICAL DIGITAL-TO-ANALOG (D\A) CONVERTER FOR A	14	17	14
Q1137	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN A ELECTROMECHANICAL DIGITAL-TO-ANALOG (D\A)	7	0	14
Q1138	Q3-04 DO YOU COMPUTE THE ANALOG VOLTAGE FOR A GIVEN BINARY COUNT IN ELECTRONIC DIGITAL-TO-ANALOG (D\A)	19	11	26
Q1139	Q3-05 DO YOU PERFORM ANY TASKS ON THE SAMPLE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	18	14	21
Q1140	Q3-06 DO YOU PERFORM ANY TASKS ON THE HOLD FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	18	14	21
Q1141	Q3-07 DO YOU PERFORM ANY TASKS ON THE COMPARE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	20	14	26
Q1142	Q3-08 DO YOU PERFORM ANY TASKS ON THE DIGITIZE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	20	14	26
Q1143	Q3-09 DO YOU PERFORM ANY TASKS ON THE DON'T REMEMBER WHICH FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D)	14	17	14
Q1144	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A\D CONVERTERS.	22	14	28
Q1145	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A\D CONVERTERS.	20	14	26
Q1146	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A\D CONVERTERS.	23	17	30
Q1147	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A\D CONVERTERS.	29	23	35
Q1148	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A\D) CONVERTERS.	11	9	14
R1149	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY ON YOUR PRESENT JOB.	2	0	5
R1150	R2-01 ON YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS.	60	49	58

MODULE 55 - DIGITAL/ANALOG CONVERTERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

DY-TSK		GP 0017	SPC 024	SPC 025
R1151	R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS.	56	69	49
R1152	R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS.	53	57	53
R1153	R3-01 ON YOUR PRESENT JOB DO YOU FABRICATE MULTI-CONDUCTOR CABLES.	93	23	56
R1154	R3-02 DO YOU FABRICATE COAXIAL CABLES.	59	49	65
S1155	S1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS.	67	57	77
S1156	S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OF NIXIE LIGHT DECODER SYSTEMS.	61	54	70
S1157	S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA.	16	6	23
S1158	S2-01 DO YOU WORK WITH PHOTO TUBES ON YOUR PRESENT JOB.	96	43	53
S1159	S3-01 ON YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS.	12	9	14
S1160	S3-02 DO YOU MEASURE EXCITATION FREQUENCY OF CHOPPER COILS.	5	6	2
S1161	S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	1	0	2
S1162	S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCY OF CHOPPER COILS.	2	0	2
S1163	S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	1	0	2
S1164	S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	8	3	12
S1165	S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	8	6	9
S1166	S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	10	6	12
S1167	S3-09 DO YOU USE COMPARISON IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	7	3	9
T1168	T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS.	12	0	23
T1169	T1-02 DO YOU INSPECT INFRARED SYSTEMS.	5	0	9
T1170	T1-03 DO YOU CLEAN INFRARED SYSTEMS.	4	0	7
T1171	T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS.	4	0	7
T1172	T1-05 DO YOU OPERATE INFRARED SYSTEMS.	5	0	9
T1173	T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS.	4	0	7
T1174	T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	4	0	7
T1175	T1-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF INFRARED SYSTEMS.	5	0	9
T1176	T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	4	0	7
T1177	T1-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF INFRARED SYSTEMS.	4	0	7

MODULE 78 - FABIRCATE MULTI-CONDUCTOR AND COAXIAL CABLES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

DY-TSK	GP DD17	SPC 024	SPC 025
T1178 T1-11 DO YOU USE OR REFER TO FAR REGION.	0	0	0
T1179 T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION.	2	0	5
T1180 T1-13 DO YOU USE OR REFER TO NEAR REGION.	4	0	7
T1181 T1-14 DO YOU USE OR REFER TO MICRON(M).	7	0	14
T1182 T1-15 DO YOU USE OR REFER TO GRAY BODIES.	4	0	7
T1183 T1-16 DO YOU USE OR REFER TO BLACK BODIES.	5	0	9
T1184 T1-17 DO YOU USE OR REFER TO ABSORPTION.	0	0	0
T1185 T1-18 DO YOU USE OR REFER TO SCATTERING.	2	0	5
T1186 T1-19 DO YOU USE OR REFER TO ABSOLUTE ZERO.	4	0	7
T1187 T1-20 DO YOU PERFORM TASKS ON BLITZ.	0	0	0
T1188 T1-21 DO YOU PERFORM TASKS ON TARGET BUTTONS.	0	0	0
T1189 T1-22 DO YOU PERFORM TASKS ON ERECTOR LENSES.	0	0	0
T1190 T1-23 DO YOU PERFORM TASKS ON OCULAR LENSES.	0	0	0
T1191 T1-24 DO YOU PERFORM TASKS ON CORRECTION LENSES.	1	0	2
T1192 T1-25 DO YOU PERFORM TASKS ON FILTERS.	2	0	5
T1193 T1-26 DO YOU PERFORM TASKS ON SPHERICAL MIRRORS.	2	0	5
T1194 T1-27 DO YOU PERFORM TASKS ON PLANE MIRRORS.	1	0	2
T1195 T2-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS.	0	0	0
T1196 T2-02 DO YOU INSPECT LASERS.	0	0	0
T1197 T2-03 DO YOU CLEAN LASERS.	0	0	0
T1198 T2-04 DO YOU ADJUST OR CALIBRATE LASERS.	0	0	0
T1199 T2-05 DO YOU OPERATE LASERS.	0	0	0
T1200 T2-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASERS.	0	0	0
T1201 T2-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASERS.	0	0	0
T1202 T2-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF LASERS.	0	0	0
T1203 T2-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASERS.	0	0	0
T1204 T2-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASERS.	0	0	0
T1205 T2-11 DO YOU USE OR REFER TO ANGSTROMS (A).	0	0	0
T1206 T2-12 DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS.	0	0	0
T1207 T2-13 DO YOU USE OR REFER TO GROUND STATE.	0	0	0
T1208 T2-14 DO YOU USE OR REFER TO EXCITED STATE.	0	0	0
T1209 T2-15 DO YOU USE OR REFER TO PACKET OF RADIATION.	0	0	0
T1210 T2-16 DO YOU USE OR REFER TO PHOTONS.	0	0	0
T1211 T2-17 DO YOU USE OR REFER TO SPONTANEOUS EMISSION.	0	0	0
T1212 T2-18 DO YOU USE OR REFER TO STIMULATED EMISSION.	0	0	0
T1213 T2-19 DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE.	0	0	0
T1214 T2-20 DO YOU USE OR REFER TO INVERSION LEVEL.	0	0	0
T1215 T2-21 DO YOU USE OR REFER TO MONOCHROMATIC.	0	0	0
T1216 T2-22 DO YOU WORK WITH ACTIVE MATERIALS.	0	0	0
T1217 T2-23 DO YOU WORK WITH PUMPING SOURCE.	0	0	0
T1218 T2-24 DO YOU WORK WITH FULL SILVERED (100_ REFLECTIVE) MIRRORS.	0	0	0
T1219 T2-25 DO YOU WORK WITH HALF SILVERED (92_ REFLECTIVE) MIRRORS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MAINTENANCE
308X0 30830 30870

	BY-TSK	GP 0017	SPC 029	SPC 025
T1220	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES.	0	0	0
T1221	T2-27 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH RUBY.	0	0	0
T1222	T2-28 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0
T1223	T2-29 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-XENON.	0	0	0
T1224	T2-30 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH XENON.	0	0	0
T1225	T2-31 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH CESIUM-HELIUM.	1	0	2
T1226	T2-32 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0
T1227	T2-33 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH NEODYMIUM IN GLASS.	0	0	0
T1228	T2-34 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH GALLIUM ARSENIDE.	1	0	2
T1229	T3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE	11	11	9
T1230	T3-02 DO YOU INSPECT DVST OR MMST.	6	9	2
T1231	T3-03 DO YOU CLEAN DVST OR MMST.	4	6	2
T1232	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST.	2	3	2
T1233	T3-05 DO YOU OPERATE (OPERATE A SYSTEM THAT CONTAINS A DVST OR MMST).	6	6	7
T1234	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS.	5	6	5
T1235	T3-07 DO YOU REMOVE OR REPLACE THE DVST OR MMST TUBE FROM ITS MAJOR ASSEMBLY OR UNIT (YOU ACTUALLY REMOVE	2	6	0
T1236	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF DVST.	4	0	7
T1237	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF MMST.	2	0	5
T1238	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS.	2	0	2
T1239	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS.	2	0	2
T1240	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS.	0	0	0
T1241	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS.	2	0	3
T1242	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS.	2	0	2
U1243	U1-01 ON YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS.	33	37	30
U1244	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS.	23	17	28
U1245	U1-03 DO YOU USE OR REFER TO PROGRAMS.	25	20	30
U1246	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS.	14	6	21
U1247	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS.	12	6	16
U1248	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS.	2	0	5
U1249	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS.	24	17	30
U1250	U1-08 DO YOU USE OR REFER TO TIME-SHARING.	8	3	12

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		MAINTENANCE 308X0	30830	30870
	DY-TSA	GP 0017	SPC 029	SPC 025
U1251	U1-09 DO YOU USE OR REFER TO DATA WORDS.	29	19	33
U1252	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS.	33	34	33
U1253	U1-11 DO YOU USE OR REFER TO ADDRESS\SUBADDRESS.	20	23	19
U1254	U1-12 DO YOU USE OR REFER TO STEERING\INFORMATION.	15	11	16
U1255	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS.	18	14	21
U1256	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING SYSTEMS.	12	11	12
U1257	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING SYSTEMS.	5	3	5
U1258	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES.	27	29	26
U1259	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES.	24	23	26
U1260	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS.	22	17	26
U1261	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS.	23	20	26
U1262	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES.	23	20	26
U1263	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES.	29	34	26
U1264	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION.	67	69	67
U1265	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS.	11	11	7
U1266	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS.	11	11	7
U1267	DUMMY QUESTION TO FACILITATE SETCHECK	0	0	0

TABULATION OF PERCENT MEMBERS PERFORMING DUTIES AND TASKS BY DAFSC GROUPS IN THE 308X0 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY = GP0009 STAGE = 4 KPATH ORDER FROM 1 TO 64 CONTAINING 64 MEMBERS.
GROUP IDENTITY = SPC026 ALL MEMBERS OF GP0009 WHO ARE DAFSC 30830 CONTAINING 18 MEMBERS.
GROUP IDENTITY = SPC027 ALL MEMBERS OF GP0009 WHO ARE DAFSC 30870 CONTAINING 36 MEMBERS.

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 30830 30870

	DUTY	6P 0004	SPC 026	SPC 027
A	MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	73	72	69
B	MULTIMETER USES, ALTERNATING CURRENT, INDUCTORS, AND INDUCTIVE	50	94	97
C	CAPACITORS, CAPACITIVE REACTANCE, TRANSFORMERS, AND MAGNETISM	5	6	6
D	RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	0	0	0
E	COUPLING, SOLDERING, AND RELAYS	0	0	0
F	MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	66	78	97
G	SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	0	0	0
H	SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	6	6	6
I	MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES	2	0	3
J	ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	6	11	6
K	AM SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	67	56	78
L	LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	2	0	0
M	TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	11	22	6
N	METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	9	11	6
O	SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	9	17	6
P	TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	0	0	0
Q	REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	22	33	17
R	PHANTASTRONS, SCHMITT TRIGGERS, AND CABLE FABRICATION	0	0	0
S	INPUT\OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	14	11	11
T	INFRARED, LASERS, AND DISPLAY TUBES	9	11	6
U	PROGRAMMING, DB AND POWER RATIOS	22	22	22

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 30830 30870

	BY-TSK		GP 0004	SPC 026	SPC 027	
A	1	A1-01 DO YOU USE AN INSTRUMENT, SUCH AS METER OR AN OSCILLOSCOPE, IN WHICH IT IS NECESSARY TO AMPLIFY OR	20	44	11	
A	2	A1-02 DO YOU USE A PUBLICATION, SUCH AS A TECHNICAL ORDER OR MAINTENANCE MANUAL, IN WHICH IT IS NECESSARY	8	6	6	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	3	0	3	
A	4	A1-04 DO YOU FIND THE SQUARE ROOT OF A QUANTITY.	3	0	3	
A	5	A1-05 DO YOU SOLVE FOR AN UNKNOWN QUANTITY.	11	11	11	
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	3	0	3	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	3	0	3	MODULE 3 - ELECTRONIC MATHEMATICS
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	0	0	0	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS (THIS IS THE LOGARITHM SYSTEM WHICH USES THE NUMBER 2.718 AS	2	0	3	
A	10	A1-10 DO YOU WORK WITH VECTOR QUANTITIES, SUCH AS ADDING OR SUBTRACTING TWO VECTORS.	8	6	8	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	5	0	3	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES, SUCH AS AREAS OF CIRCLES OR TRIANGLES.	2	0	3	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	2	6	0	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	3	6	0	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT.	70	61	69	
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	11	6	11	
A	17	A2-03 DO YOU USE THE TERM OHM.	38	28	33	
A	18	A2-04 DO YOU USE THE TERM ION.	11	0	14	MODULE 4 - DIRECT CURRENT AND VOLTAGE
A	19	A2-05 DO YOU USE THE TERM DYNE.	5	0	6	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	58	39	61	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	9	0	11	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	5	0	6	
A	23	A2-09 DO YOU USE THE TERM PROTON.	20	0	28	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	3	6	3	
A	25	A3-02 DO YOU INSPECT RESISTORS.	2	6	0	
A	26	A3-03 DO YOU CLEAN RESISTORS.	2	6	0	
A	27	A3-04 DO YOU ADJUST RESISTORS.	2	6	0	
A	28	A3-05 DO YOU CHECK OHMIC VALUE OF RESISTORS.	2	6	0	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	2	6	0	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS IN YOUR PRESENT JOB.	3	6	3	MODULE 5 - RESISTANCE, RESISTORS, AND SCHEMATIC SYMBOLS
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS, SUCH AS FOR FIXED RESISTORS OR FOR TAPPED RESISTORS.	3	6	3	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT OR	3	6	3	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	OPERATIONS 308X0 GP 0304	30830 SPC 026	30870 SPC 027	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE OHMIC VALUE OF RESISTANCE.	2	6	0	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE TOLERANCE OF RESISTORS.	2	6	0	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE THE FAILURE RATE OF RESISTORS.	2	6	0	
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	0	0	0	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT ANY OF THE FOLLOWING COMPONENTS: BATTERY.	0	0	0	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	0	0	0	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	0	0	0	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	0	0	0	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	0	0	0	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	0	0	0	
B	52	B1-01 DO YOU MEASURE RESISTANCE.	0	0	0	
B	53	B1-02 DO YOU REPAIR AN OHMMETER.	0	0	0	
B	54	B1-03 DO YOU MEASURE VOLTAGE.	5	6	3	MODULE 6 - MULTIMETER USES
B	55	B1-04 DO YOU REPAIR A VOLTMETER.	0	0	0	
B	56	B1-05 DO YOU REPAIR AN AMMETER.	0	3	0	
B	57	B1-06 DO YOU MEASURE CURRENT.	0	0	0	
B	58	B1-07 DO YOU USE A MULTIMETER.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

308X0 30830 30670

		BY-TSK	GP 0004	SPC 026	SPC 027	
B	59	81-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	0	0	0	
B	60	81-09 DO YOU READ SCHEMATICS.	20	0	19	
B	61	82-01 DO YOU USE OR REFER THE TERM EFFECTIVE VOLTAGE (RMS).	13	0	11	
B	62	82-02 DO YOU USE OR REFER THE TERM PEAK TO PEAK VOLTAGE.	11	11	8	
B	63	82-03 DO YOU USE OR REFER THE TERM AVERAGE VOLTAGE (DC).	16	11	14	MODULE 11 - DC COMPUTATION AND FREQUENCY SPECTRUM
B	64	82-04 DO YOU USE OR REFER THE TERM WAVE LENGTH.	6	6	6	
B	65	82-05 DO YOU USE OR REFER THE TERM FREQUENCY.	39	39	33	
B	66	82-06 DO YOU USE OR REFER THE TERM INSTANTANEOUS VALUE.	3	0	3	
B	67	83-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	0	0	0	
B	68	83-02 DO YOU INSPECT INDUCTORS.	0	0	0	
B	69	83-03 DO YOU CLEAN INDUCTORS.	0	0	0	
B	70	83-04 DO YOU ADJUST INDUCTORS.	0	0	0	
B	71	83-05 DO YOU REMOVE OR REPLACE INDUCTORS.	0	0	0	
B	72	83-06 DO YOU USE OR REFER TO INDUCTANCE.	0	0	0	
B	73	83-07 DO YOU USE OR REFER TO HENRIES.	0	0	0	
B	74	83-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	0	0	0	
B	75	83-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	0	0	0	
B	76	83-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	0	0	0	
B	77	83-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS.	0	0	0	
B	78	83-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE	0	0	0	
B	79	83-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	0	0	0	MODULE 14 - INDUCTORS AND INDUCTIVE REACTANCE
B	80	83-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO	0	0	0	
B	81	83-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	0	0	0	
B	82	83-16 DO YOU CALCULATE INDUCTANCE FOR A PARTICULAR INDUCTOR USING FORMULAS.	0	0	0	
B	83	83-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES.	0	0	0	
B	84	83-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	2	0	3	
B	85	83-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	0	0	0	
B	86	83-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	0	0	0	
B	87	83-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	2	0	3	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		QY-TSK	OPERATIONS 308X0 GP 0004	30830 SPC 026	30870 SPC 027
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO	0	0	0
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	2	0	3
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	2	0	3
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	0	0	0
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS ON YOUR PRESENT JOB.	2	0	3
C	93	C1-02 DO YOU INSPECT CAPACITORS.	0	0	0
C	94	C1-03 DO YOU CLEAN CAPACITORS.	0	0	0
C	95	C1-04 DO YOU ADJUST CAPACITORS.	0	0	0
C	96	C1-05 DO YOU TEST CAPACITORS.	0	0	0
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	0	0	0
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	0	0	0
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	0	0	0
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	0	0	0
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	0	0	0
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	0	0	0
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT.	0	0	0
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS.	0	0	0
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE.	0	0	0
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES.	0	0	0
C	107	C1-16 THE CAPACITORS YOU WORK WITH IN DC CIRCUITS.	0	0	0
C	108	C1-17 THE CAPACITORS YOU WORK WITH ARE IN AC CIRCUITS.	0	0	0
C	109	C1-18 THE CAPACITORS YOU WORK WITH ARE IN CIRCUITS WITH BOTH DC AND AC.	0	0	0
C	110	C1-19 THE CAPACITORS YOU WORK WITH ARE DON'T REMEMBER WHICH CIRCUITS.	0	0	0
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR A PARTICULAR CAPACITOR USING FORMULAS.	0	0	0
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL	0	0	0
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL	0	0	0
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES.	0	0	0
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL.	0	0	0
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS.	0	0	0
C	117	C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY	0	0	0

MODULE 12 - CAPACITORS AND CAPACITIVE REACTANCE

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		OPERATIONS 308X0 30830 30870		
	DY-TSK	6P 0004	SPC 026	SPC 027
C 118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS.	0	0	0
C 119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	0	0	0
C 120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE.	0	0	0
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR CAPACITORS (VARIABLE).	0	0	0
C 122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS.	0	0	0
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC CAPACITORS (FIXED).	0	0	0
C 124	C1-33 DO YOU WORK WITH PAPER CAPACITORS (FIXED).	0	0	0
C 125	C1-34 DO YOU WORK WITH MICA CAPACITORS (FIXED).	0	0	0
C 126	C1-35 DO YOU WORK WITH CERAMIC CAPACITORS (FIXED).	0	0	0
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS.	0	0	0
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS ON YOUR PRESENT JOB.	0	0	0
C 129	C2-02 DO YOU INSPECT TRANSFORMERS.	0	0	0
C 130	C2-03 DO YOU CLEAN TRANSFORMERS.	2	0	3
C 131	C2-04 DO YOU ADJUST TRANSFORMERS.	0	0	0
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS.	2	0	3
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS.	0	0	0
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING.	2	0	3
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M).	0	0	0
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M.	0	0	0
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS.	0	0	0
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS.	0	0	0
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS.	0	0	0
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS.	0	0	0
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS.	0	0	0
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS.	0	0	0
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS.	0	0	0
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS.	0	0	0
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMER.	0	0	0
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE.	0	0	0
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE.	0	0	0
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES.	0	0	0
C 149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	0	0	0

MODULE 15 - TRANSFORMERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	OPERATIONS 30830 GP 0004	30870 SPC 026	30870 SPC 027
C 150	C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	0	0	0
C 151	C2-24 DO YOU REFER TO THE BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 152	C2-25 DO YOU REFER TO THE MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 153	C2-26 DO YOU REFER TO THE MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 154	C2-27 DO YOU REFER TO THE CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 155	C2-28 DO YOU REFER TO THE AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 156	C2-29 DO YOU REFER TO THE IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 157	C2-30 DO YOU REFER TO THE COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS.	0	0	0
C 158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	0	0	0
C 159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH.	0	0	0
C 160	C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE	0	0	0
C 161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS.	0	0	0
C 162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	0	0	0
C 163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS.	0	0	0
C 164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH 3 PHASE TRANSFORMERS.	0	0	0
C 165	C2-38 DO YOU INSPECT 3 PHASE TRANSFORMERS.	0	0	0
C 166	C2-39 DO YOU CLEAN OR LUBRICATE 3 PHASE TRANSFORMERS.	0	0	0
C 167	C2-40 DO YOU ADJUST 3 PHASE TRANSFORMERS.	0	0	0
C 168	C2-41 DO YOU TROUBLESHOOT 3 PHASE TRANSFORMERS.	0	0	0
C 169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE 3 PHASE TRANSFORMER.	0	0	0
C 170	C2-43 DO YOU REMOVE OR REPLACE 3 PHASE TRANSFORMER PARTS, SUCH AS A WINDING.	0	0	0
C 171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS.	2	0	3
C 172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS.	3	6	3
C 173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS.	0	0	0
C 174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		OPERATIONS 308X0 30830 30870		
	QY-TSK	GP 0009	SPC 026	SPC 027
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS.	0	0	0
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM.	0	0	0
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX.	2	4	0
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM.	0	0	0
C 179	C3-09 DO YOU USE OR REFER TO THE DOMAIN THEORY OF MAGNETISM.	0	0	0
C 180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION.	0	0	0
C 181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY.	0	0	0
C 182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES; LIKE POLES REPEL AND UNLIKE POLES	0	0	0
C 183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES.	0	0	0
C 184	C3-14 DO YOU USE THE LEFT THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL.	0	0	0
D 185	D1-01 DO YOU WORK WITH RC, LR, OR RCL CIRCUITS ON YOUR PRESENT JOB.	0	0	0
D 186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH ORCL CIRCUITS.	0	0	0
D 191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS.	0	0	0

MODULE 7 - SERIES RESISTIVE CIRCUIT

MODULE 8 - PARALLEL RESISTIVE CIRCUITS

MODULE 9 - SERIES-PARALLEL RESISTIVE CIRCUITS

MODULE 21 - SERIES RCL CIRCUITS

MODULE 22 - PARALLEL RCL CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	OPERATIONS 308X0 GP 0009	30830 SPC 026	30870 SPC 027
D 200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS.	0	0	0
D 205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS! SINE OF AN ANGLE = OPPOSITE SIDE	0	0	0
D 206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS.	0	0	0
D 207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS.	0	0	0
D 208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS.	0	0	0
D 209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS.	0	0	0
D 210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS.	0	0	0
D 211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS.	0	0	0
D 212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS.	0	0	0
D 213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS.	0	0	0
D 214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS.	0	0	0
D 215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS.	0	0	0
D 216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD.	0	0	0
D 217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW.	0	0	0
D 218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS.	0	0	0
D 219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION.	0	0	0
D 220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS.	0	0	0
D 221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION.	0	0	0
D 222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA=0, PF=1, AND PA=PT FOR RESONANT CIRCUITS.	0	0	0
D 223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS.	0	0	0
D 224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	OPERATIONS 308X0 GP 0009	30830 SPC 026	30870 SPC 027	
D 225	D1-01	DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT	0	0	0	
D 226	D1-02	DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK	0	0	0	
D 227	D1-03	DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q.	0	0	0	
D 228	D1-04	DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT	0	0	0	
D 229	D2-01	IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANCE CIRCUITS OR	0	0	0	
D 230	D2-02	DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS.	0	0	0	
D 231	D2-03	DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE.	0	0	0	MODULE 24 - SERIES RESONANCE
D 232	D2-04	DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS.	0	0	0	MODULE 25 - PARALLEL RESONANCE
D 233	D2-05	DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE	0	0	0	MODULE 26 - TIME CONSTANTS
D 234	D2-06	DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS.	0	0	0	
D 235	D2-07	DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUITS CURRENT OR COMPONENT VOLTAGES AFTER A	0	0	0	
D 236	D2-08	DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT	0	0	0	
D 237	D2-09	DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	0	0	0	
D 238	D2-10	DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR	0	0	0	
D 239	D3-01	DO YOU WORK WITH CIRCUITS USED AS FILTERS ON YOUR PRESENT JOB.	0	0	0	
D 240	D3-02	DO YOU INSPECT FILTER CIRCUITS.	0	0	0	MODULE 27 - FILTERS
D 241	D3-03	DO YOU CLEAN FILTER CIRCUITS.	0	0	0	
D 242	D3-04	DO YOU ALIGN OR ADJUST FILTER CIRCUITS.	0	0	0	
D 243	D3-05	DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT.	0	0	0	
D 244	D3-06	DO YOU TROUBLESHOOT TO COMPONENT PARTS OF FILTER CIRCUITS.	0	0	0	
D 245	D3-07	DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		OPERATIONS 308X0	30830	30870
	BY-TSK	6P 0004	SPC 026	SPC 027
D 246	D3-08 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF FILTER CIRCUITS.	0	0	0
D 247	D3-09 DO YOU WORK ON LOW PASS FILTERS.	0	0	0
D 248	D3-10 DO YOU WORK ON HIGH PASS FILTERS.	0	0	0
D 249	D3-11 DO YOU WORK ON BANDPASS FILTERS.	0	0	0
D 251	D3-13 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF FILTER	0	0	0
D 250	D3-12 DO YOU WORK ON BAND-REJECT FILTERS.	0	0	0
D 252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATIONS.	0	0	0
D 253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATIONS.	0	0	0
D 254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATIONS.	0	0	0
D 255	D3-17 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF FILTER CONFIGURATIONS.	0	0	0
D 256	D3-18 ARE PARALLEL RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	0	0	0
D 257	D3-19 ARE SERIES-PARALLEL CIRCUITS USED IN FILTERS YOU WORK WITH.	0	0	0
D 258	D3-20 ARE SERIES RESONANT CIRCUITS USED IN FILTERS YOU WORK WITH.	0	0	0
D 259	D3-21 ARE DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT USED IN FILTERS YOU WORK WITH.	0	0	0
D 260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	0	0	0
E 261	E1-01 DO YOU WORK WITH COUPLING DEVICES ON YOUR PRESENT JOB.	0	0	0
E 262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
E 263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
E 264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
E 265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE RC COUPLING FUNCTIONS.	0	0	0
E 266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE IMPEDANCE COUPLING FUNCTIONS.	0	0	0
E 267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE TRANSFORMER COUPLING FUNCTIONS.	0	0	0
E 268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS.	0	0	0
E 269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS.	0	0	0
E 270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS.	0	0	0
E 271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS.	0	0	0
E 272	E1-12 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUIT.	0	0	0

MODULE 28 - COUPLING

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			OPERATIONS 308X0 30830 30870			
		DY-TSK	GP 0004	SPC 026	SPC 027	
E	273	E2-01 ON YOUR PRESENT JOB DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS.	0	0	0	
E	274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE.	0	0	0	
E	275	E2-03 DO YOU ADD FLUX TO CONNECTIONS.	0	0	0	
E	276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS.	0	0	0	
E	277	E2-05 DO YOU STRIP INSULATION FROM WIRES.	0	0	0	
E	278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS.	0	0	0	MODULE 76 - SOLDERING TOOLS AND MATERIALS
E	279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS.	0	0	0	
E	280	E2-08 DO YOU CUT WIRES.	0	0	0	
E	281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS.	0	0	0	
E	282	E2-10 DO YOU TIN SOLDERING IRON TIPS.	0	0	0	MODULE 77 - SOLDERING AND DESOLDERING PROCEDURES
E	283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS.	0	0	0	
E	284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS.	0	0	0	
E	285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS.	0	0	0	
E	286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS.	0	0	0	
E	287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING.	0	0	0	
E	288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS.	0	0	0	
E	289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS.	0	0	0	
E	290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL.	0	0	0	
E	291	E2-19 DO YOU MAKE HARDWIRE TURRET CONNECTIONS.	0	0	0	
E	292	E2-20 DO YOU MAKE HARDWIRE BIFURCATED CONNECTIONS.	0	0	0	
E	293	E2-21 DO YOU MAKE PRINTED CIRCUIT BOARD TURRET CONNECTIONS.	0	0	0	
E	294	E2-22 DO YOU MAKE PRINTED CIRCUIT BOARD BIFURCATED CONNECTIONS.	0	0	0	
E	295	E2-23 DO YOU MAKE PRINTED CIRCUIT BOARD TERMINAL PADS.	0	0	0	
E	296	E2-24 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS.	0	0	0	
E	297	E2-25 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS.	0	0	0	
E	298	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB.	0	0	0	
E	299	E3-02 DO YOU ADJUST RELAYS.	0	0	0	
E	300	E3-03 DO YOU CLEAN RELAYS.	0	0	0	
E	301	E3-04 DO YOU INSPECT RELAYS.	0	0	0	
E	302	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAY.	0	0	0	
E	303	E3-06 DO YOU REMOVE OR REPLACE PARTS OF RELAY.	0	0	0	
E	304	E3-07 DO YOU TROUBLESHOOT RELAYS.	0	0	0	MODULE 16 - RELAYS
E	305	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS.	0	0	0	
E	306	E3-09 DO YOU PERFORM ANY TASKS ON RELAY CONTACTS.	0	0	0	
E	307	E3-10 DO YOU PERFORM ANY TASKS ON RELAY CORE.	0	0	0	
E	308	E3-11 DO YOU PERFORM ANY TASKS ON RELAY COIL.	0	0	0	
E	309	E3-12 DO YOU PERFORM ANY TASKS ON RELAY ARMATURE.	0	0	0	
E	310	E3-13 DO YOU PERFORM ANY TASKS ON RELAY SPRING.	0	0	0	
E	311	E3-14 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPEN (NO) SCHEMATIC SYMBOLS	0	0	0	

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK	OPERATIONS 308X0 67 0909	30830 SPC 926	30870 SPC 927
E 312 E3-15 DO YOU USE OR REFER TO THE SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS	0	0	0
E 313 E3-16 DO YOU USE OR REFER TO THE SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS.	0	0	0
E 314 E3-17 DO YOU USE OR REFER TO THE DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS.	0	0	0
E 315 E3-18 DO YOU USE OR REFER TO THE OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS.	0	0	0
E 316 E3-19 DO YOU CHECK THE ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE.	0	0	0
F 317 F1-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH MICROPHONES.	27	22	28
F 318 F1-02 DO YOU INSPECT MICROPHONES.	0	0	0
F 319 F1-03 DO YOU CLEAN MICROPHONES.	2	0	0
F 320 F1-04 DO YOU OPERATE (HAVE A JOB IN WHICH YOU USE MICROPHONES).	28	22	28
F 321 F1-05 DO YOU TROUBLESHOOT MICOPHONES AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	2	4	0
F 322 F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONES COMPONENTS.	0	0	0
F 323 F1-07 DO YOU REMOVE OR REPLACE THE COMPLETE MICROPHONE.	0	0	0
F 324 F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS.	0	0	0
F 325 F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES.	3	4	3
F 326 F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES.	0	0	0
F 327 F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES.	2	0	3
F 328 F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES.	0	0	0
F 329 F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES.	0	0	0
F 330 F2-01 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH SPEAKERS. SUCH AS LISTENING TO AUDIO OUTPUTS, ETC.	33	28	33
F 331 F2-02 DO YOU INSPECT SPEAKERS.	0	0	0
F 332 F2-03 DO YOU CLEAN SPEAKERS.	0	0	0
F 333 F2-04 DO YOU OPERATE (HAVE A JOB IN WHICH SPEAKERS ARE USED).	33	28	33
F 334 F2-05 DO YOU TROUBLESHOOT SPEAKERS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	0	0	0
F 335 F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER COMPONENTS.	0	0	0
F 336 F2-07 DO YOU REMOVE OR REPLACE THE COMPLETE SPEAKER.	0	0	0
F 337 F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS.	0	0	0
F 338 F2-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER CONES.	0	0	0
F 339 F2-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SPIDERS.	0	0	0
F 340 F2-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER FIELD COILS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	OPERATIONS 30830 GP 0004	30870 SPC 026	SPC 027	
F 341	F2-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER VOICE COILS.	0	0	0	
F 342	F2-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS.	2	6	0	
F 343	F2-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS.	0	0	0	
F 344	F2-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES.	0	0	0	
F 345	F3-01 DO YOU USE OSCILLOSCOPES ON YOUR PRESENT JOB.	28	56	19	
F 346	F3-02 DO YOU USE AN OSCILLOSCOPETO PERFORM OPERATIONAL CHECKS.	23	39	19	
F 347	F3-03 DO YOU USE AN OSCILLOSCOPE TO PERFORM ALIGNMENT OR ADJUSTMENTS.	0	0	0	
F 348	F3-04 DO YOU USE AN OSCILLOSCOPE TO PERFORM TROUBLESHOOT ELECTRONIC CIRCUITS.	0	0	0	MODULE 20 - OSCILLOSCOPE USES
F 349	F3-05 DO YOU USE AN OSCILLOSCOPE TO MEASURE FREQUENCY.	2	6	0	
F 350	F3-06 DO YOU USE AN OSCILLOSCO TO MEASURE TIME.	0	0	0	
F 351	F3-07 DO YOU USE AN OSCILLOSCOPE TO OBSERVE LISSAJOUS PATTERNS.	0	0	0	
F 352	F3-08 DO YOU USE AN OSCILLOSCOPE TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES.	0	0	0	
F 353	F3-09 DO YOU USE AN OSCILLOSCOPE TO MAKE FREQUENCY OR TIME MEASUREMENTS USING THE DELAY TIME MULTIPLIER.	0	0	0	
F 354	F3-10 DO YOU USE AN OSCILLOSCOPE TO MEASURE AC VOLTAGE.	5	6	6	
F 355	F3-11 DO YOU USE AN OSCILLOSCOPE TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL	14	17	14	
G 356	G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES ON YOUR PRESENT JOB.	0	0	0	
G 357	G1-02 DO YOU INSPECT DIODES.	0	0	0	
G 358	G1-03 DO YOU REMOVE OR REPLACE DIODES.	0	0	0	
G 359	G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT.	0	0	0	
G 360	G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES.	0	0	0	MODULE 29 - PN JUNCTIONS AND DIO
G 361	G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE	0	0	0	
G 362	G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES.	0	0	0	
G 363	G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF THE DIODE.	0	0	0	
G 364	G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS,	0	0	0	
G 365	G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	OPERATIONS 302X0 30830 30870 SP 0004	SPC 026	SPC 027
G 366	G1-11 DO YOU USE OR REFER TO A MEASUREMENT OF FORWARD BIAS RESISTANCE.	0	0	0
G 367	G1-12 DO YOU USE OR REFER TO DIODE COLOR CODING.	0	0	0
G 368	G1-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0
G 369	G1-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS.	0	0	0
G 370	G1-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538.	0	0	0
G 371	G1-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0
G 372	G1-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT.	0	0	0
G 373	G1-18 DO YOU USE OR REFER TO A MEASUREMENT OR REVERSE BIAS RESISTANCE.	0	0	0
G 374	G1-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT.	0	0	0
G 375	G1-20 DO YOU USE OR REFER TO PERMISTIBLE ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0
G 376	G1-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON.	0	0	0
G 377	G1-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL).	0	0	0
G 378	G1-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM).	0	0	0
G 379	G1-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END.	0	0	0
G 380	G1-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES, SUCH AS GERMANIUM OR	0	0	0
G 381	G1-26 IS IT IMPORTANT FOR YOU TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS	0	0	0
G 382	G1-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES SUCH AS VOLTAGE - CURRENT	0	0	0
G 383	G1-28 DO YOU DETERMINE WHETHER A PN JUNCTION DIODE IS FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	0	0	0
G 384	G1-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS.	0	0	0
G 385	G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS.	0	0	0
G 386	G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	OPERATIONS 30810 30880 30870 6P 0004	SPC 026	SPC 027
6 387	61-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS.	0	0	0
6 388	61-33 DO YOU USE OR REFER TO ELECTRON - HOLE PAIR CREATED IN SEMICONDUCTORS.	0	0	0
6 389	61-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS.	0	0	0
6 390	61-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS.	0	0	0
6 391	61-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS.	0	0	0
6 392	61-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL.	0	0	0
6 393	61-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL.	0	0	0
6 394	61-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS.	0	0	0
6 395	61-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS.	0	0	0
6 396	61-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS.	0	0	0
6 397	61-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS.	0	0	0
6 398	61-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL.	0	0	0
6 399	61-44 DO YOU USE OR REFER TO THE 10 TO 1 BACK TO FRONT RESISTANCE RATIO FOR DIODES.	0	0	0
6 400	61-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS.	0	0	0
6 401	61-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION.	0	0	0
6 402	61-47 DO YOU USE OR REFER TO THE MAXIMUM AVERAGE FORWARD CURRENT DIODE RATING.	0	0	0
6 403	61-48 DO YOU USE OR REFER TO THE PEAK RECURRENT FORWARD CURRENT DIODE RATING.	0	0	0
6 404	61-49 DO YOU USE OR REFER TO THE MAXIMUM SURGE CURRENT DIODE RATING.	0	0	0
6 405	61-50 DO YOU USE OR REFER TO THE PEAK REVERSE (INVERSE) VOLTAGE DIODE RATING.	0	0	0
6 406	62-01 DO YOU WORK WITH TRANSISTORS ON YOUR PRESENT JOB.	0	0	0
6 407	62-02 DO YOU INSPECT TRANSISTORS.	0	0	0
6 408	62-03 DO YOU REMOVE OR REPLACE TRANSISTORS.	0	0	0
6 409	62-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT.	0	0	0
6 410	62-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	0	0	0
6 411	62-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS.	0	0	0
6 412	62-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			OPERATIONS 308XC 30830 30870		
		DY-TSK	GP 0004	SPC 026	SPC 027
G	413	62-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION.	0	0	0
G	414	62-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION.	0	0	0
G	415	62-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER).	0	0	0
G	416	62-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR.	0	0	0
G	417	62-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS.	0	0	0
G	418	62-13 DO YOU USE OR REFER TO TRANSISTOR NOTATIONS, SUCH AS Q1, Q2, Q3, ETC.	0	0	0
G	419	62-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION.	0	0	0
G	420	62-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY	0	0	0
G	421	62-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE	0	0	0
G	422	62-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE	0	0	0
G	423	62-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES.	0	0	0
G	424	62-19 DO YOU USE OR REFER TO THE BETA TRANSISTOR GAINS.	0	0	0
G	425	62-20 DO YOU USE OR REFER TO THE ALPHA TRANSISTOR GAINS.	0	0	0
G	426	62-21 DO YOU USE OR REFER TO THE GAMMA TRANSISTOR GAINS.	0	0	0
G	427	62-22 DO YOU CALCULATE THE BETA TRANSISTOR GAINS.	0	0	0
G	428	62-23 DO YOU CALCULATE THE ALPHA TRANSISTOR GAINS.	0	0	0
G	429	62-24 DO YOU CALCULATE THE GAMMA TRANSISTOR GAINS.	0	0	0
G	430	63-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB.	0	0	0
G	431	63-02 DO YOU INSPECT TRANSISTER AMPLIFIERS.	0	0	0
G	432	63-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS.	0	0	0
G	433	63-04 DO YOU TROUBLESHOOT TO THE TRANSISTOR AMPLIFIER CIRCUIT LEVEL.	0	0	0
G	434	63-05 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF TRANSISTER AMPLIFIERS.	0	0	0
G	435	63-06 DO YOU REMOVE OR REPLACE THE COMPLETE TRANSISTOR AMPLIFIERS.	0	0	0
G	436	63-07 DO YOU REMOVE OR REPLACE TRANSISTOR AMPLIFIER COMPONENT PARTS.	0	0	0
G	437	63-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN	0	0	0

MODULE 31 - AMPLIFIER PRINCIPLES

MODULE 39 - SOLID STATE WIDEBAND AMPLIFIERS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		OPERATIONS 308X0 30830 30870		
	DY-TSK	GP 0004	SPC 026	SPC 027
G 438	63-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	0	0	0
G 439	63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN	0	0	0
G 440	63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	0	0	0
G 441	63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL.	0	0	0
G 442	63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE	0	0	0
G 443	63-14 IN YOUR CIRCUIT ANALYSIS OF THE COMMON EMITTER, DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS (THIS	0	0	0
G 444	63-15 DO YOU USE OR REFER TO THE OPERATING POINT @ (QUIESCENT POINT) FOR A TRANSISTOR.	0	0	0
G 445	63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR.	0	0	0
G 446	63-17 DO YOU MEASURE VOLTAGE GAIN (COMMON EMITTER).	0	0	0
G 447	63-18 DO YOU MEASURE CURRENT GAIN (COMMON EMITTER).	0	0	0
G 448	63-19 DO YOU MEASURE POWER GAIN (COMMON EMITTER).	0	0	0
G 449	63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	0	0	0
G 450	63-21 DO YOU CALCULATE THE CURRENT GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MEASURE	0	0	0
G 451	63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA. THAT IS, DO YOU MULTIPLY	0	0	0
G 452	63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS	0	0	0
G 453	63-24 DO YOU COMPUTE THE STATIC OPERATING POINT (Q) OF A TRANSISTOR AT DIFFERENT TEMPERATURES.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	OPERATIONS 308X0 GP 0004	308X0 SPC 026	308X0 SPC 027
G	454	63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
G	455	63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
G	456	63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
G	457	63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
G	458	63-29 DO YOU IDENIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
G	459	63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED	0	0	0
G	460	63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE EMITTER (SWAMPING) RESISTOR	0	0	0
G	461	63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE SELF BIAS STABILIZATION FUNCTIONS.	0	0	0
G	462	63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE THERMISTOR STABILIZATION FUNCTIONS.	0	0	0
G	463	63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE FORWARD BIAS DIODE STABILIZATION	0	0	0
G	464	63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE REVERSE BIAS DIODE STABILIZATION	0	0	0
G	465	63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THE DOUBLE DIODE STABILIZATION FUNCTIONS.	0	0	0
G	466	63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0
G	467	63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	0	0	0
G	468	63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0
G	469	63-40 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	0	0	0
G	470	63-41 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0
G	471	63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	0	0	0
G	472	63-43 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			OPERATIONS 30811 30830 30870		
		BY-TSK	GP UGD4	SPC 026	SPC 027
G	473	G3-44 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSE OF AMPLITUDE DISTORTION.	0	0	0
G	474	G3-45 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0
G	475	G3-46 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0
G	476	G3-47 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS.	0	0	0
G	477	G3-48 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION.	0	0	0
G	478	G3-49 THIS QUESTION REFERS TO A TRANSISTOR AMPLIFIER IN THE COMMON COLLECTOR CONFIGURATION. DO YOU NEED TO	0	0	0
G	479	G3-50 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS.	0	0	0
G	480	G3-51 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS CIRCUITS.	0	0	0
G	481	G3-52 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS CIRCUITS.	0	0	0
G	482	G3-53 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS .	0	0	0
G	483	G3-54 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS CIRCUITS.	0	0	0
G	484	G3-55 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS CIRCUITS.	0	0	0
H	485	H1-01 DO YOU USE OR REFER TO VARACTORS.	3	0	3
H	486	H1-02 DO YOU USE OR REFER TO TUNNEL DIODES.	0	0	0
H	487	H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET).	0	0	0
H	488	H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS.	0	0	0
H	489	H1-05 DO YOU USE OR REFER TO ZENER DIODES.	0	0	0
H	490	H1-06 DO YOU USE OR REFER TO INTERGRATED CIRCUITS.	6	6	6
H	491	H2-01 ON YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES.	2	6	0
H	492	H2-02 DO YOU INSPECT POWER SUPPLIES.	0	0	0
H	493	H2-03 DO YOU CLEAN POWER SUPPLIES.	0	0	0
H	494	H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES.	0	0	0
H	495	H2-05 DO YOU TROUBLESHOOT TO THE POWER SUPPLY CIRCUIT.	0	0	0
H	496	H2-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF POWER SUPPLIES.	0	0	0
H	497	H2-07 DO YOU REMOVE OR REPLACE THE COMPLETE POWER SUPPLIES.	0	0	0
H	498	H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY PARTS.	0	0	0
H	499	H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS.	0	0	0
H	500	H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS.	0	0	0

MODULE 33 - SELECTED SOLID STATE DEVICES

MODULE 34 - SOLID STATE POWER SUPPLY RECTIFIERS AND FILTERS

MODULE 35 - SOLID STATE POWER SUPPLY REGULATIONS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	OPERATIONS 30870 GP 0004	30870 SPC 026	30870 SPC 027
M 501	M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS.	0	0	0
M 502	M2-12 DO YOU WORK WITH THREE PHASE RECTIFIERS.	0	0	0
M 503	M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE.	0	0	0
M 504	M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY.	0	0	0
M 505	M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE.	0	0	0
M 506	M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE.	0	0	0
M 507	M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE.	0	0	0
M 508	M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY.	0	0	0
M 509	M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE.	0	0	0
M 510	M2-20 DO YOU USE OR REFER TO SHAPE OF THE OUTPUT WAVEFORM.	0	0	0
M 511	M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE.	0	0	0
M 512	M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS.	0	0	0
M 513	M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS.	0	0	0
M 514	M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS.	0	0	0
M 515	M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS.	0	0	0
M 516	M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS.	0	0	0
M 517	M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS.	0	0	0
M 518	M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER.	0	0	0
M 519	M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER.	0	0	0
M 520	M3-01 DO YOU WORK WITH OSCILLATORS ON YOUR PRESENT JOB.	0	0	0
M 521	M3-02 DO YOU INSPECT OSCILLATORS.	0	0	0
M 522	M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS.	0	0	0
M 523	M3-04 DO YOU REMOVE OR REPLACE THE COMPLETE OSCILLATORS CIRCUIT.	0	0	0
M 524	M3-05 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF OSCILLATORS.	0	0	0
M 525	M3-06 DO YOU TROUBLESHOOT TO THE OSCILLATORS CIRCUIT LEVEL.	0	0	0
M 526	M3-07 DO YOU TROUBLESHOOT TO OSCILLATORS COMPONENTS.	0	0	0
M 527	M3-08 DO YOU USE OR REFER TO FEEDBACK.	0	0	0
M 528	M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD).	0	0	0
M 529	M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY.	0	0	0
M 530	M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY.	0	0	0
M 531	M3-12 DO YOU USE OR REFER TO DAMPING.	0	0	0
M 532	M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK.	0	0	0

MODULE 42 - PRINCIPLES OF OSCILLATION

MODULE 43 - SOLID STATE LC OSCILLATORS

MODULE 44 - SOLID STATE RC OSCILLATORS

MODULE 46 - SOLID STATE PULSED AND BLOCKING OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			OPERATIONS 308X0 30830 30870		
		UY-TSK	%P 0004	SPC 026	SPC 027
M	533	M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT.	0	0	0
M	534	M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING.	0	0	0
M	535	M3-16 DO YOU USE OR REFER TO UNDER DAMPING.	0	0	0
M	536	M3-17 DO YOU USE OR REFER TO OVER DAMPING.	0	0	0
M	537	M3-18 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FDD.	0	0	0
M	538	M3-19 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FDD.	0	0	0
M	539	M3-20 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.	0	0	0
M	540	M3-21 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FDD.	0	0	0
M	541	M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS.	0	0	0
M	542	M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS.	0	0	0
M	543	M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS.	0	0	0
M	544	M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS.	0	0	0
M	545	M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS.	0	0	0
M	546	M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF SINUSOIDAL OSCILLATORS.	0	0	0
I	547	I1-01 DO YOU WORK WITH MULTIVIBRATORS ON YOUR PRESENT JOB.	0	0	0
I	548	I1-02 DO YOU INSPECT WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	549	I1-03 DO YOU ALIGN OR ADJUST WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	550	I1-04 DO YOU CALIBRATE WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	551	I1-05 DO YOU TROUBLESHOOT TO THE WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	552	I1-06 DO YOU TROUBLESHOOT TO COMPONENTS WITHIN THE WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	553	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	554	I1-08 DO YOU REMOVE OR REPLACE COMPONENTS OF WAVE SHAPING OR GENERATING CIRCUITS.	0	0	0
I	555	I1-09 DO OSCILLATORS YOU WORK WITH USE LC TANK CIRCUITS AS FDD.	0	0	0
I	556	I1-10 DO OSCILLATORS YOU WORK WITH USE RC NETWORKS AS FDD.	0	0	0
I	557	I1-11 DO OSCILLATORS YOU WORK WITH USE CRYSTALS AS FDD.	0	0	0
I	558	I1-12 DO OSCILLATORS YOU WORK WITH USE DON'T REMEMBER WHICH TYPE AS FDD.	0	0	0
I	559	I1-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS.	0	0	0
I	560	I1-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS.	0	0	0
I	561	I1-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS.	0	0	0
I	562	I1-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF MULTIVIBRATORS.	0	0	0

MODULE 47 - SOLID STATE MULTIVIBRATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	OPERATIONS 30870 GP 0004	30870 SPC 026	30870 SPC 027	
563	12-01	DO YOU WORK WITH LIMITERS OR CLAMPERS ON YOUR PRESENT JOB.	0	0	0	
564	12-02	DO YOU WORK WITH SERIES DIODE LIMITERS.	0	0	0	
565	12-03	DO YOU WORK WITH SHUNT DIODE LIMITERS.	0	0	0	
566	12-04	DO YOU WORK WITH LIMITERS WITH BIAS.	0	0	0	
567	12-05	DO YOU WORK WITH ZENER DIODE LIMITERS.	0	0	0	
568	12-06	DO YOU WORK WITH TRANSISTOR LIMITERS.	0	0	0	MODULE 50 - SOLID STATE LIMITERS AND CLAMPERS
569	12-07	DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITER.	0	0	0	
570	12-08	DO YOU WORK WITH DIODE CLAMPERS.	0	0	0	
571	12-09	DO YOU WORK WITH DIODE CLAMPERS WITH BIAS.	0	0	0	
572	12-10	DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPER.	0	0	0	
573	13-01	FOR PURPOSES OF THIS QUESTION DO NOT CONSIDER HIGH FREQUENCY DEVICES, SUCH AS KLYSTRONS, TRAVELLING WAVE	0	0	0	
574	13-02	DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT.	0	0	0	MODULE 56 - ELECTRON TUBE CHARACTERISTICS AND DIODES
575	13-03	DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING TUBE TESTERS.	0	0	0	
576	13-04	DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING MULTIMETERS.	0	0	0	MODULE 57 - TRIODES
577	13-05	DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SCOPES.	0	0	0	
578	13-06	DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD OR NOT USING SUBSTITUTION.	0	0	0	MODULE 58 - MULTIGRID ELECTRON TUBES
579	13-07	DO YOU USE OR REFER TO CUTOFF.	0	0	0	
580	13-08	DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING.	0	0	0	
581	13-09	DO YOU USE OR REFER TO PEAK CURRENT RATING.	0	0	0	
582	13-10	DO YOU USE OR REFER TO TRANSIT TIME.	0	0	0	
583	13-11	DO YOU USE OR REFER TO PLATE DISSIPATION RATING.	0	0	0	
584	13-12	DO YOU USE OR REFER TO SATURATION.	0	0	0	
585	13-13	DO YOU USE OR REFER TO DC PLATE RESISTANCE.	0	0	0	
586	13-14	DO YOU COMPUTE THE ACTUAL VALUE OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES.	0	0	0	
587	13-15	DO YOU USE OR REFER TO PLATE VOLTAGE.	0	0	0	
588	13-16	DO YOU USE OR REFER TO PLATE CURRENT.	0	0	0	
589	13-17	DO YOU USE OR REFER TO GRID VOLTAGE.	0	0	0	
590	13-18	DO YOU USE OR REFER TO GRID CURRENT.	0	0	0	
591	13-19	DO YOU USE OR REFER TO CATHODE VOLTAGE.	0	0	0	
592	13-20	DO YOU USE OR REFER TO CATHODE CURRENT.	0	0	0	
593	13-21	THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN	0	0	0	
594	13-22	DO YOU CALCULATE THE ACTUAL VALUE OF THE TRIODE AMPLIFICATION FACTOR.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	JV-TSK	OPERATIONS 30240 30830 30870 GP 0004	SPC 026	SPC 027
I 595	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC.) AMPLIFICATION FACTORS.	0	0	0
I 596	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS).	0	0	0
I 597	I3-25 DO YOU CALCULATE THE ACTUAL VALUE OF ELECTRON TUBE TRANSCONDUCTANCE.	0	0	0
I 598	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE.	0	0	0
I 599	I3-27 DO YOU CALCULATE THE ACTUAL VALUE OF AC PLATE RESISTANCE.	0	0	0
I 600	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE.	0	0	0
I 601	I3-29 IN YOUR WORK WITH ELECTRON TUBES, DO YOU USE OR REFER TO CHARACTERISTIC CURVES.	0	0	0
I 602	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS.	0	0	0
I 603	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS.	0	0	0
I 604	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF.	0	0	0
I 605	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION.	0	0	0
I 606	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN.	2	0	3
I 607	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY.	0	0	0
I 608	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
I 609	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
I 610	I3-38 DO YOU USE SCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
I 611	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN.	0	0	0
I 612	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES, SUCH AS INPUT CAPACITANCE, ETC.	0	0	0
I 613	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION.	0	0	0
I 614	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS.	0	0	0
I 615	I3-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL AND THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN	0	0	0
I 616	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL, SUCH AS MANUALS, ETC.	0	0	0
J 617	J1-01 DO YOU WORK WITH ELECYRON TUBE AMPLIFIERS OR CIRCUITS ON YOUR PRESENT JOB.	0	0	0
J 618	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS

DY-TSK	303X0 GP 0004	30330 SPC 026	30370 SPC 027	
J 619 J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS.	0	0	0	MODULE 60 - ELECTRON TUBE AUDIO AMPLIFIERS
J 620 J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS.	0	0	0	
J 621 J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS.	0	0	0	MODULE 61 - ELECTRON TUBE RF AMPLIFIERS, CATHODE FOLLOWERS, DC AMPLIFIERS AND TRIODE LIMITERS -
J 622 J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE CONNECTED AMPLIFIERS.	0	0	0	
J 623 J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF ELECTRON TUBE AMPLIFIER.	0	0	0	
J 624 J2-01 DO YOU WORK WITH GAS TUBES (HOT CATHODE OR COLD CATHODE).	0	0	0	
J 625 J2-02 DO YOU WORK WITH CATHODE RAY TUBES.	2	[illegible]	0	
J 626 J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES.	0	0	0	
J 627 J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED.	0	0	0	
J 628 J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS.	0	0	0	
J 629 J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED.	0	0	0	MODULE 59 - SPECIAL PURPOSE ELECTRON TUBES
J 630 J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTRON GUN OF THE CATHODE RAY TUBE	0	0	0	
J 631 J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROMAGNETIC DEFLECTION SYSTEM OF	0	0	0	
J 632 J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF THE ELECTROSTATIC DEFLECTION SYSTEM OF THE	0	0	0	
J 633 J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS.	2	0	3	
J 634 J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS.	0	0	0	
J 635 J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS.	0	0	0	
J 636 J2-13 DO YOU USE OR REFER TO PERSISTENCE.	2	0	3	
J 637 J2-14 DO YOU USE OR REFER TO DECAY TIMES.	0	0	0	
J 638 J2-15 DO YOU USE OR REFER TO FLUORESCENCES.	0	0	0	
J 639 J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCES.	0	0	0	
J 640 J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	3	6	3	MODULE 63 - HETERODYNING
J 641 J3-02 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	2	6	0	MODULE 64 - MODULATION
J 642 J3-03 DO YOU PERFORM ANY TASKS ON FREQUENCY MIXERS.	0	0	0	MODULE 65 - DEMODULATION
J 643 J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS.	0	0	0	
J 644 J3-05 DO YOU PERFORM ANY TASKS ON REACTANCE MODULATORS.	0	0	0	
J 645 J3-06 DO YOU PERFORM ANY TASKS ON MODULATED OSCILLATORS.	0	0	0	
K 646 K1-01 DO YOU WORK ON AN TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30SYC 30230 30270

DY-TSK	GP 0004	SPC 026	SPC 027	
K 647 K1-02 DO YOU INSPECT AM SYSTEMS.	0	0	0	
K 648 K1-03 DO YOU CLEAN AM SYSTEMS.	0	0	0	
K 649 K1-04 DO YOU ALIGN OR ADJUST AM SYSTEMS.	0	0	0	
K 650 K1-05 DO YOU TROUBLESHOOT TO AM SYSTEMS.	0	0	0	
K 651 K1-06 DO YOU TROUBLESHOOT TO AM COMPONENTS.	0	0	0	
K 652 K1-07 DO YOU REMOVE OR REPLACE AM SYSTEMS.	0	0	0	
K 653 K1-08 DO YOU REMOVE OR REPLACE AM COMPONENTS.	0	0	0	
K 654 K1-09 DO YOU PERFORM ANY TASKS ON RF OSCILLATORS.	0	0	0	
K 655 K1-10 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	0	0	0	MODULE 68 - AM SYSTEMS
K 656 K1-11 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.	0	0	0	
K 657 K1-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	0	0	0	
K 658 K1-13 DO YOU PERFORM ANY TASKS ON LOCAL OSCILLATORS.	0	0	0	
K 659 K1-14 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	0	0	0	
K 660 K1-15 DO YOU PERFORM ANY TASKS ON DETECTORS.	0	0	0	
K 661 K1-16 DO YOU PERFORM ANY TASKS ON DON'T REMEMBER WHICH STAGE.	0	0	0	
K 662 K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS.	0	0	0	
K 663 K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS.	0	0	0	
K 664 K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS.	0	0	0	
K 665 K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS.	0	0	0	
K 666 K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION.	0	0	0	
K 667 K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION.	0	0	0	
K 668 K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION.	0	0	0	
K 669 K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE.	0	0	0	
K 670 K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS.	0	0	0	
K 671 K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS.	0	0	0	
K 672 K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS.	0	0	0	
K 673 K1-28 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS.	0	0	0	
K 674 K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS ON YOUR PRESENT JOB.	5	6	6	
K 675 K2-02 DO YOU INSPECT FM SYSTEMS.	0	0	0	
K 676 K2-03 DO YOU CLEAN FM SYSTEMS.	0	0	0	MODULE 69 - FM SYSTEMS
K 677 K2-04 DO YOU ALIGN FM SYSTEMS.	0	0	0	
K 678 K2-05 DO YOU TROUBLESHOOT TO FM SYSTEMS.	0	0	0	
K 679 K2-06 DO YOU TROUBLESHOOT TO FM COMPONENTS.	0	0	0	
K 680 K2-07 DO YOU REMOVE OR REPLACE FM SYSTEMS.	0	0	0	
K 681 K2-08 DO YOU REMOVE OR REPLACE FM COMPONENTS.	0	0	0	
K 682 K2-09 DO YOU PERFORM ANY TASKS ON AUDIO AMPLIFIERS.	0	0	0	
K 683 K2-10 DO YOU PERFORM ANY TASKS ON FREQUENCY MULTIPLIERS.	0	0	0	
K 684 K2-11 DO YOU PERFORM ANY TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS).	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	OPERATIONS 30870 GP 0004	30870 SPC 026	30870 SPC 027	
K 685	K2-12 DO YOU PERFORM ANY TASKS ON POWER AMPLIFIERS.	0	0	0	
K 686	K2-13 DO YOU PERFORM ANY TASKS ON RF AMPLIFIERS.	0	0	0	
K 687	K2-14 DO YOU PERFORM ANY TASKS ON FREQUENCY CONVERTERS.	0	0	0	
K 688	K2-15 DO YOU PERFORM ANY TASKS ON IF AMPLIFIERS.	0	0	0	
K 689	K2-16 DO YOU PERFORM ANY TASKS ON LIMITERS.	0	0	0	
K 690	K2-17 DO YOU PERFORM ANY TASKS ON FREQUENCY DISCRIMINATORS.	0	0	0	
K 691	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS.	0	0	0	
K 692	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS.	0	0	0	
K 693	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS.	50	22	64	
K 694	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS.	55	33	67	
K 695	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS.	47	17	64	
K 696	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS.	50	17	69	
K 697	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS.	50	28	64	
K 698	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS.	55	28	72	MODULE 51 - NUMBERING SYSTEM AND MATHEMATICAL COMPUTATIONS
K 699	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM.	20	6	28	
K 700	K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD.	17	11	22	
K 701	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD.	19	11	22	
K 702	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM.	28	6	39	
L 703	L1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS.	0	0	0	
L 704	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	0	0	0	
L 705	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	0	0	0	MODULE 52 - LOGIC FUNCTIONS AND BOOLEAN EQUATIONS
L 706	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	0	0	0	
L 707	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES.	0	0	0	
L 708	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES.	0	0	0	
L 709	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES.	0	0	0	
L 710	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS.	0	0	0	
L 711	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS.	0	0	0	
L 712	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	0	0	0	
L 713	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES.	0	0	0	
L 714	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	OPERATIONS 308X0 UP 0004	308X0 SPC 026	308X0 SPC 027
L 715	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES.	0	0	0
L 716	L2-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS OR LOGIC	0	0	0
L 717	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS.	0	0	0
L 718	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	0	0	0
L 719	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS.	0	0	0
L 720	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES.	0	0	0
L 721	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS.	0	0	0
L 722	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA.	0	0	0
L 723	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES.	0	0	0
L 724	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS.	0	0	0
L 725	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE.	0	0	0
L 726	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS.	0	0	0
L 727	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS.	0	0	0
L 728	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS.	0	0	0
L 729	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS.	0	0	0
L 730	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS.	0	0	0
L 731	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS.	0	0	0
L 732	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS.	0	0	0
L 733	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS.	0	0	0
L 734	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES.	0	0	0
L 735	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS.	0	0	0
L 736	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS.	0	0	0
L 737	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS.	0	0	0
L 738	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS.	0	0	0
L 739	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS.	0	0	0

MODULE 53 - LOGIC CIRCUITS AND DIAGRAMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			OPERATIONS 30EXC 30830 30870		
		DY-TSK	GP 0004	SPC 026	SPC 027
L	740	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS.	0	0	0
L	741	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB.	2	0	0
L	742	L3-02 DO YOU USE OR REFER TO THE TERM UP-COUNTER.	0	0	0
L	743	L3-03 DO YOU USE OR REFER TO THE TERM DOWN-COUNTER.	0	0	0
L	744	L3-04 DO YOU USE OR REFER TO THE TERM SERIAL COUNTER.	0	0	0
L	745	L3-05 DO YOU USE OR REFER TO THE TERM PARALLEL COUNTER.	0	0	0
L	746	L3-06 DO YOU USE OR REFER TO THE TERM RING COUNTER.	0	0	0
L	747	L3-07 DO YOU USE OR REFER TO THE TERM DECADE COUNTER.	2	0	0
L	748	L3-08 DO YOU USE OR REFER TO THE TERM COUNT DETECT CIRCUIT.	0	0	0
L	749	L3-09 DO YOU USE OR REFER TO THE TERM DOWN CLOCK.	0	0	0
L	750	L3-10 DO YOU USE OR REFER TO THE TERM UP CLOCK.	0	0	0
L	751	L3-11 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTER HAVING COMPLEMENTED FLIP-FLOPS.	0	0	0
L	752	L3-12 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTER HAVING COMPLEMENTING	0	0	0
L	753	L3-13 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTER.	0	0	0
L	754	L3-14 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTER.	0	0	0
L	755	L3-15 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTER FEEDING A PARALLEL STORAGE	0	0	0
L	756	L3-16 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTER.	0	0	0
L	757	L3-17 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTER.	0	0	0
L	758	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR UP-COUNTER HAVING COMPLEMENTED FLIP-	0	0	0
L	759	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP- OR DOWN-COUNTER HAVING	0	0	0
L	760	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR SERIAL UP-COUNTER FEEDING A PARALLEL	0	0	0
L	761	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER A SPECIFIC INPUT PULSE FOR OTHER TYPE OF COUNTER.	0	0	0
L	762	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS.	0	0	0
L	763	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN A RING COUNTER FOR SPECIFIC INPUT PULSES.	0	0	0
L	764	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN A COUNT DETECT CIRCUIT TO INDICATE A	0	0	0

MODULE 54 - COUNTER, REGISTERS, AND STORAGE DEVICES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	GP 0004	SPC 026	SPC 027
M 765	M1-01	DO YOU WORK WITH SAWTOOTH WAVE GENERATORS.	0	0	0
M 766	M1-02	DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS.	0	0	0
M 767	M1-03	DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK.	0	0	0
M 768	M1-04	DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK.	0	0	0
M 769	M1-05	DO YOU WORK WITH BLOCKING OSCILLATORS.	0	0	0
M 770	M1-06	DO YOU USE OR REFER TO RISE TIME.	3	0	6
M 771	M1-07	DO YOU USE OR REFER TO FALL OR FLYBACK TIME.	0	0	0
M 772	M1-08	DO YOU USE OR REFER TO SWEEP TIME.	0	0	0
M 773	M1-09	DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS.	0	0	0
M 774	M1-10	DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS.	0	0	0
M 775	M1-11	DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS.	0	0	0
M 776	M1-12	DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS.	0	0	0
M 777	M2-01	DO YOU USE SIGNAL GENERATORS ON YOUR PRESENT JOB.	5	17	0
M 778	M2-02	DO YOU PERFORM OPERATIONAL OR PERFORMANCE CHECKS WHILE USING SIGNAL GENERATORS.	5	17	0
M 779	M2-03	DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING OR CALIBRATING WHILE USING SIGNAL	0	0	0
M 780	M2-04	DO YOU PERFORM TROUBLESHOOTING TO AN ASSEMBLY OR SUB-ASSEMBLY WHILE USING SIGNAL GENERATORS.	0	0	0
M 781	M2-05	DO YOU PERFORM TROUBLESHOOTING TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS.	0	0	0
M 782	M2-06	DO YOU USE AUDIO SINE-WAVE GENERATORS.	0	0	0
M 783	M2-07	DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE OR SPIKE.	0	0	0
M 784	M2-08	DO YOU USE RF GENERATORS LESS THAN 1,000 MHZ.	0	0	0
M 785	M2-09	DO YOU USE RF GENERATORS GREATER THAN 1,000 MHZ.	2	6	0
M 786	M2-10	DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS.	2	6	0
M 787	M3-01	DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR	3	6	0
M 788	M3-02	DO YOU INSPECT MOTORS.	0	0	0
M 789	M3-03	DO YOU CLEAN OR LUBRICATE MOTORS.	0	0	0
M 790	M3-04	DO YOU OPERATE MOTORS.	2	6	0
M 791	M3-05	DO YOU REMOVE OR REPLACE COMPLETE MOTORS.	0	0	0
M 792	M3-06	DO YOU REMOVE OR REPLACE MOTOR PARTS.	0	0	0
M 793	M3-07	DO YOU TROUBLESHOOT MOTORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	0	0	0
M 794	M3-08	DO YOU TROUBLESHOOT DOWN TO MOTOR COMPONENT PARTS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	GP 0004	SPC 026	SPC 027
		OPERATIONS		
M 795	M3-09 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR FIELD COILS.	0	0	0
M 796	M3-10 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ARMATURES.	0	0	0
M 797	M3-11 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR ROTORS.	0	0	0
M 798	M3-12 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR BRUSHES.	0	0	0
M 799	M3-13 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR SLIP RINGS.	0	0	0
M 800	M3-14 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR COMMUTATORS.	0	0	0
M 801	M3-15 ARE YOU REQUIRED TO PERFORM ANY TASKS ON MOTOR POLE PIECES.	0	0	0
M 802	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR.	0	0	0
M 803	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR.	0	0	0
M 804	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN A MOTOR.	0	0	0
M 805	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS.	0	0	0
M 806	M3-20 DO YOU WORK WITH INDUCTION MOTORS.	0	0	0
M 807	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS.	0	0	0
M 808	M3-22 DO YOU WORK WITH SOME COMBIN ION OF THE ABOVE MOTORS.	0	0	0
M 809	M3-23 DO YOU INSPECT GENERATORS.	0	0	0
M 810	M3-24 DO YOU CLEAN OR LUBRICATE NERATORS.	0	0	0
M 811	M3-25 DO YOU OPERATE GENERATORS.	3	6	0
M 812	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS.	0	0	0
M 813	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS.	0	0	0
M 814	M3-28 DO YOU TROUBLESHOOT GENERATORS AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO	0	0	0
M 815	H3-29 DO YOU TROUBLESHOOT DOWN TO GENERATOR COMPONENT PARTS.	0	0	0
N 816	N1-01 DO YOU WORK WITH METERS ON YOUR PRESENT JOB.	9	6	8
N 817	N1-02 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER PERMANENT MAGNETS.	3	0	0
N 818	N1-03 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER MOVING COILS.	0	0	0
N 819	N1-04 DO YOU DESCRIBE THE FUNCTIONS OR USES OF METER SPIRAL SPRINGS.	3	0	0
N 820	N1-05 DO YOU READ METER SCALES.	6	4	8
N 821	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS.	0	0	0
N 822	N1-07 DO YOU ZERO OHMMETERS.	0	0	0
N 823	N1-08 DO YOU ZERO AMMETERS.	0	0	0
N 824	N1-09 DO YOU EXTEND THE RAN E OF VOLTMETERS.	0	0	0

MODULE 18 - METEP MOVEMENTS AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30SX0 30S30 30S70

	DY-TSK	GP 0004	SPC 026	SPC 027	
N 825	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (IT IS EXPRESSED IN UNITS OF OHMS PER VOLT).	0	0	0	
N 826	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB.	0	0	0	
N 827	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	0	0	0	
N 828	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	0	0	0	
N 829	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	0	0	0	
N 830	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	0	0	0	
N 831	N2-06 DO YOU REMOVE OR REPLACE COMPLETE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS.	0	0	0	
N 832	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS COMPONENTS.	2	6	0	MODULE 40 - SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 833	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS.	0	0	0	
N 834	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD	0	0	0	
N 835	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS THE REACTOR WINDING OR LOAD RESISTOR OF A SINGLE WINDING SATURABLE	2	6	0	
N 836	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS.	0	0	0	
N 837	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN A SATURABLE REACTOR.	0	0	0	
N 838	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN A SATURABLE REACTOR.	0	0	0	
N 839	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN A SATURABLE REACTOR.	0	0	0	
N 840	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN A SATURABLE REACTOR.	0	0	0	
N 841	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS.	0	0	0	
N 842	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS ON YOUR PRESENT JOB.	0	0	0	
N 843	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS.	0	0	0	
N 844	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW).	0	0	0	MODULE 48 - SOLID STATE SAWTOOTH GENERATORS
N 845	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	0	0	0	
N 846	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	0	0	0	MODULE 49 - SOLID STATE TRAPEZOIDAL GENERATORS
N 847	N3-06 DO YOU USE OR REFER TO DIFFERENTIANGON CIRCUITS.	0	0	0	
N 848	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS.	0	0	0	
N 849	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30BX0 30830 30870

		DY-TSK	GP 0004	SPC 026	SPC 027
N	850	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME	0	0	0
N	851	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS.	0	0	0
N	852	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS.	0	0	0
O	853	01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS ON YOUR PRESENT JOB.	0	0	0
O	854	01-02 DO YOU INSPECT SSB SYSTEMS.	0	0	0
O	855	01-03 DO YOU CLEAN SSB SYSTEMS.	0	0	0
O	856	01-04 DO YOU ALIGN SSB SYSTEMS.	0	0	0
O	857	01-05 DO YOU TROUBLESHOOT TO SSB SYSTEMS.	0	0	0
O	858	01-06 DO YOU TROUBLESHOOT TO SSB COMPONENTS.	0	0	0
O	859	01-07 DO YOU REMOVE OR REPLACE SSB SYSTEMS.	0	0	0
O	860	01-08 DO YOU REMOVE OR REPLACE SSB COMPONENTS.	0	0	0
O	861	01-09 DO YOU PERFORM ANY TASKS ON SSB AUDIO AMPLIFIER.	0	0	0
O	862	01-10 DO YOU PERFORM ANY TASKS ON SSB BALANCED MODULATORS.	0	0	0
O	863	01-11 DO YOU PERFORM ANY TASKS ON SSB CARRIER OSCILLATORS.	0	0	0
O	864	01-12 DO YOU PERFORM ANY TASKS ON SSB LC FILTERS.	0	0	0
O	865	01-13 DO YOU PERFORM ANY TASKS ON SSB CRYSTAL FILTERS.	0	0	0
O	866	01-14 DO YOU PERFORM ANY TASKS ON SSB MECHANICAL FILTERS.	0	0	0
O	867	01-15 DO YOU PERFORM ANY TASKS ON SSB OSCILLATORS.	0	0	0
O	868	01-16 DO YOU PERFORM ANY TASKS ON SSB MIXERS.	0	0	0
O	869	01-17 DO YOU PERFORM ANY TASKS ON SSB DRIVERS.	0	0	0
O	870	01-18 DO YOU PERFORM ANY TASKS ON SSB POWER AMPLIFIERS.	0	0	0
O	871	01-19 DO YOU PERFORM ANY TASKS ON SSB RF AMPLIFIERS.	0	0	0
O	872	01-20 DO YOU PERFORM ANY TASKS ON SSB FREQUENCY CONVERTERS.	0	0	0
O	873	01-21 DO YOU PERFORM ANY TASKS ON SSB IF AMPLIFIERS.	0	0	0
O	874	01-22 DO YOU PERFORM ANY TASKS ON SSB DEMODULATORS.	0	0	0
O	875	01-23 DO YOU PERFORM ANY TASKS ON SSB DON'T REMEMBER WHICH SYSTEM STAGES.	0	0	0
O	876	01-24 DO YOU USE OR REFER TO SELECTIVE FADING.	0	0	0
O	877	01-25 DO YOU USE OR REFER TO PEAK POWER.	0	0	0
O	878	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY.	0	0	0
O	879	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS.	0	0	0
O	880	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS.	0	0	0
O	881	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS.	0	0	0
O	882	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS.	0	0	0
O	883	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS ON YOUR PRESENT JOB.	2	6	0

MODULE 70 - SINGLE SIDEBAND SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	OPERATIONS GP 0004	SPC 026	SPC 027
O	884	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS.	[illegible]	0	0
O	885	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS.	0	0	0
O	886	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS.	0	0	0
O	887	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS.	0	0	0
O	888	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS.	0	0	0
O	889	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS.	0	0	0
O	890	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS.	0	0	0
O	891	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS.	0	0	0
O	892	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS.	0	0	0
O	893	02-11 DO YOU WORK ON PULSE POSITION MODULATION (PPM) SYSTEMS.	0	0	0
O	894	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS.	2	0	0
O	895	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS.	0	0	0
O	896	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF PULSE MODULATION SYSTEM.	0	0	0
O	897	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES.	0	0	0
O	898	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKE AND CHARGING DIODES.	0	0	0
O	899	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS.	0	0	0
O	900	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS.	0	0	0
O	901	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS.	0	0	0
O	902	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS.	0	0	0
O	903	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES.	0	0	0
O	904	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS.	0	0	0
O	905	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS.	0	0	0
O	906	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS.	0	0	0
O	907	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS.	0	0	0
O	908	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS.	0	0	0
O	909	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS.	0	0	0
O	910	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH STAGE.	0	0	0

MODULE 71 - PULSE MODULATION SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 30830 30870

	DY-TSK	GP 0004	SPC 026	SPC 027
0 911	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF).	0	0	0
0 912	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT).	0	0	0
0 913	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW).	0	0	0
0 914	02-32 DO YOU USE OR REFER TO PULSE SHAPE.	0	0	0
0 915	02-33 DO YOU USE OR REFER TO PEAK POWER.	0	0	0
0 916	02-34 DO YOU USE OR REFER TO AVERAGE POWER.	0	0	0
0 917	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	0	0	0
0 918	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF).	0	0	0
0 919	02-37 DO YOU CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEM.	0	0	0
0 920	02-38 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS.	0	0	0
0 921	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS.	0	0	0
0 922	02-40 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS.	0	0	0
0 923	03-01 DO YOU WORK WITH ANTENNAS ON YOUR PRESENT JOB.	0	11	0
0 924	03-02 DO YOU INSPECT ANTENNAS.	0	0	0
0 925	03-03 DO YOU CLEAN ANTENNAS.	0	0	0
0 926	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS.	0	0	0
0 927	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS.	0	0	0
0 928	03-06 DO YOU TROUBLESHOOT TO ANTENNA.	0	0	0
0 929	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS.	0	0	0
0 930	03-08 DO YOU REMOVE OR INSTALL ANTENNAS.	0	0	0
0 931	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OR ANTENNAS.	0	0	0
0 932	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E (ELECTRIC FIELD) LINES.	0	0	0
0 933	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H (MAGNETIC FIELD) LINES.	0	0	0
0 934	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR	0	0	0
0 935	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	0	0	0
0 936	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS	0	0	0
0 937	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS	0	0	0
0 938	03-16 DO YOU WORK WITH HERTZ ANTENNAS.	0	0	0
0 939	03-17 DO YOU WORK WITH MARCONI ANTENNAS.	0	0	0

MODULE 67 - ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
303X0 30330 30370

DY-TSK	GP 0004	SPC 026	SPC 027
O 940 03-18 DO YOU WORK WITH BROADSIDE ARRAYS.	0	0	0
O 941 03-19 DO YOU WORK WITH END-FIRE ARRAYS.	2	6	0
O 942 03-20 DO YOU WORK WITH CARDIOID ARRAYS.	0	0	0
O 943 03-21 DO YOU WORK WITH COLLINEAR ARRAYS.	0	0	0
O 944 03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH	0	0	0
O 945 03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS.	0	0	0
O 946 03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS.	0	0	0
O 947 03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS.	0	0	0
O 948 03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA	0	0	0
O 949 03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN THE ANTENNA	0	0	0
O 950 03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED.	0	0	0
O 951 03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED.	5	6	6
O 952 03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON.	0	0	0
O 953 03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	0	0	0
O 954 03-32 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS.	2	6	0
O 955 03-33 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS.	2	6	0
O 956 03-34 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS.	2	6	0
O 957 03-35 DO YOU WORK WITH ANTENNA ARRAYS WHICH CONTAIN DON'T REMEMBER.	0	0	0
O 958 03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS.	3	6	3
O 959 03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS.	0	0	0
O 960 03-38 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF ANTENNAS.	0	0	0
O 961 03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS.	3	6	3
P 962 P1-01 TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS	0	0	0
P 963 P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I R LOSS IN TRANSMISSION LINES.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30870 30830 30870

	BY-TSK	GP 0004	SPC 026	SPC 027	
P 964	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES.	0	0	0	
P 965	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES.	0	0	0	
P 966	P1-05 DO YOU REFER TO OR USE DIELECTRIC LOSS IN TRANSMISSION LINES.	0	0	0	
P 967	P1-06 DO YOU REFER TO OR USE LEAKAGE LOSSES IN TRANSMISSION LINES.	0	0	0	
P 968	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES.	0	0	0	MODULE 66 - TRANSMISSION LINES
P 969	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES.	0	0	0	
P 970	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES.	0	0	0	
P 971	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE.	0	0	0	
P 972	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE.	0	0	0	
P 973	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES.	0	0	0	
P 974	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	0	0	0	
P 975	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINE TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS.	0	0	0	
P 976	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS.	0	0	0	
P 977	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	0	0	0	
P 978	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES.	0	0	0	
P 979	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER-	0	0	0	
P 980	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOAD USING MATCHING TRANSFORMERS.	0	0	0	
P 981	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING DELTA MATCHING.	0	0	0	
P 982	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR A PARTICULAR JOB WITHOUT REFERRING TO TECHNICAL	0	0	0	
P 983	P1-22 DO YOU REFER TO OR USE THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES.	0	0	0	
P 984	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES.	0	0	0	
P 985	P1-24 DO YOU REFER TO OR USE THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES.	0	0	0	
P 986	P1-25 DO YOU REFER TO OR USE THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES.	0	0	0	
P 987	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES.	0	0	0	
P 988	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF A PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES.	0	0	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	OPERATIONS 308X0 GP 0009	30830 SPC 026	308P0 SPC 027
P 989	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE PHYSICAL LENGTH OF A TRANSMISSION LINE REMAINS	0	0	0
P 990	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES.	0	0	0
P 991	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES.	0	0	0
P 992	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO A LOAD USING STUB MATCHING.	0	0	0
P 993	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS ON YOUR PRESENT JOB.	0	0	0
P 994	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P 995	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P 996	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P 997	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P 998	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P 999	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P1000	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS.	0	0	0
P1001	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDE.	0	0	0
P1002	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS.	0	0	0
P1003	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS.	0	0	0
P1004	P2-12 DO YOU REMOVE OR INSTALL E BENDS.	0	0	0
P1005	P2-13 DO YOU REMOVE OR INSTALL H BENDS.	0	0	0
P1006	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS.	0	0	0
P1007	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS.	0	0	0
P1008	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS.	0	0	0
P1009	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS.	0	0	0
P1010	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS.	0	0	0
P1011	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES.	0	0	0
P1012	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES.	0	0	0
P1013	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES.	0	0	0
P1014	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES.	0	0	0
P1015	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES.	0	0	0
P1016	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS.	0	0	0
P1017	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS.	0	0	0
P1018	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS.	0	0	0
P1019	P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7	0	0	0
P1020	P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH	0	0	0

MODULE 74 - WAVEGUIDES AND CAVITY RESONATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30840 30850 30870

	DY-TSK	GP 0004	SPC 026	SPC 027
P1021	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OFF.	0	0	0
P1022	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION.	0	0	0
P1023	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	0	0	0
P1024	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1025	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1026	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" AND "H" LINES IN WAVEGUIDES.	0	0	0
P1027	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1028	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1029	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1030	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1031	P1-39 ARE DON'T REMEMBER WHICH ENERGY COUPLING DEVICE USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1032	P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT	0	0	0
P1033	P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0
P1034	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERATURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT	0	0	0
P1035	P2-43 ARE CHOKE JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1036	P2-44 ARE ROTATING JOINTS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1037	P2-45 ARE DON'T REMEMBER WHICH KIND OF JOINT USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH.	0	0	0
P1038	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING.	0	0	0
P1039	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING.	0	0	0
P1040	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING.	0	0	0
P1041	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER HOW.	0	0	0
P1042	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
308X0 30830 30970

	BY-TSK	GP 0004	SPC 026	SPC 027
P1043	P3-01 ON YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	0	0	0
P1044	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE.	0	0	0
P1045	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME.	0	0	0
P1046	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE.	0	0	0
P1047	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY.	0	0	0
P1048	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION.	0	0	0
P1049	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING.	0	0	0
P1050	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS.	0	0	0
P1051	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS.	0	0	0
P1052	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS.	0	0	0
P1053	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT).	0	0	0
P1054	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS.	0	0	0
P1055	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS.	0	0	0
P1056	P3-14 DO YOU WORK WITH MAGNETRONS.	0	0	0
P1057	P3-15 DO YOU INSPECT TWT OR KLYSTRONS.	0	0	0
P1058	P3-16 DO YOU CLEAN TWT OR KLYSTRONS.	0	0	0
P1059	P3-17 DO YOU TUNE TWT OR KLYSTRONS ELECTRICALLY.	0	0	0
P1060	P3-18 DO YOU TUNE TWT OR KLYSTRONS MECHANICALLY.	0	0	0
P1061	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF TWT OR KLYSTRONS.	0	0	0
P1062	P3-20 DO YOU TROUBLESHOOT TWT OR KLYSTRONS.	0	0	0
P1063	P3-21 DO YOU REMOVE OR REPLACE COMPLETE TWT OR KLYSTRON ASSEMBLY.	0	0	0
P1064	P3-22 DO YOU REMOVE OR REPLACE TWT OR KLYSTRON COMPONENTS.	0	0	0
P1065	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS.	0	0	0
P1066	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS.	0	0	0
P1067	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS.	0	0	0
P1068	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS.	0	0	0
P1069	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS.	0	0	0
P1070	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS.	0	0	0
P1071	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIERS.	0	0	0
P1072	P3-30 DO YOU REMOVE OR REPLACE COMPONENTS OF PARAMETRIC AMPLIFIERS.	0	0	0
P1073	P3-31 DO YOU INSPECT MAGNETRONS.	0	0	0
P1074	P3-32 DO YOU CLEAN MAGNETRONS.	0	0	0
P1075	P3-33 DO YOU ADJUST MAGNETRONS.	0	0	0
P1076	P3-34 DO YOU TUNE MAGNETRONS.	0	0	0
P1077	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS.	0	0	0

MODULE 75 - MICROWAVE AMPLIFIERS AND OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	GP G004	SPC 026	SPC 027
P1078 P3-36 DO YOU TROUBLESHOOT MAGNETRONS.	0	0	0
P1079 P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON ASSEMBLY.	0	0	0
P1080 P3-38 DO YOU REMOVE OR REPLACE COMPONENTS OF MAGNETRONS.	0	0	0
P1081 P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON COLLECTOR PLATES.	0	0	0
P1082 P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER CAVITIES.	0	0	0
P1083 P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON CATCHER GRIDS.	0	0	0
P1084 P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON FEEDBACK LOOPS.	0	0	0
P1085 P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON DRIFT SPACES.	0	0	0
P1086 P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER GRIDS.	0	0	0
P1087 P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRON BUNCHER CAVITIES.	0	0	0
P1088 P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS.	0	0	0
P1089 P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES.	0	0	0
P1090 P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES.	0	0	0
P1091 P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS.	0	0	0
P1092 P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS.	0	0	0
P1093 P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES.	0	0	0
P1094 P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS.	0	0	0
P1095 P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS.	0	0	0
P1096 P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES.	0	0	0
P1097 P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS.	0	0	0
P1098 P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT FILAMENTS.	0	0	0
P1099 P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT CATHODES.	0	0	0
P1100 P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MODULATOR GRIDS.	0	0	0
P1101 P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ANODES.	0	0	0
P1102 P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT HELIXES.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
[illegible]

DY-TSK	GP G004	SPC 026	SPC 027
P1103 P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT COLLECTORS.	0	0	0
P1104 P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT MAGNETS.	0	0	0
P1105 P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWT ATTENUATORS.	0	0	0
P1106 P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS.	0	0	0
P1107 P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES.	0	0	0
P1108 P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES.	0	0	0
P1109 P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES.	0	0	0
P1110 P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS.	0	0	0
P1111 P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES.	0	0	0
P1112 P3-70 DO YOU PERFORM TASKS ON MAGNETRON ANODES.	0	0	0
P1113 P3-71 DO YOU PERFORM TASKS ON MAGNETRON ANODE COOLING PINS.	0	0	0
P1114 P3-72 DO YOU PERFORM TASKS ON MAGNETRON COUPLING LOOPS.	0	0	0
P1115 P3-73 DO YOU PERFORM TASKS ON MAGNETRON HEATER LEADS.	0	0	0
P1116 P3-74 DO YOU PERFORM TASKS ON MAGNETRON RESONANT CAVITIES.	0	0	0
P1117 P3-75 DO YOU PERFORM TASKS ON MAGNETRON CATHODES.	0	0	0
P1118 P3-76 DO YOU PERFORM TASKS ON MAGNETRON MAGNETS.	0	0	0
Q1119 Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS.	3	0	6
Q1120 Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS.	2	0	3
Q1121 Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOL OF SHIFT REGISTERS.	0	0	0
Q1122 Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOL OF STORAGE REGISTERS.	0	0	0
Q1123 Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS.	0	0	0
Q1124 Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE REGISTER.	0	0	0
Q1125 Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	0	0	0
Q1126 Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB.	11	17	6
Q1127 Q2-02 DO YOU USE OR REFER TO DELAY LINES.	5	6	3
Q1128 Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES.	3	0	3
Q1129 Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS.	3	0	3
Q1130 Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES.	8	11	3
Q1131 Q2-06 DO YOU USE OR REFER TO ACCESS TIMES OR SPEED OF MEMORY SYSTEMS.	3	0	3

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	OPERATIONS 30690 JP J004	30330 SPC U26	30370 SPC U27
Q1132 Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS.	5	6	3
Q1133 Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS.	4	6	0
Q1134 Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES.	0	0	0
Q1135 Q3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DIGITAL-TO-ANALOG (D\A) CONVERTERS, ANALOG-TO-DIGITAL (A\D)	9	11	11
Q1136 Q3-02 DO YOU COMPUTE THE OUTPUT VOLTAGE OR AN ELECTRO MECHANICAL DIGITAL-TO-ANALOG (D\A) CONVERTER FOR A	0	0	0
Q1137 Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN A ELECTROMECHANICAL DIGITAL-TO-ANALOG (D\A)	0	0	0
Q1138 Q3-04 DO YOU COMPUTE THE ANALOG VOLTAGE FOR A GIVEN BINARY COUNT IN ELECTRONIC DIGITAL-TO-ANALOG (D\A)	0	0	0
Q1139 Q3-05 DO YOU PERFORM ANY TASKS ON THE SAMPLE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	0	0	0
Q1140 Q3-06 DO YOU PERFORM ANY TASKS ON THE HOLD FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	0	0	0
Q1141 Q3-07 DO YOU PERFORM ANY TASKS ON THE COMPARE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	0	0	0
Q1142 Q3-08 DO YOU PERFORM ANY TASKS ON THE DIGITIZE FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D) CONVERTER	0	0	0
Q1143 Q3-09 DO YOU PERFORM ANY TASKS ON THE DON'T REMEMBER WHICH FUNCTION OF VARIABLE TIME ANALOG-TO-DIGITAL (A\D)	0	0	0
Q1144 Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A\D CONVERTERS.	0	0	0
Q1145 Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A\D CONVERTERS.	0	0	0
Q1146 Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A\D CONVERTERS.	0	0	0
Q1147 Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A\D CONVERTERS.	0	0	0
Q1148 Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A\D) CONVERTERS.	0	0	0
R1149 R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY ON YOUR PRESENT JOB.	0	0	0
R1150 R2-01 ON YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS.	0	0	0

MODULE 55 - DIGITAL/ANALOG CONVERTERS

PCT MBRS ANSWRG YES FOR OPER DAFSC GPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

OPERATIONS
30340 30350 30370

DY-TSK	GP 0004	SPC 026	SPC 027
R1151 R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS.	0	0	0
R1152 R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS.	0	0	0
R1153 R3-01 ON YOUR PRESENT JOB DO YOU FABRICATE MULTI-CONDUCTOR CABLES.	0	0	0
R1154 R3-02 DO YOU FABRICATE COAXIAL CABLES.	0	0	0
S1155 S1-01 ON YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS.	14	11	11
S1156 S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OF NIXIE LIGHT DECODER SYSTEMS.	2	4	0
S1157 S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA.	0	0	0
S1158 S2-01 DO YOU WORK WITH PHOTO TUBES ON YOUR PRESENT JOB.	0	0	0
S1159 S3-01 ON YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS.	0	0	0
S1160 S3-02 DO YOU MEASURE EXCITATION FREQUENCY OF CHOPPER COILS.	0	0	0
S1161 S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	0	0	0
S1162 S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCY OF CHOPPER COILS.	0	0	0
S1163 S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIP OF CHOPPER COILS.	0	0	0
S1164 S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	0	0	0
S1165 S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	0	0	0
S1166 S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	0	0	0
S1167 S3-09 DO YOU USE COMPARISON IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION.	0	0	0
T1168 T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS.	3	6	3
T1169 T1-02 DO YOU INSPECT INFRARED SYSTEMS.	0	0	0
T1170 T1-03 DO YOU CLEAN INFRARED SYSTEMS.	0	0	0
T1171 T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS.	0	0	0
T1172 T1-05 DO YOU OPERATE INFRARED SYSTEMS.	2	0	3
T1173 T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS.	0	0	0
T1174 T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	0	0	0
T1175 T1-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF INFRARED SYSTEMS.	0	0	0
T1176 T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS.	0	0	0
T1177 T1-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF INFRARED SYSTEMS.	0	0	0

MODULE 78 - FABRICATE MULTI-CONDUCTOR AND COAXIAL CABLES

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	OPERATIONS 305X0 30330 30370 GP 0004	SPC 026	SPC 027
T1178 T1-11 DO YOU USE OR REFER TO FAR REGION.	0	0	0
T1179 T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION.	0	0	0
T1180 T1-13 DO YOU USE OR REFER TO NEAR REGION.	0	0	0
T1181 T1-14 DO YOU USE OR REFER TO MICRON(M).	0	0	0
T1182 T1-15 DO YOU USE OR REFER TO GRAY BODIES.	0	0	0
T1183 T1-16 DO YOU USE OR REFER TO BLACK BODIES.	0	0	0
T1184 T1-17 DO YOU USE OR REFER TO ABSORPTION.	0	0	0
T1185 T1-18 DO YOU USE OR REFER TO SCATTERING.	0	0	0
T1186 T1-19 DO YOU USE OR REFER TO ABSOLUTE ZERO.	0	0	0
T1187 T1-20 DO YOU PERFORM TASKS ON BLITZ.	0	0	0
T1188 T1-21 DO YOU PERFORM TASKS ON TARGET BUTTONS.	0	0	0
T1189 T1-22 DO YOU PERFORM TASKS ON ERECTOR LENSES.	0	0	0
T1190 T1-23 DO YOU PERFORM TASKS ON OCULAR LENSES.	0	0	0
T1191 T1-24 DO YOU PERFORM TASKS ON CORRECTION LENSES.	0	0	0
T1192 T1-25 DO YOU PERFORM TASKS ON FILTERS.	0	0	0
T1193 T1-26 DO YOU PERFORM TASKS ON SPHERICAL MIRRORS.	0	0	0
T1194 T1-27 DO YOU PERFORM TASKS ON PLANE MIRRORS.	0	0	0
T1195 T2-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS.	2	0	3
T1196 T2-02 DO YOU INSPECT LASERS.	0	0	0
T1197 T2-03 DO YOU CLEAN LASERS.	0	0	0
T1198 T2-04 DO YOU ADJUST OR CALIBRATE LASERS.	0	0	0
T1199 T2-05 DO YOU OPERATE LASERS.	0	0	0
T1200 T2-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASERS.	0	0	0
T1201 T2-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASERS.	0	0	0
T1202 T2-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF LASERS.	0	0	0
T1203 T2-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASERS.	0	0	0
T1204 T2-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASERS.	0	0	0
T1205 T2-11 DO YOU USE OR REFER TO ANGSTROMS (A).	0	0	0
T1206 T2-12 DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS.	0	0	0
T1207 T2-13 DO YOU USE OR REFER TO GROUND STATE.	0	0	0
T1208 T2-14 DO YOU USE OR REFER TO EXCITED STATE.	0	0	0
T1209 T2-15 DO YOU USE OR REFER TO PACKET OF RADIATION.	0	0	0
T1210 T2-16 DO YOU USE OR REFER TO PHOTONS.	0	0	0
T1211 T2-17 DO YOU USE OR REFER TO SPONTANEOUS EMISSION.	0	0	0
T1212 T2-18 DO YOU USE OR REFER TO STIMULATED EMISSION.	0	0	0
T1213 T2-19 DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE.	0	0	0
T1214 T2-20 DO YOU USE OR REFER TO INVERSION LEVEL.	0	0	0
T1215 T2-21 DO YOU USE OR REFER TO MONOCHROMATIC.	0	0	0
T1216 T2-22 DO YOU WORK WITH ACTIVE MATERIALS.	0	0	0
T1217 T2-23 DO YOU WORK WITH PUMPING SOURCE.	0	0	0
T1218 T2-24 DO YOU WORK WITH FULL SILVERED (100_ REFLECTIVE) MIRRORS.	0	0	0
T1219 T2-25 DO YOU WORK WITH HALF SILVERED (92_ REFLECTIVE) MIRRORS.	0	0	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	OPERATIONS 308X0 GP 0004	30830 SPC 026	30870 SPC 027
T1220	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES.	0	0	0
T1221	T2-27 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH RUBY.	0	0	0
T1222	T2-28 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-NEON.	0	0	0
T1223	T2-29 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH HELIUM-XENON.	0	0	0
T1224	T2-30 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH XENON.	0	0	0
T1225	T2-31 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH CESIUM-HELIUM.	0	0	0
T1226	T2-32 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH ARGON.	0	0	0
T1227	T2-33 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH NEODYMIUM IN GLASS.	0	0	0
T1228	T2-34 DOES YOUR PRESENT JOB INVOLVE ANY TASKS WHICH REQUIRE YOU TO WORK WITH GALLIUM ARSENIDE.	0	0	0
T1229	T3-01 ON YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE	6	6	6
T1230	T3-02 DO YOU INSPECT DVST OR MMST.	0	0	0
T1231	T3-03 DO YOU CLEAN DVST OR MMST.	0	0	0
T1232	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST.	0	0	0
T1233	T3-05 DO YOU OPERATE (OPERATE A SYSTEM THAT CONTAINS A DVST OR MMST).	2	0	0
T1234	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS.	0	0	0
T1235	T3-07 DO YOU REMOVE OR REPLACE THE DVST OR MMST TUBE FROM ITS MAJOR ASSEMBLY OR UNIT (YOU ACTUALLY REMOVE	0	0	0
T1236	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF DVST.	0	0	0
T1237	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO BE ABLE TO NAME THE VARIOUS ELEMENTS OF MMST.	0	0	0
T1238	T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS.	0	0	0
T1239	T3-11 DO YOU PERFORM TASKS ON WRITE GUNS.	0	0	0
T1240	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS.	0	0	0
T1241	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS.	0	0	0
T1242	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS.	0	0	0
U1243	U1-01 ON YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS.	13	22	8
U1244	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS.	5	6	6
U1245	U1-03 DO YOU USE OR REFER TO PROGRAMS.	11	22	8
U1246	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS.	6	6	8
U1247	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS.	0	0	0
U1248	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS.	0	0	0
U1249	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS.	8	11	8
U1250	U1-08 DO YOU USE OR REFER TO TIME-SHARING.	3	0	4

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	OPERATIONS 308X0 GP 0004	30830 SPC 026	30870 SPC 027
U1251	U1-09 DO YOU USE OR REFER TO DATA WORDS.	8	11	8
U1252	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS.	9	11	8
U1253	U1-11 DO YOU USE OR REFER TO ADDRESS\SUBADDRESS.	5	11	3
U1254	U1-12 DO YOU USE OR REFER TO STEERING\INFORMATION.	0	0	0
U1255	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS.	2	6	0
U1256	U1-14 DO YOU PER WM TASKS ON SINGLE LEVEL PROGRAMMING SYSTEMS.	0	0	0
U1257	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING SYSTEMS.	2	6	0
U1258	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES.	9	6	11
U1259	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES.	2	6	0
U1260	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS.	0	0	0
U1261	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS.	2	6	0
U1262	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES.	6	6	6
U1263	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES.	0	0	0
U1264	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION.	8	0	11
U1265	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS.	3	0	3
U1266	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS.	3	0	3
U1267	DUMMY QUESTION TO FACILITATE SETCHECK	0	0	0