

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

PREFACE

1. The Fire Control Instrument Repairer Course is designed to provide instruction for the tasks listed in Section I of this POI. The Terminal Learning Objectives for each lesson in Section IV have been developed from the task list.
2. All agencies and commands receiving graduates of this course, and specifically those sighted in Section VI, are requested to review the contents of this POI and evaluate performance of the graduates against field requirements. Comments and recommendations may be submitted to:

COMMANDING OFFICER
Marine Detachment
U. S. Army Ordnance Center and School
Aberdeen Proving Ground, Maryland 21005-5281
ATTN: Curriculum Development Officer

3. The following information for this course has been submitted for inclusion in the current edition of NAVMC 2771 (Formal School Catalog):

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

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ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION I - COURSE DESCRIPTIVE DATA

1. COURSE TITLE. Electro-Optical Ordnance Repairer
2. LOCATION. United States Marine Corps, Marine Detachment, U.S. Army Ordnance Center and School, Aberdeen Proving Ground, MD 21005-5281
3. COURSE ID. A0157L1
4. OTHER SERVICE COURSE NUMBER. 670-2171
5. MILITARY ARTICLES AND SERVICE LIST NUMBER. N/A
6. PURPOSE. To train enlisted personnel in electro-optical inspection and maintenance procedures for ground ordnance fire control equipment, night vision devices, small missiles systems, LASER's, shop procedures, maintenance administration and use of publications.
7. SCOPE. The course focuses on inspection and maintenance of the Electro-Optical equipment used in tanks, howitzers, light armored vehicles, guided missile systems, LASER's, night vision equipment and survey instruments. Students are instructed in electrical theory, electronics, digital and analog circuits, series, parallel, and series/parallel circuits, AC/DC circuits, intergrated circuits, schematic analysis, precision soldering, and test equipment diagnostic troubleshooting.
8. LENGTH (PEACETIME). 99 Training Days
9. CURRICULUM BREAKDOWN (PEACETIME).
 - 708.00 Academic Hours
 - 1.50 Administrative
 - 31.40 Demonstration
 - 27.50 Interactive Courseware
 - 129.50 Lecture
 - 372.50 Practical Application
 - 117.90 Performance Exam
 - 27.70 Written Exam
 - 83.00 Administrative Hours
 - 19.00 Administrative
 - 64.00 Commanders Time
10. LENGTH (MOBILIZATION). 78 Training Days
11. CURRICULUM BREAKDOWN (MOBILIZATION). Same as Peacetime.
12. MAXIMUM CLASS CAPACITY. 8
13. OPTIMUM CLASS CAPACITY. 8
14. MINIMUM CLASS CAPACITY. 6
15. CLASS FREQUENCY. 16
16. STUDENT PREREQUISITES.
 - (A) Must have an MM score of 105 or higher.
 - (B) Must have an EL score of 115 or higher.
 - (C) Must have normal color vision
 - (D) ENTNAC or NAC completed with favorable results.
 - (E) Must be a U.S. citizen.
 - (F) Must be eligible for a secret security clearance.

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SECTION I - COURSE DESCRIPTIVE DATA

17. MOS RECEIVED. 2171
18. QUOTA CONTROL. Training Command (C475)
19. FUNDING. TECOM (C464)
20. REPORTING INSTRUCTIONS. Students report to the Commanding Officer, Marine Detachment, U.S. Army Ordnance Center & School, Aberdeen Proving Ground, Maryland 21005. All students should report in by 2359 the Wednesday prior to the start date. Report to Bldg 4501, Randolph Barracks, Commercial phone 1-800-392-2015 ext: 5703 or DSN: 298-5703. Marines will report in Service Alpha Uniform. Privately Owned Vehicles (POV) and family members are not authorized. Government Messing and Billeting are available.
21. INSTRUCTOR STAFFING REQUIREMENTS. See Appendix A for Instructor Computation Worksheet.

LN#	GRADE	MOS	BILLET DESCRIPTION	REQUIRED
199E	E7	2171	INSTRUCTOR	1
199F	E7	2171	INSTRUCTOR	2
199G	E6	2171	INSTRUCTOR	5
199H	E5	2171	INSTRUCTOR	6

22. SCHOOL OVERHEAD REQUIREMENTS.

LN#	GRADE	MOS	BILLET DESCRIPTION	REQUIRED
193A	O4	2102	COMMANDING OFFICER/MC REP	1
193B	O3E	2102	XO/INSTRUCTOR	1
193C	E8	9999	FIRST SERGEANT	1
193E	E3	2161	POLICE SERGEANT	1
194A	E6	0193	ADMIN CHIEF	1
194B	E5	0121	ADMIN CLERK	1
194C	E4	0121	UNIT DIARY CLERK	1
194D	E3	0121	UNIT DIARY CLERK	1
194E	E4	0121	PERSONNEL CLERK	1
194F	E3	0151	ADMIN CLERK	2
195A	O3E	2102	CRS DEV SUPERVISOR	1
195C	E7	2111	ACADEMIC COORDINATOR	1
195D	E6	2146	CURRICULUM DEV/INSTRUCTOR	1
195E	E6	2111	CURRICULUM DEV/INSTRUCTOR	1
196A	E7	3043	SUPPLY CHIEF	1
196B	E4	3043	SUPPLY NCO	1
196C	E3	3043	SUPPLY CLERK	1
196D	E3	3043	SUPPLY CLERK	1
199A	W-3	2125	PLT COMDR/COURSE DIR	1
199B	E6	0369	PLATOON SERGEANT	1
199C	E8	2181	SENIOR INSTRUCTOR	1
199O	E9	2181	MOS SPECIALIST	1
199P	E6	2171	CURRICULUM DEV/INSTRUCTOR	1
UNK1	E6	2100	MAT PLT SGT	1
UNK3	E7	2100	S-3 OPERATIONS & TRAINING/SACO	1
UNK4	E7	2100	DETACHMENT GUNNERY SERGEANT	1
UNK6	E7	2100	ISC/COMPUTER REPAIR/NETWORK ADMIN	1

Comments Line# UNK1 : Marines Awaiting Training, one instructor is tasked with this duty for 6 months out of the year. This billet is a full time job and the Marine is taken from one of the platoons.

Comments Line# UNK3 : This billet is a full time job, which is responsible for all permanent party training and the Marine is taken from one of the platoons.

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Comments Line# UNK4 : The Detachment Gunnery Sergeant is in charge of barracks, grounds and maintenance. This billet is a full time job and the Marine is taken from one of the platoons.

Comments Line# UNK6 : The ISC is responsible for all the computer assets and LAN connections throughout the Detachment. This billet is a full time job and the Marine is taken from one of the platoons.

23. TRAINING/EDUCATION SUPPORT REQUIREMENTS.

The following facility requirements are identified for one iteration of this course:

<u>FACILITY</u>	<u>FACILITY ID</u>	<u>SQ FT</u>	<u>REQ'D</u>	<u>ON HAND</u>	<u>SHORT</u>
1200 GENERAL PURPOSE CLAS	17120-1200-60	1200	12	12	0
2000 GENERAL PURPOSE CLAS	17120-2000-60	2000	2	2	0
600 GENERAL PURPOSE CLASS	17120-600-50	600	10	10	0
650 GENERAL PURPOSE CLASS	171-30	650	4	4	0
MAINT BAY	17130	9999	1	1	0
SHOP	17130	2000	1	1	0

The following materiel requirements are identified for one iteration of this course:

<u>NOMEMCLATURE</u>	<u>NSN</u>	<u>UNIT OF ISSUE</u>	<u>REQ'D</u>	<u>ON HAND</u>	<u>SHORT</u>
*ADHESIVE	8040-01-024-6988	DOZEN	2	2	0
*AN/PAM-1 TEST SET	6655-01-120-0764	EACH	4	4	0
*AN/PSM-45 DMM	6625-01-139-2512	EACH	4	4	0
*AURAL SOUND SUPPRESSORS	6515-00-137-6345	EACH	12	12	0
*BREAKOUT BOX	5999-01-130-8077	EACH	4	4	0
*CALIPER, VERNIER 0-12"	5210-00-293-2913	EACH	8	8	0
*CALIPER, VERNIER 0-6"	5210-00-250-4761	EACH	8	8	0
*CALIPER, VERNIER 1	7291-00-T94-0198	EACH	1	1	0
*CALIPER, VERNIER 2	7295-00-T94-0176	EACH	1	1	0
*CARD, NIDA SET 9901401	5815-00-T94-0038	EACH	8	8	0
*CDRS WPN STA SIGHT	1240-01-076-6703	EACH	8	8	0
*COLLIMATOR, INFINITY	1240-01-324-2217	EACH	4	4	0
AIMI M1A1TANK					
*COMPUTER CONTROL PANEL	1220-01-074-8419	EACH	8	8	0
*CONSOLE	54206-920000060-	EACH	7	7	0
*DANIELS REPAIR KIT	5935-00-543-7771	EACH	2	2	0
*DIAL CALIPER	5210-01-010-4522	EACH	8	8	0
*DRILL, ELECTRIC	5130-00-889-8994	EACH	8	8	0
*DSESTS C/O	4931-01-263-7922	EACH	1	1	0
*GAGE SET, TELESCOPING	5120-00-473-9350	EACH	8	8	0
*GAGE, SCREW PITCH	5210-00-293-1872	EACH	8	8	0
*GEAR BOARD	1509-00-T94-0060	EACH	1	1	0
*GLOVES	8415-00-634-5026	PAIR	8	8	0
*GUNNERS AUX SIGHT	1240-01-259-9096	EACH	8	8	0
*HELIUM, ULTRA HIGH PURITY	5830-01-103-8393	CUBIC FOOT	2	2	0
*IMAGE CONTROL UNIT	1240-01-074-8946	EACH	8	8	0
*IMAGE CONTROL UNIT CUTAWAY	1240-01-074-8946	EACH	1	1	0
*M1A1 BALISTIC COMPUTER	17-68A/3	EACH	4	4	0
*MICROMETER 0-1" CALIPER	5210-00-540-2973	EACH	16	16	0
*MICROMETER DEPTH	5210-00-826-5368	EACH	8	8	0
*MICROMETER MOCKUP 1	7271-00-T94-0189	EACH	1	1	0
*MICROMETER MOCKUP 2	7272-00-T94-0198	EACH	1	1	0
*MICROMETER, DEPTH (1)	5120-00-529-1729	EACH	8	8	0
*MICROMETER, DEPTH (2)	5120-00-826-5368	EACH	8	8	0
*MICROMETER, INSIDE	5210-00-293-1652	EACH	16	16	0
*PANEL	5426-914151010-0	EACH	3	3	0



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*SEALERS	8030-00-251-2312	EACH	8	8	0
*SEALING COMPOUND	8030-00-935-5841	EACH	8	8	0
*SILICONE	6850-00-664-4959	GALLON	8	8	0
*SLING LIFTING	3940-00-695-5002	EACH	1	1	0
*TANK M1A1	2350-01-087-1095	EACH	4	4	0
*THERMAL RECEIVER UNIT	1240-01-074-8947	EACH	8	8	0
*THERMAL RECEIVER UNIT CUT	1240-01-074-8947	EACH	1	1	0
*TRAINING AID 1	5820-01-A11-0286	EACH	2	2	0
*TRAINING AID 10	NIDA 130	EACH	8	8	0
*TRAINING AID 2	5835-01-A00-8218	EACH	1	1	0
*TRAINING AID 3	5836-01-A02-3962	EACH	2	2	0
*TRAINING AID 4	6730-00-A16-0735	EACH	1	1	0
*TRAINING AID 5	6780-01-A16-0190	EACH	2	2	0
*TRAINING AID 6	6910-01-A16-0059	EACH	1	1	0
*TRAINING AID 7	7730-00-A16-1287	EACH	2	2	0
*TRAINING AID 9	M60449	EACH	8	8	0
AIMING CIRCLE, M2A2	1290-01-067-0687	EACH	15	15	0
AN/GVS-5	5860-01-062-3543	EACH	6	6	0
AN/PAQ-3 MULE	1260-01-122-8735	EACH	6	6	0
AN/PAS-18 RECIVING SET, INF	6685-01-356-6542	EACH	10	10	0
AN/PVS-14 NVS	5855-01-432-0524	EACH	8	8	0
AN/PVS-4 NVS	5855-00-629-5334	EACH	6	6	0
AN/PVS-7B NVG	5585-01-228-0937	EACH	6	6	0
AN/TAM-3B NS TEST SET	5855-01-224-9784	EACH	6	6	0
AN/TAM-5 AMP TEST SET	5855-01-144-4837	EACH	6	6	0
AN/TSM-140B TFTS	4935-01-173-5016	EACH	8	8	0
AN/TSM-152 MGS TEST SET	4935-01-147-5999	EACH	9	9	0
AN/TVS-5 NVS	5855-00-629-5327	EACH	6	6	0
AN/UAS-12C NS EQ SET	5855-01-301-0158	EACH	8	8	0
AN/USM-488 OSCILLOSCOPE	6625-01-187-7847	EACH	8	8	0
AVERKEY	FC002	EACH	8	8	0
BENCH LEVEL	5210-00-288-6758	EACH	8	8	0
BENCH, WORK	7110-00-400-0143	EACH	82	82	0
BRIDGE CLAMP HOLDBACK FIX	4902-01-013-8136	EACH	8	8	0
CHAIR, DESK	7110-00-100-0135	EACH	75	75	0
CHARGE KIT, NITROGEN	1025-01-070-3200	EACH	1	1	0
CHRISTIE BATTERY CHARGER	6130-01-341-2073	EACH	15	15	0
COMMAND LAUNCH UNIT	1430-01-433-8025	EACH	6	6	0
COMPUTER ELECT UNIT	1220-01-076-6745	EACH	8	8	0
COUNTER (RACAL DANA) TFTS	6625-01-271-3012	EACH	7	7	0
CYLINDER, NITROGEN	F68633	CYLINDER	1	1	0
DESK STUDENT	7110-00-100-0136	EACH	90	90	0
DIOPTIMETER	4931-00-536-5557	EACH	8	8	0
DMM (FLUKE 77)	6625-01-336-3372	EACH	40	40	0
DRILL BITS	5133-00-293-0983	SET	8	8	0
DRILL PRESS	5130-01-087-6835	EACH	8	8	0
DRY ERASE BOARD	7110-00-900-0121	EACH	14	14	0
EXTRACTOR SET	5120-00-540-1416	EACH	8	8	0
F36706 CRANE FLOOR PORT	3950-00-449-7004	EACH	1	1	0
FUNCTION GENERATOR	6625-01-252-4293	EACH	4	4	0
GPIA LAV	5998-01-382-7282	EACH	1	1	0
GRINDER ELECTRICAL	3415-00-517-7754	EACH	2	2	0
HARD HAT	8415-00-935-3136	EACH	10	10	0
HELICAL KIT (THREAD)	5180-00-935-0732	KIT	2	2	0
HOIST 2T	3950-00-T01-0001	EACH	1	1	0
HOWITZER, MEDIUM TOWED	1025-01-026-6648	EACH	1	1	0
INTERMEDIATE MAINT KIT	4931-01-114-3991	EACH	5	5	0
LASER POINTER	FC001	EACH	10	10	0
LASER RANGEFINDER	1240-01-076-1879	EACH	6	6	0

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LASER SAFETY GOGGLES	4240-00-258-2054	EACH	20	20	0
LAV-AT TRAINER	6920-01-075-7868	EACH	1	1	0
MICROFICHE VEIWER	6730-00-116-1618	EACH	8	8	0
NFM (MX18204/GSQ)	6675-01-179-2982	EACH	6	6	0
NIDA TRAINERS 130C	6930-00-T51-183	EACH	8	8	0
OSCILLOSCOPE (TEX 2246)	6625-01-275-4766	EACH	10	10	0
OSCILLOSCOPE (TEX 2430A)	6625-01-258-0022	EACH	15	15	0
PODIUM	LL0002	EACH	7	7	0
POWER SUPPLY (HP6289A)	6130-00-165-3838	EACH	12	12	0
POWER SUPPLY (KEPCO)	6130-00-488-4443	EACH	4	4	0
POWER SUPPLY (TYPE 1)	4240-01-064-7342	EACH	1	1	0
POWER SUPPLY (TYPE 2)	6130-00-249-2748	EACH	8	8	0
POWER SUPPLY (TYPE 3)	6130-01-176-4186	EACH	3	3	0
POWER SUPPLY (XANTRAX)	6130-21-911-6149	EACH	4	4	0
POWER UNIT CONTROL UNIT	1240-01-162-0367	EACH	8	8	0
PROJECTOR SCREEN	PP0094	EACH	2	2	0
PROJECTOR, VIDEO	FC010	EACH	3	3	0
PURGE AND RECHARGE SET	5855-01-250-2369	EACH	2	2	0
PURGE DEVICE	5855-01-246-6815	EACH	9	9	0
QADRANT M18	1290-01-037-7259	EACH	16	16	0
QUADRANT, GUNNER'S	1290-00-891-9999	EACH	55	55	0
SAFETY GOGGLES	4240-00-052-3776	EACH	20	20	0
SAFETY WIRE	9505-00-293-4208	POUND	8	8	0
STOOL	7110-00-100-0088	EACH	75	75	0
SURFACE PLATE	5220-00-879-6405	EACH	8	8	0
TABLE WORK AUTO 25X60X35	4910-00-543-7772	EACH	8	8	0
TAP AND DIE SET	5180-00-856-3471	KIT	8	8	0
TELESCOPE PANARAMIC M137	1240-01-038-0531	EACH	15	15	0
TELESCOPE, OBSERVATION	6650-00-530-0960	EACH	16	16	0
M49					
TELEVISION	5820-00-T94-0049	EACH	12	12	0
TELEVISION/RECEIVER	98807N	EACH	2	2	0
TEST FIXTURE, AZIMUTH	4931-00-786-8288	EACH	7	7	0
TEST FIXTURE, CROSS LEVEL	4931-00-508-5484	EACH	6	6	0
THERMAL ELECTRONICS UNIT	1240-01-162-0368	EACH	8	8	0
THICKNESS GAGE	5210-00-250-6245	EACH	8	8	0
TOOL KIT, ELECTRO-OPTICAL	5180-01-382-1335	EACH	58	58	0
TOOL KIT, ELECTRONIC SYS	T38254	EACH	4	4	0
TOOL KIT, SMS (TOW)	5855-01-132-5988	EACH	2	2	0
TOW FIELD TEST SET ADAPT	4935-01-070-3427	EACH	4	4	0
TOW II WPN SYSTEM M220E4	1140-01-410-8165	EACH	8	8	0
TRAINING CARD A19 (MGS)	5999-01-102-9311	EACH	3	3	0
TRAINING CARD A2/A3 (MSG)	5998-01-327-2071	EACH	3	3	0
TRAINING CARD A21 (MGS)	5999-01-102-9324	EACH	3	3	0
TRAINING CARD A4 (MGS)	5999-01-272-1973	EACH	3	3	0
TRAINING CARD A9 (MGS)	5998-01-108-4211	EACH	3	3	0
TRAVERSING UNIT M83	1440-01-115-3405	EACH	4	4	0
TRUCK, HAND SHELF	3920-00-272-7732	EACH	4	4	0
TS-3620/GVS-5	5860-01-052-9477	EACH	6	6	0
TS-3784/TAS TEST SET	5855-01-133-3587	EACH	6	6	0
TS-4348/UV NVSTS	6625-01-323-9584	EACH	9	9	0
TWIST, DRILL	5130-00-293-1284	EACH	8	8	0
VIDEO CASSET RECORDER	7110-00-900-0111	EACH	8	8	0
WISE MACHINIST'S BENCH	5120-00-180-0681	EACH	4	4	0
W32182- TOOL KIT TURRET	5180-00-357-7727	KIT	4	4	0
WRENCH SET SPANNER	4931-00-580-0012	EACH	1	1	0
WRENCH, TORQUE	5120-00-542-5681	EACH	8	8	0

24. TASK LIST. See Appendix B.

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CDD NOTES: This CDD represents an 8 hour day for Annex B, C and D, the remainder of the CDD is based on a 7 hour instructional day and 1 hour for either PT or uniform inspections (Commander's time).

The "*" in paragraph 23 represent items that are not owned by the Marine Corps and which are used in an ITRO portion of the course. These items are still required to teach this course.

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APPENDIX B - TASKLIST

DUTY: 2171.01 COMMON KNOWLEDGE AND SKILLS

- TASKS: (S) 2171.01.01 COMPLY WITH COMMON SHOP PROCEDURES
(S) 2171.01.02 ANALYZE ELECTRONIC DEVICES/COMPONENTS
(S) 2171.01.03 ANALYZE ELECTRONIC CIRCUITS
(S) 2171.01.04 COMPLY WITH COMMON MAINTENANCE PROCEDURES

DUTY: 2171.02 MAINTAIN ELECTRO-OPTICAL ORDNANCE EQUIPMENT

- TASKS: (P) 2171.02.05 MAINTAIN AN/TAM-3B NIGHT SIGHT TEST SET
(S) 2171.02.11 MAINTAIN M22OE4 TOW WEAPON SYSTEM
(S) 2171.02.12 MAINTAIN AN/UAS-12 SERIES NIGHT SIGHT EQUIPMENT SET
(P) 2171.02.14 MAINTAIN AN/TSM-140B TOW FIELD TEST SET (TFTS)
(P) 2171.02.15 MAINTAIN AN/TSM-152 MISSILE GUIDANCE SET TEST SET (MGSTS)
(P) 2171.02.16 MAINTAIN TS-3784/TAS BORESIGHT COLLIMATOR TEST SET
(P) 2171.02.17 MAINTAIN AN/TAM-5 AMPLIFIER TEST SET
(S) 2171.02.18 MAINTAIN AN/PAQ-3 MODULAR UNIVERSAL LASER EQUIPMENT (MULE)
(S) 2171.02.19 MAINTAIN AN/GVS-5 LASER INFRARED OBSERVATION SET
(P) 2171.02.20 MAINTAIN MODULAR UNIVERSAL LASER EQUIPMENT (MULE)
INTERMEDIATE MAINTENANCE KIT
(S) 2171.02.21 MAINTAIN PASSIVE NIGHT VISION EQUIPMENT
(S) 2171.02.22 MAINTAIN M1 SERIES GUNNER'S QUADRANT
(S) 2171.02.24 MAINTAIN M2A2 AIMING CIRCLE
(S) 2171.02.31 MAINTAIN M198 HOWITZER FIRE CONTROL SYSTEM
(S) 2171.02.32 MAINTAIN M1A1 TANK FIRE CONTROL SYSTEM
(P) 2171.02.33 MAINTAIN DIRECT SUPPORT ELECTRONIC SYSTEMS TEST SET (DSESTS)
(S) 2171.02.34 MAINTAIN LIGHT ARMORED VEHICLE (LAV) SERIES FIRE CONTROL
SYSTEM
(S) 2171.02.37 MAINTAIN TS-3620/GVS-5 TEST SET
(S) 2171.02.38 MAINTAIN TS-4348/UV ELECTRONIC SYSTEMS TEST SET
(S) 2171.02.39 MAINTAIN CROSS-LEVELING FIXTURE
(S) 2171.02.40 MAINTAIN AZIMUTH TEST FIXTURE
(P) 2171.02.42 OPERATE THE PP-8333/U BATTERY ANALYZER-CHARGER (CHRISTIE)
(S) 2171.02.43 MAINTAIN THERMAL SIGHTS
(P) 2171.02.44 MAINTAIN ELECTRO-OPTICAL EQUIPMENT MAINTENANCE SHELTER
(S) 2171.02.46 MAINTAIN M98A1 JAVELIN WEAPONS SYSTEM

TASK LIST NOTES: a. "Applicable resources" as written in the condition of the learning objective refers to: Tools, TMDE, equipment, personnel, facilities, access to the internet where required and current references.

b. "References" as written in the standard of the learning objectives refers to: current Orders, Directives, TMs, TIs, SIs, MIs and SLs.

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SECTION II - SUMMARY OF HOURS

PEACETIME (99 TRAINING DAYS)

ACADEMIC TIME

<u>TITLE</u>	<u>HOURS</u>	<u>ANNEX</u>
COMMON KNOWLEDGE AND SKILLS BLOCK A	27.00	A
COMMON KNOWLEDGE AND SKILLS BLOCK B	66.00	B
COMMON KNOWLEDGE AND SKILLS BLOCK C	93.00	C
M1A1 ABRAMS TANK	99.00	D
TOW II WEAPONS SYSTEM	98.00	E
NIGHT SIGHT SYSTEMS	98.00	F
JAVELIN WEAPON SYSTEM	42.00	G
LASER DEVICES	38.00	H
LIGHT ARMORED VEHICLE	49.00	I
HOWITIZERS	<u>98.00</u>	J
TOTAL ACADEMIC HOURS:	708.00	

ADMINISTRATIVE TIME

IN PROCESSING	8.00	Z
OUT PROCESSING/GRADUATION	8.00	Z
COMMANDERS TIME	64.00	Z
MCI TESTING	<u>3.00</u>	Z
TOTAL ADMINISTRATIVE HOURS:	83.00	

SUMMARY (PEACETIME)

ACADEMIC TIME	708.00
ADMINISTRATIVE TIME	<u>83.00</u>
TOTAL ACADEMIC AND ADMINISTRATIVE TIME:	791.00

MOBILIZATION (78 TRAINING DAYS)

Mobilization course length was determined by dividing the total academic hours plus administrative time by 10. Commander's time would also be reduced by 14 hours.

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SECTION III - SCOPE OF ANNEXES

A. COMMON KNOWLEDGE AND SKILLS BLOCK A. The learning outcome for this annex is to introduce the student to knowledge and skills common to all entry level students, such as how to use technical manuals and other publications, hazard communications standards, shop safety practices, use of tools and how to fill out maintenance forms. Knowledge and skills learned in this annex will be re-enforced in greater detail in all remaining annexes. This annex is Marine unique.

B. COMMON KNOWLEDGE AND SKILLS BLOCK B. The learning outcome for this annex is to introduce the student to electrical safety, effects of electro-static discharge, fundamentals of electricity, AC/DC circuits, multimeter operation, metric system math for electronics, schematic symbols/analysis, troubleshooting series, parallel and series parallel circuits, purging and charging optical equipment and utilizing a Daniel's kit to perform solderless cable repair. The knowledge and skills learned in this annex will be re-enforced in all remaining annexes. This is an ITRO annex.

C. COMMON KNOWLEDGE AND SKILLS BLOCK C. The learning outcome for this annex is to expand upon the electronic knowledge and skills gained in the previous annex by introducing the student to complex test equipment operation (i.e. power supplies, function generators, frequency counters and oscilloscopes). The student will use this equipment to test and isolate faults in more complex electronic circuitry dealing with AC/DC coupling, analog/digital signals, transformers, relays, operational amplifiers, oscillators, flip flops and other wave shaping circuits. The students are also taught to solder. The student will be able to apply the skills learned here to perform electrical/electronic troubleshooting and repair solder connections in all remaining annexes. This is an ITRO annex.

D. M1A1 ABRAMS TANK. The learning outcome for this annex is to provide the student with knowledge and skills required to test, fault isolate, repair and inspect the M1A1 Abrams tank fire control system. Students will utilize the direct support electrical systems test set (DSESTS) to test, fault isolate, repair and inspect line replaceable units (LRU's) of the M1A1 Abrams tank. This is an ITRO annex.

E. TOW II WEAPONS SYSTEM. The learning outcome for this annex is to provide the student with the knowledge and skills required to test, fault isolate, repair and inspect the TOW II missile system. Students receive additional instruction in operating and maintaining TOW II support equipment (i.e. TOW field test set [TFTS], missile guidance set test set [MGSTS], Christie battery charger/analyzer and fire control maintenance shelters). This and all remaining annexes are Marine unique.

F. NIGHT SIGHT SYSTEMS. The learning outcome of this annex is to provide the student with the knowledge and skills required to operate, test, fault isolate, repair and inspect night vision equipment, both ambient light activated and thermal imaging sights. Students receive additional instruction in operating and maintaining night vision support equipment (i.e. AN/TAM-3B night sight test set, AN/TAM-5 amplifier test set, TS-3784 boresight collimator test set and TS-4348 UV test set).

G. JAVELIN WEAPON SYSTEM. The learning outcome of this annex is to provide the student with the knowledge and skills required to test, fault isolate, repair and inspect the Javelin weapon system. The student receives additional instruction in the use of interactive electronic technical manuals (IETM), IETM readers and memory load verifiers.

H. LASER DEVICES. The learning outcome for this annex is to provide the student with the knowledge and skills required to operate, test, fault isolate, repair and inspect LASER devices and test equipment, (i.e. AN/PAQ-3 modular universal LASER equipment [MULE], AN/GVS-5 LASER range finder and LASER designator ranging module [LDRM]). Students receive additional instruction in the use of the MULE fault isolation test set and AN/GVS-5 test set.

I. LIGHT ARMORED VEHICLE. The learning outcome for this annex is to provide the student with the knowledge and skills required to operate, test, fault isolate, repair and

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION III - SCOPE OF ANNEXES

inspect the light armored vehicle anti-tank (LAV-AT/LAV-25) fire control system and the DIM-36 (LAV night sight).

J. HOWITIZERS. The learning outcome for this annex is to provide the student with the knowledge and skills required to operate, test, fault isolate, repair and inspect the M198 howitzer fire control system. Students receive additional instruction in operating and maintaining the M1A1 gunner's quadrant, M2A2 aiming circle and cross leveling and azimuth test fixtures.

Z. ADMIN. Administrative processing provides for check in, check out, graduation, physical training, inspections and movement to the training areas.

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION IV - CONCEPT CARDS

1. A concept card is developed to describe each academic or administrative block of time during a course. These concept cards are then grouped into subject areas, called annexes, which are summarized in Section III. Annexes A through Y are reserved for academic lessons and exams. Annex Z is reserved for administrative time.
2. The following information is contained on each academic concept card in Section IV:
 - a. Heading. The heading listed at the top of the concept card includes the name of the course, the section of the POI, and the letter and title of the annex to which the lesson or exam is assigned.
 - b. Lesson/Exam ID. This designator is a unique code assigned to this specific lesson or exam within this course.
 - c. Hours. This number (carried to the second decimal place) depicts the amount of time required to conduct the lesson or exam once, even if it is presented multiple times to smaller groups of students.
 - d. Title. This is the title assigned to this lesson or exam. It should refer to the subject matter covered in the lesson or exam when possible.
 - e. Phase (optional). This is a code depicting the phase (e.g., week, month, etc.) of the course during which this lesson or exam takes place.
 - f. Group (optional). This is a code depicting the instructional group or section responsible for teaching or developing this lesson or exam.
 - g. Methods,Hours,S:I Ratio. Displayed on the concept card are codes which symbolize the methods of instruction used to present this lesson or exam. Following each method code is the time (in hours) allocated to that method and the student to instructor ratio associated with that period of time. (The hours and ratios depicted on the concept card are used to determine instructor staffing requirements.) The following is a comprehensive list of methods used in this course and their respective codes:

<u>Method</u>	<u>Code</u>
Administrative	ADMIN
Commanders Time	CMDR
Demonstration	D
Interactive Courseware	ICW
Lecture	L
Practical Application	PA
Performance Exam	X(P)
Written Exam	X(W)

- h. Media. Displayed on the concept card are codes which symbolize the media used to support this lesson or exam. The following is a comprehensive list of media used in this course and their respective codes:

<u>Medium</u>	<u>Code</u>
Actual Item/Object	AIO
Audio Tape	AT
Chart	C
Computer	CPU
Filmstrip	F
Handout	HO
IETM Reader	IETM RDR
Interactive Videodisc	IVD
Javelin CD contain IETM, Acrobat Reader, RPSTL	J-CD
LASER Pointer	LASER
Mockup	MU

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION IV - CONCEPT CARDS

Overhead Projector	OP
Power Point Presentation	PPP
Smart Board	SB
Simulator	SIM
Transparencies	TP
Television	TV
Video Cassette Recorder	VCR
Videotape	VT
White Board	WB
Workbook	WBK
Wall Chart	WC

i. Learning Objective(s)/Lesson Purpose. Academic concept cards contain either learning objectives or a lesson purpose statement, but not both.

(1) Learning Objective. A learning objective describes a behavior that students are expected to perform following instruction, not necessarily identical to a behavior performed on the job. It also details the conditions under which that behavior is performed and the minimum standards of acceptable performance. A student masters the objective when his or her performance equals or exceeds the standard. (Information concerning student evaluation and mastery is contained in Section V of this POI.)

(a) Terminal Learning Objective (TLO). One, and only one, TLO is written for each task in Section I-B of the POI. The behavior in the TLO duplicates the actual behavior required on the job, modified only if the constraints of the academic environment will not allow it. A TLO should only appear on a concept card for a lesson or exam during which students actually perform the TLO. Each TLO is assigned a numeric designator identical to the designator of its corresponding task in Section I-B, which is identical to the designator of the Individual Training Standard (ITS) from which the task was derived. This designator is located in parentheses at the end of the TLO.

(b) Enabling Learning Objective (ELO). ELOs are designed to teach students the knowledges and skills required for successful performance of the TLOs. Each ELO is placed only on concept cards for lessons or exams during which students actually perform the ELO. Many introductory lessons will contain only ELOs. Each ELO is assigned the same numeric designator as the TLO it supports, followed by a unique combination of one or two letters. This designator is located in parentheses at the end of the ELO. (The first 26 ELOs are assigned the letters "a" through "z" consecutively. If there are more than 26 ELOs, they are assigned the letters "aa" through "az," then "ba" through "bz," etc.)

(2) Lesson Purpose. A lesson purpose statement is recorded on a concept card where no learning objectives are appropriate (e.g., overview, orientation, or enrichment lesson) and the lesson is not to be evaluated. The lesson purpose statement clearly describes the rationale for presenting the lesson.

j. Ammunition Requirements. Whenever a lesson requires the use of ammunition by students or by the instructional staff in support of the lesson, the concept card for that lesson will include a table depicting those requirements. Included for each type of ammunition will be its Department of Defense Identification Code (DODIC), its nomenclature, the average number of rounds used by each student, and the number of support rounds.

k. Notes (optional). This section of the concept card contains any information pertinent to the lesson. Examples of items which may be addressed here are instructor requirements, scheduling notes, special prerequisites, references to tests on which material will be evaluated, etc.

l. References. This section contains the source documents used for development of the lesson or other references which relate to the lesson. At a minimum, it must

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION IV - CONCEPT CARDS

contain all documents referenced in the learning objectives included on the concept card.

3. The following information is contained on each administrative concept card in Section IV:

a. Heading. The heading listed at the top of the concept card includes the name of the course, the section of the POI, and the fact that this concept card is part of Annex Z, Administrative Time.

b. Event ID. This designator is a unique code assigned to this administrative event within the course.

c. Hours. This number (carried to the second decimal place) depicts the amount of administrative time required for this event. If this is a repeating event, one concept card may indicate the cumulative hours associated with this event throughout the course.

d. Event. This is a short description of the administrative event.

e. Notes (optional). This section of the concept card contains any information pertinent to the administrative block of time.

4. The following pages contain useful information for locating the learning objectives and lessons that make up this course.

a. Location of Learning Objectives Report. This report lists, by learning objective designator, all learning objectives developed for this course. It also identifies every concept card on which each learning objective is included.

b. Academic and Administrative Summaries. These reports list, by annex, all academic and administrative concept cards in Section IV. Within each annex the concept cards are listed in lesson identifier order. The information provided for each entry includes Identifier, Title, Hours, and Type [Task-oriented lesson (T), Lesson Purpose lesson (LP), Exam (E), or Administrative Time (ADM)]. A subtotal of hours is provided for each annex and for all academic and administrative concept cards. Total POI hours are listed at the end of the Administrative Summary.

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SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
2171.01.01	A	21XXAA07	Shop Safety
	A	21XXAA08	Hazard Communications
	A	21XXAA09	Common Tools
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.01a	A	21XXAA07	Shop Safety
2171.01.01b	A	21XXAA07	Shop Safety
2171.01.01c	A	21XXAA07	Shop Safety
2171.01.01d	A	21XXAA07	Shop Safety
2171.01.01e	A	21XXAA08	Hazard Communications
2171.01.01f	A	21XXAA08	Hazard Communications
2171.01.01g	A	21XXAA09	Common Tools
2171.01.01h	A	21XXAA09	Common Tools
2171.01.01i	A	21XXAA09	Common Tools
2171.01.02	B	21710B02	Electrical Theory
	B	21710B03	Multimeter Operation
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
C	21710C06	Job Performance Test and review on 21710C04	
2171.01.02a	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02b	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02c	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03

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SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
2171.01.02d	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02e	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02f	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02g	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02h	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02j	B	21710B03	Multimeter Operation
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02k	B	21710B03	Multimeter Operation
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02l	B	21710B03	Multimeter Operation
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02m	B	21710B03	Multimeter Operation
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.02n	B	21710B06	Electronics Analysis

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
2171.01.02o	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
2171.01.02q	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02r	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02s	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02t	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02u	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02v	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02w	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.02x	C	21710C04	AC Theory
	C	21710C05	Job Knowledge Test and review on 21710C04
	C	21710C06	Job Performance Test and review on 21710C04
2171.01.03	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03a	B	21710B02	Electrical Theory

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SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.03b	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.03c	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
2171.01.03d	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
2171.01.03e	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
2171.01.03f	B	21710B06	Electronics Analysis
	B	21710B07	Job Knowledge Test and review on 21710B06
	B	21710B08	Job Performance Test and review on 21710B06
2171.01.03g	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
2171.01.03h	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
2171.01.03i	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
2171.01.03j	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
2171.01.03k	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
2171.01.03l	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07
2171.01.03m	C	21710C07	Electronic Components/Circuits
	C	21710C08	Job Knowledge Test and review on 21710C07
	C	21710C09	Job Performance test and review on 21710C07

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SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
2171.01.03o	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03p	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03q	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03r	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03s	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03t	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03u	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03v	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.03x	C	21710C10	Digital Electronics
	C	21710C11	Job Knowledge Test and review on 21710C10
	C	21710C12	Job Performance Test and review on 21710C10
2171.01.04	B	21710B01	Nitrogen Purging and Charging
	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
	B	21710B09	Cable Repair, Daniel's kit
	C	21710C01	Introduction to Test Equipment
	C	21710C02	Job Knowledge Test and review on 21710C01
	C	21710C13	Soldering
	C	21710C14	Job Performance Test and review on 21710C13
	A	21XXAA03	Publications
	A	21XXAA04	Maintenance Administration
	A	21XXAA05	Modifications
	A	21XXAA06	Calibrations
A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09	
2171.01.04a	A	21XXAA03	Publications

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SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04b	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04c	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04d	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04e	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04f	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04g	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04h	A	21XXAA03	Publications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04i	A	21XXAA06	Calibrations
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04j	A	21XXAA06	Calibrations
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04k	A	21XXAA06	Calibrations
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04l	A	21XXAA05	Modifications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04m	A	21XXAA05	Modifications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04n	A	21XXAA05	Modifications
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09

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SECTION IV - CONCEPT CARDS

LOCATION OF LEARNING OBJECTIVES REPORT

LO	ANNEX	LESSON ID	LESSON TITLE
2171.01.04o	A	21XXAA04	Maintenance Administration
	A	21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09
2171.01.04p	B	21710B01	Nitrogen Purging and Charging
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.04q	B	21710B01	Nitrogen Purging and Charging
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.04r	B	21710B02	Electrical Theory
	B	21710B04	Job Knowledge Test and review on 21710B01 through 21710B03
	B	21710B05	Job Performance Test and review on 21710B02 through 21710B03
2171.01.04s	B	21710B02	Electrical Theory
2171.01.04t	C	21710C01	Introduction to Test Equipment
	C	21710C02	Job Knowledge Test and review on 21710C01
2171.01.04u	C	21710C01	Introduction to Test Equipment
	C	21710C02	Job Knowledge Test and review on 21710C01
2171.01.04v	C	21710C01	Introduction to Test Equipment
	C	21710C02	Job Knowledge Test and review on 21710C01
2171.01.04w	C	21710C01	Introduction to Test Equipment
	C	21710C02	Job Knowledge Test and review on 21710C01
2171.01.04x	B	21710B09	Cable Repair, Daniel's kit
	C	21710C14	Job Performance Test and review on 21710C13
2171.01.04y	B	21710B09	Cable Repair, Daniel's kit
2171.01.04z	C	21710C13	Soldering
2171.01.04aa	C	21710C13	Soldering
	C	21710C14	Job Performance Test and review on 21710C13
2171.01.04bb	C	21710C13	Soldering
	C	21710C14	Job Performance Test and review on 21710C13
2171.01.04cc	C	21710C13	Soldering
	C	21710C14	Job Performance Test and review on 21710C13
2171.01.04dd	C	21710C13	Soldering
	C	21710C14	Job Performance Test and review on 21710C13

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.05	F	21710F08	Thermal NVE Test and Support Equipment
	F	21710F11	Job Knowledge Test and review on 21710F07 through 21710F10
	F	21710F12	Job Performance Test and review on 21710F07 through 21710F10
2171.02.05a	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.05b	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.05c	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.11	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
	E	21710E07	Repair of the M220E4 TOW II Weapon System
2171.02.11a	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11b	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11c	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11d	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11e	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11f	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11g	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11h	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11i	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
	E	21710E07	Repair of the M220E4 TOW II Weapon System

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LO	ANNEX	LESSON ID	LESSON TITLE
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11j	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11k	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11l	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11m	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11n	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11o	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11p	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11q	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11r	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11s	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11t	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11u	E	21710E07	Repair of the M220E4 TOW II Weapon System
2171.02.11v	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11w	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11y	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS

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LO	ANNEX	LESSON ID	LESSON TITLE
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11z	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11aa	E	21710E01	Introduction to the M220E4 TOW II Weapons System
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.11bb	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
2171.02.11cc	E	21710E07	Repair of the M220E4 TOW II Weapon System
2171.02.11dd	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11ee	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.11gg	E	21710E04	M220E4 TOW II Weapons System Scheduled PMCS
	E	21710E05	Job Knowledge Test and review on 21710E04
	E	21710E06	Job Performance Test and review on 21710E04
	E	21710E07	Repair of the M220E4 TOW II Weapon System
	E	21710E08	Job Performance Test and review on 21710E07
2171.02.12	F	21710F07	Thermal Night Vision Equipment (NVE)
	F	21710F09	Thermal NVE Scheduled PMCS
	F	21710F10	Thermal NVE Corrective Maintenance
	F	21710F11	Job Knowledge Test and review on 21710F07 through 21710F10
	F	21710F12	Job Performance Test and review on 21710F07 through 21710F10
	F	21710F13	Night Vision Equipment Set (NVES) Ancillary Equipment
	F	21710F15	NVES Ancillary Equipment Scheduled PMCS
	F	21710F16	NVES Ancillary Equipment Corrective Maintenance
	F	21710F17	Job Knowledge Test and review on 21710F13 through 21710F16
	F	21710F18	Job Performance Test and review on 2171F13 through 21710F16
2171.02.12a	F	21710F07	Thermal Night Vision Equipment (NVE)
2171.02.12b	F	21710F07	Thermal Night Vision Equipment (NVE)
2171.02.12c	F	21710F07	Thermal Night Vision Equipment (NVE)
2171.02.12d	F	21710F13	Night Vision Equipment Set (NVES) Ancillary Equipment
2171.02.12e	F	21710F13	Night Vision Equipment Set (NVES) Ancillary Equipment

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.12f	F	21710F13	Night Vision Equipment Set (NVES) Ancillary Equipment
2171.02.12g	F	21710F10	Thermal NVE Corrective Maintenance
	F	21710F16	NVES Ancillary Equipment Corrective Maintenance
2171.02.12h	F	21710F10	Thermal NVE Corrective Maintenance
	F	21710F16	NVES Ancillary Equipment Corrective Maintenance
2171.02.12i	F	21710F10	Thermal NVE Corrective Maintenance
	F	21710F16	NVES Ancillary Equipment Corrective Maintenance
2171.02.12j	F	21710F09	Thermal NVE Scheduled PMCS
	F	21710F15	NVES Ancillary Equipment Scheduled PMCS
2171.02.12k	F	21710F09	Thermal NVE Scheduled PMCS
2171.02.12l	F	21710F09	Thermal NVE Scheduled PMCS
	F	21710F10	Thermal NVE Corrective Maintenance
	F	21710F15	NVES Ancillary Equipment Scheduled PMCS
	F	21710F16	NVES Ancillary Equipment Corrective Maintenance
2171.02.14	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.14a	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.14b	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.14c	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.14d	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.14e	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.14f	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.14g	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.15	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.15a	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment

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LO	ANNEX	LESSON ID	LESSON TITLE
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.15b	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.15c	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.15d	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.15e	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.15f	E	21710E09	Test and Support Equipment Scheduled PMCS
2171.02.16	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
	F	21710F17	Job Knowledge Test and review on 21710F13 through 21710F16
	F	21710F18	Job Performance Test and review on 2171F13 through 21710F16
2171.02.16a	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
2171.02.16b	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
2171.02.16c	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
2171.02.16d	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
2171.02.16e	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
2171.02.16f	F	21710F14	NVES Ancillary Equipment Test and Support Equipment
2171.02.17	F	21710F08	Thermal NVE Test and Support Equipment
	F	21710F11	Job Knowledge Test and review on 21710F07 through 21710F10
	F	21710F12	Job Performance Test and review on 21710F07 through 21710F10
2171.02.17a	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.17b	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.17c	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.17d	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.17e	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.17f	F	21710F08	Thermal NVE Test and Support Equipment
2171.02.18	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
	H	21710H05	Job Knowledge Test and review on 21710H01 through 21710H04

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LO	ANNEX	LESSON ID	LESSON TITLE
	H	21710H06	Job Performance Test and review on 21710H01 through 21710H04
2171.02.18a	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
2171.02.18b	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
2171.02.18c	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
2171.02.18d	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
2171.02.18e	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
2171.02.18f	H	21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)
2171.02.19	H	21710H01	AN/GVS-5 LASER Rangefinder
	H	21710H05	Job Knowledge Test and review on 21710H01 through 21710H04
	H	21710H06	Job Performance Test and review on 21710H01 through 21710H04
2171.02.19a	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.19b	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.19c	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.19d	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.19e	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.19f	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.19g	H	21710H01	AN/GVS-5 LASER Rangefinder
2171.02.20	H	21710H04	AN/PAQ-3 MULE Support Equipment
	H	21710H05	Job Knowledge Test and review on 21710H01 through 21710H04
	H	21710H06	Job Performance Test and review on 21710H01 through 21710H04
2171.02.20a	H	21710H04	AN/PAQ-3 MULE Support Equipment
2171.02.20b	H	21710H04	AN/PAQ-3 MULE Support Equipment
2171.02.20c	H	21710H04	AN/PAQ-3 MULE Support Equipment
2171.02.20d	H	21710H04	AN/PAQ-3 MULE Support Equipment
2171.02.20e	H	21710H04	AN/PAQ-3 MULE Support Equipment
2171.02.20f	H	21710H04	AN/PAQ-3 MULE Support Equipment
2171.02.21	F	21710F01	Passive Night Vision Equipment (NVE)
	F	21710F03	Passive NVE Scheduled PMCS

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LO	ANNEX	LESSON ID	LESSON TITLE
	F	21710F04	Passive NVE Corrective Maintenance
	F	21710F05	Job Knowledge Test and review on 21710F01 through 21710F04
	F	21710F06	Job Performance Test and review on 21710F01 through 21710F04
2171.02.21a	F	21710F01	Passive Night Vision Equipment (NVE)
2171.02.21b	F	21710F01	Passive Night Vision Equipment (NVE)
2171.02.21c	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21d	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21e	F	21710F03	Passive NVE Scheduled PMCS
2171.02.21f	F	21710F03	Passive NVE Scheduled PMCS
	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21g	F	21710F01	Passive Night Vision Equipment (NVE)
2171.02.21h	F	21710F01	Passive Night Vision Equipment (NVE)
2171.02.21i	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21j	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21k	F	21710F03	Passive NVE Scheduled PMCS
2171.02.21l	F	21710F03	Passive NVE Scheduled PMCS
	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21m	F	21710F01	Passive Night Vision Equipment (NVE)
2171.02.21n	F	21710F01	Passive Night Vision Equipment (NVE)
2171.02.21o	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21p	F	21710F04	Passive NVE Corrective Maintenance
2171.02.21q	F	21710F03	Passive NVE Scheduled PMCS
2171.02.21r	F	21710F03	Passive NVE Scheduled PMCS
	F	21710F04	Passive NVE Corrective Maintenance
2171.02.22	J	21710J02	Maintain the M1A1 Gunners Quadrant
	J	21710J03	Job Performance Test and review on 21710J01 through 21710J02
2171.02.22a	J	21710J02	Maintain the M1A1 Gunners Quadrant
2171.02.22b	J	21710J02	Maintain the M1A1 Gunners Quadrant
2171.02.22c	J	21710J02	Maintain the M1A1 Gunners Quadrant

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.22d	J	21710J02	Maintain the M1A1 Gunners Quadrant
2171.02.22e	J	21710J02	Maintain the M1A1 Gunners Quadrant
2171.02.22f	J	21710J02	Maintain the M1A1 Gunners Quadrant
2171.02.22g	J	21710J02	Maintain the M1A1 Gunners Quadrant
2171.02.24	J	21710J11	Maintenance of the M2A2 Aiming Circle
	J	21710J12	Job Performance Test and review on 21710J11
2171.02.24a	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.24b	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.24c	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.24d	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.24e	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.24f	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.24g	J	21710J11	Maintenance of the M2A2 Aiming Circle
2171.02.31	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31a	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31b	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31c	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31d	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31e	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31f	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31g	J	21710J09	Maintain M198 Howitzer Fire Control System
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31h	J	21710J09	Maintain M198 Howitzer Fire Control System

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LO	ANNEX	LESSON ID	LESSON TITLE
	J	21710J10	Job Performance Test and review on 21710J09
2171.02.31i	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
2171.02.31j	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
2171.02.31k	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
2171.02.31l	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
2171.02.31m	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
2171.02.31n	J	21710J04	Maintain the M18 Elevation Quadrant
	J	21710J05	Job Performance Test and review on 21710J04
2171.02.31o	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
2171.02.31p	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
2171.02.31q	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
2171.02.31r	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
2171.02.31s	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
2171.02.31t	J	21710J07	Maintain the M137 Panoramic Telescope
	J	21710J08	Job Performance Test and review on 21710J06 through 21710J07
2171.02.32	D	21710D01	Introduction to the M1A1 Abrams Tank
	D	21710D02	Functions of the Fire Control System
	D	21710D03	Fire Control Interconnect Diagram
	D	21710D05	Gunner's Primary Sight (GPS)
	D	21710D06	LASER Safety
	D	21710D07	Non-Thermal Line Replaceable Units (LRU)
	D	21710D08	Thermal Imaging System
	D	21710D09	Abrams Optics
	D	21710D10	Job Performance Test and review on 21710D01 through 21710D09
	D	21710D11	Job Knowledge Test and review on 21710D01 through

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SECTION IV - CONCEPT CARDS

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LO	ANNEX	LESSON ID	LESSON TITLE
			21710D09
2171.02.32a	D	21710D01	Introduction to the M1A1 Abrams Tank
2171.02.32b	D	21710D01	Introduction to the M1A1 Abrams Tank
2171.02.32c	D	21710D01	Introduction to the M1A1 Abrams Tank
2171.02.32d	D	21710D02	Functions of the Fire Control System
2171.02.32e	D	21710D02	Functions of the Fire Control System
2171.02.32f	D	21710D05	Gunner's Primary Sight (GPS)
2171.02.32g	D	21710D05	Gunner's Primary Sight (GPS)
2171.02.32h	D	21710D05	Gunner's Primary Sight (GPS)
2171.02.32i	D	21710D03	Fire Control Interconnect Diagram
2171.02.32j	D	21710D03	Fire Control Interconnect Diagram
2171.02.32k	D	21710D06	LASER Safety
2171.02.32l	D	21710D06	LASER Safety
2171.02.32m	D	21710D06	LASER Safety
2171.02.32n	D	21710D06	LASER Safety
2171.02.32o	D	21710D08	Thermal Imaging System
2171.02.32p	D	21710D08	Thermal Imaging System
2171.02.32q	D	21710D08	Thermal Imaging System
2171.02.32r	D	21710D08	Thermal Imaging System
2171.02.32s	D	21710D09	Abrams Optics
2171.02.32t	D	21710D09	Abrams Optics
2171.02.32u	D	21710D09	Abrams Optics
2171.02.32v	D	21710D09	Abrams Optics
2171.02.32w	D	21710D07	Non-Thermal Line Replaceable Units (LRU)
2171.02.32x	D	21710D07	Non-Thermal Line Replaceable Units (LRU)
2171.02.32y	D	21710D07	Non-Thermal Line Replaceable Units (LRU)
2171.02.32z	D	21710D07	Non-Thermal Line Replaceable Units (LRU)
2171.02.32aa	D	21710D07	Non-Thermal Line Replaceable Units (LRU)

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SECTION IV - CONCEPT CARDS

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.32bb	D	21710D08	Thermal Imaging System
2171.02.33	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
	D	21710D10	Job Performance Test and review on 21710D01 through 21710D09
	D	21710D11	Job Knowledge Test and review on 21710D01 through 21710D09
2171.02.33a	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.33b	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.33c	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.33d	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.33e	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.33f	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.33g	D	21710D04	Direct Support Electrical Systems Test Set (DSESTS)
2171.02.34	I	21710I01	Light Armored Vehicle/LAV-AT Introduction
	I	21710I02	Maintain the LAV-AT
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05
2171.02.34a	I	21710I01	Light Armored Vehicle/LAV-AT Introduction
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34b	I	21710I01	Light Armored Vehicle/LAV-AT Introduction
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34c	I	21710I01	Light Armored Vehicle/LAV-AT Introduction
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34d	I	21710I01	Light Armored Vehicle/LAV-AT Introduction
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.34e	I	21710I01	Light Armored Vehicle/LAV-AT Introduction
2171.02.34f	I	21710I02	Maintain the LAV-AT
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34g	I	21710I02	Maintain the LAV-AT
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34h	I	21710I02	Maintain the LAV-AT
2171.02.34i	I	21710I02	Maintain the LAV-AT
2171.02.34j	I	21710I02	Maintain the LAV-AT
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34k	I	21710I02	Maintain the LAV-AT
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34l	I	21710I02	Maintain the LAV-AT
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34m	I	21710I02	Maintain the LAV-AT
	I	21710I03	Job Knowledge Test and review on 21710I01 through 21710I02
	I	21710I04	Job Performance Test and review on 21710I01 through 21710I02
2171.02.34n	I	21710I02	Maintain the LAV-AT
2171.02.34o	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05
2171.02.34p	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05
2171.02.34q	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05
2171.02.34r	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.34s	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05
2171.02.34t	I	21710I05	Inspection and Maintenance of the LAV Thermal Sights
	I	21710I06	Job Knowledge Test and review on 21710I05
	I	21710I07	Job Performance Test and review on 21710I05
2171.02.37	H	21710H02	AN/GVS-5 Support Equipment
	H	21710H05	Job Knowledge Test and review on 21710H01 through 21710H04
	H	21710H06	Job Performance Test and review on 21710H01 through 21710H04
2171.02.37a	H	21710H02	AN/GVS-5 Support Equipment
2171.02.37b	H	21710H02	AN/GVS-5 Support Equipment
2171.02.37c	H	21710H02	AN/GVS-5 Support Equipment
2171.02.37d	H	21710H02	AN/GVS-5 Support Equipment
2171.02.37e	H	21710H02	AN/GVS-5 Support Equipment
2171.02.37f	H	21710H02	AN/GVS-5 Support Equipment
2171.02.38	F	21710F02	Passive NVE Test and Support Equipment
	F	21710F05	Job Knowledge Test and review on 21710F01 through 21710F04
	F	21710F06	Job Performance Test and review on 21710F01 through 21710F04
2171.02.38a	F	21710F02	Passive NVE Test and Support Equipment
2171.02.38b	F	21710F02	Passive NVE Test and Support Equipment
2171.02.38c	F	21710F02	Passive NVE Test and Support Equipment
2171.02.38d	F	21710F02	Passive NVE Test and Support Equipment
2171.02.38e	F	21710F02	Passive NVE Test and Support Equipment
2171.02.38f	F	21710F02	Passive NVE Test and Support Equipment
2171.02.39	J	21710J01	Cross Leveling Test Fixture
2171.02.39a	J	21710J01	Cross Leveling Test Fixture
2171.02.39b	J	21710J01	Cross Leveling Test Fixture
2171.02.39c	J	21710J01	Cross Leveling Test Fixture
2171.02.40	J	21710J06	Azimuth Test Fixture
2171.02.40a	J	21710J06	Azimuth Test Fixture

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LO	ANNEX	LESSON ID	LESSON TITLE
2171.02.40b	J	21710J06	Azimuth Test Fixture
2171.02.40c	J	21710J06	Azimuth Test Fixture
2171.02.42	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
	E	21710E03	Job Knowledge Test and review on 21710E01 through 21710E02
2171.02.42a	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
2171.02.42b	E	21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment
2171.02.43	F	21710F07	Thermal Night Vision Equipment (NVE)
	F	21710F09	Thermal NVE Scheduled PMCS
	F	21710F10	Thermal NVE Corrective Maintenance
	F	21710F11	Job Knowledge Test and review on 21710F07 through 21710F10
	F	21710F12	Job Performance Test and review on 21710F07 through 21710F10
2171.02.43a	F	21710F07	Thermal Night Vision Equipment (NVE)
2171.02.43b	F	21710F07	Thermal Night Vision Equipment (NVE)
2171.02.43c	F	21710F07	Thermal Night Vision Equipment (NVE)
2171.02.43d	F	21710F10	Thermal NVE Corrective Maintenance
2171.02.43e	F	21710F10	Thermal NVE Corrective Maintenance
2171.02.43f	F	21710F10	Thermal NVE Corrective Maintenance
2171.02.43g	F	21710F09	Thermal NVE Scheduled PMCS
2171.02.43h	F	21710F09	Thermal NVE Scheduled PMCS
	F	21710F10	Thermal NVE Corrective Maintenance
2171.02.44	E	21710E10	Maintenance Shelters
2171.02.44a	E	21710E10	Maintenance Shelters
2171.02.44b	E	21710E10	Maintenance Shelters
2171.02.46	G	21710G01	Javelin Introduction
	G	21710G02	Javelin Operation
	G	21710G03	Command Launch Unit(CLU) Theory
	G	21710G04	Command Launch Unit (CLU) Maintenance
	G	21710G05	Job Knowledge Test and review on 21710G01 through 21710G04
	G	21710G06	Job Performance Test and review on 21710G01 through 21710G04

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<u>LO</u>	<u>ANNEX</u>	<u>LESSON ID</u>	<u>LESSON TITLE</u>
2171.02.46a	G	21710G01	Javelin Introduction
2171.02.46b	G	21710G02	Javelin Operation
2171.02.46c	G	21710G02	Javelin Operation
2171.02.46d	G	21710G03	Command Launch Unit(CLU) Theory
2171.02.46e	G	21710G04	Command Launch Unit (CLU) Maintenance
2171.02.46f	G	21710G04	Command Launch Unit (CLU) Maintenance
2171.02.46g	G	21710G02	Javelin Operation
2171.02.46h	G	21710G04	Command Launch Unit (CLU) Maintenance

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ACADEMIC SUMMARY

IDENTIFIER	TITLE	HRS	TYPE
ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A			
21XXAA01	Course Introduction	0.50	LP
21XXAA02	Maintenance Management Overview	0.50	LP
21XXAA03	Publications	6.00	T
21XXAA04	Maintenance Administration	9.00	T
21XXAA05	Modifications	1.00	T
21XXAA06	Calibrations	1.00	T
21XXAA07	Shop Safety	1.00	T
21XXAA08	Hazard Communications	1.00	T
21XXAA09	Common Tools	3.00	T
21XXAA10	Troubleshooting	1.00	LP
21XXAA11	Job Knowledge Test and review on 21XXAA03 through 21XXAA09	2.00	E
21XXAA12	Maintenance Management Overview II	0.50	LP
21XXAA13	Movement to School	0.50	LP
		Annex Total :	27.00
ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B			
21710B01	Nitrogen Purging and Charging	3.00	T
21710B02	Electrical Theory	20.00	T
21710B03	Multimeter Operation	3.00	T
21710B04	Job Knowledge Test and review on 21710B01 through 21710B03	1.00	E
21710B05	Job Performance Test and review on 21710B02 through 21710B03	3.00	E
21710B06	Electronics Analysis	23.00	T
21710B07	Job Knowledge Test and review on 21710B06	1.00	E
21710B08	Job Performance Test and review on 21710B06	3.00	E
21710B09	Cable Repair, Daniel's kit	8.00	T
21710B10	Inspection and Maintenance	1.00	LP
		Annex Total :	66.00
ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C			
21710C01	Introduction to Test Equipment	4.00	T
21710C02	Job Knowledge Test and review on 21710C01	1.00	E
21710C03	LASER Eye Exam	4.00	LP
21710C04	AC Theory	12.00	T
21710C05	Job Knowledge Test and review on 21710C04	1.00	E
21710C06	Job Performance Test and review on 21710C04	3.00	E
21710C07	Electronic Components/Circuits	12.00	T
21710C08	Job Knowledge Test and review on 21710C07	1.00	E
21710C09	Job Performance test and review on 21710C07	3.00	E
21710C10	Digital Electronics	12.00	T
21710C11	Job Knowledge Test and review on 21710C10	1.00	E
21710C12	Job Performance Test and review on 21710C10	3.00	E
21710C13	Soldering	27.00	T
21710C14	Job Performance Test and review on 21710C13	8.00	E
21710C15	Inspection and Maintenance	1.00	LP
		Annex Total :	93.00

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SECTION IV - CONCEPT CARDS

ACADEMIC SUMMARY

IDENTIFIER	TITLE	HRS	TYPE
ANNEX D - M1A1 ABRAMS TANK			
21710D01	Introduction to the M1A1 Abrams Tank	8.00	T
21710D02	Functions of the Fire Control System	8.00	T
21710D03	Fire Control Interconnect Diagram	8.00	T
21710D04	Direct Support Electrical Systems Test Set (DSESTS)	8.00	T
21710D05	Gunner's Primary Sight (GPS)	5.00	T
21710D06	LASER Safety	1.00	T
21710D07	Non-Thermal Line Replaceable Units (LRU)	19.00	T
21710D08	Thermal Imaging System	20.00	T
21710D09	Abrams Optics	4.00	T
21710D10	Job Performance Test and review on 21710D01 through 21710D09	15.00	E
21710D11	Job Knowledge Test and review on 21710D01 through 21710D09	3.00	E
		Annex Total :	99.00
ANNEX E - TOW II WEAPONS SYSTEM			
21710E01	Introduction to the M220E4 TOW II Weapons System	7.00	T
21710E02	Introduction to TOW II Weapon System Test Equipment/Support Equipment	7.00	T
21710E03	Job Knowledge Test and review on 21710E01 through 21710E02	2.00	E
21710E04	M220E4 TOW II Weapons System Scheduled PMCS	45.00	T
21710E05	Job Knowledge Test and review on 21710E04	2.00	E
21710E06	Job Performance Test and review on 21710E04	12.00	E
21710E07	Repair of the M220E4 TOW II Weapon System	12.00	T
21710E08	Job Performance Test and review on 21710E07	5.00	E
21710E09	Test and Support Equipment Scheduled PMCS	5.00	T
21710E10	Maintenance Shelters	1.00	T
		Annex Total :	98.00
ANNEX F - NIGHT SIGHT SYSTEMS			
21710F01	Passive Night Vision Equipment (NVE)	2.00	T
21710F02	Passive NVE Test and Support Equipment	2.00	T
21710F03	Passive NVE Scheduled PMCS	5.00	T
21710F04	Passive NVE Corrective Maintenance	5.00	T
21710F05	Job Knowledge Test and review on 21710F01 through 21710F04	2.00	E
21710F06	Job Performance Test and review on 21710F01 through 21710F04	5.00	E
21710F07	Thermal Night Vision Equipment (NVE)	5.00	T
21710F08	Thermal NVE Test and Support Equipment	2.00	T
21710F09	Thermal NVE Scheduled PMCS	21.00	T
21710F10	Thermal NVE Corrective Maintenance	21.00	T
21710F11	Job Knowledge Test and review on 21710F07 through 21710F10	2.00	E
21710F12	Job Performance Test and review on 21710F07 through 21710F10	5.00	E
21710F13	Night Vision Equipment Set (NVES) Ancillary	2.00	T

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IDENTIFIER	TITLE	HRS	TYPE
	Equipment		
21710F14	NVES Ancillary Equipment Test and Support Equipment	2.00	T
21710F15	NVES Ancillary Equipment Scheduled PMCS	1.00	T
21710F16	NVES Ancillary Equipment Corrective Maintenance	9.00	T
21710F17	Job Knowledge Test and review on 21710F13 through 21710F16	2.00	T
21710F18	Job Performance Test and review on 2171F13 through 21710F16	5.00	T
Annex Total :		98.00	
ANNEX G - JAVELIN WEAPON SYSTEM			
21710G01	Javelin Introduction	4.00	T
21710G02	Javelin Operation	5.00	T
21710G03	Command Launch Unit (CLU) Theory	8.00	T
21710G04	Command Launch Unit (CLU) Maintenance	15.00	T
21710G05	Job Knowledge Test and review on 21710G01 through 21710G04	2.00	E
21710G06	Job Performance Test and review on 21710G01 through 21710G04	8.00	E
Annex Total :		42.00	
ANNEX H - LASER DEVICES			
21710H01	AN/GVS-5 LASER Rangefinder	1.00	T
21710H02	AN/GVS-5 Support Equipment	11.00	T
21710H03	AN/PAQ-3 Modular Universal LASER Equipment (MULE)	2.00	T
21710H04	AN/PAQ-3 MULE Support Equipment	15.00	T
21710H05	Job Knowledge Test and review on 21710H01 through 21710H04	2.00	E
21710H06	Job Performance Test and review on 21710H01 through 21710H04	7.00	E
Annex Total :		38.00	
ANNEX I - LIGHT ARMORED VEHICLE			
21710I01	Light Armored Vehicle/LAV-AT Introduction	7.00	T
21710I02	Maintain the LAV-AT	11.00	T
21710I03	Job Knowledge Test and review on 21710I01 through 21710I02	2.00	E
21710I04	Job Performance Test and review on 21710I01 through 21710I02	7.00	E
21710I05	Inspection and Maintenance of the LAV Thermal Sights	12.00	T
21710I06	Job Knowledge Test and review on 21710I05	2.00	E
21710I07	Job Performance Test and review on 21710I05	8.00	E
Annex Total :		49.00	
ANNEX J - HOWITIZERS			

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ACADEMIC SUMMARY

IDENTIFIER	TITLE	HRS	TYPE
21710J01	Cross Leveling Test Fixture	0.50	T
21710J02	Maintain the M1A1 Gunners Quadrant	10.50	T
21710J03	Job Performance Test and review on 21710J01 through 21710J02	4.00	E
21710J04	Maintain the M18 Elevation Quadrant	14.00	T
21710J05	Job Performance Test and review on 21710J04	3.50	E
21710J06	Azimuth Test Fixture	0.25	T
21710J07	Maintain the M137 Panoramic Telescope	13.75	T
21710J08	Job Performance Test and review on 21710J06 through 21710J07	3.50	E
21710J09	Maintain M198 Howitzer Fire Control System	20.00	T
21710J10	Job Performance Test and review on 21710J09	7.00	E
21710J11	Maintenance of the M2A2 Aiming Circle	12.00	T
21710J12	Job Performance Test and review on 21710J11	6.00	E
21710J13	Inspection and Maintenance of the M49 Observation Telescope	3.00	LP

Annex Total : 98.00

Total Academic Hours : 708.00

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ADMINISTRATIVE SUMMARY

<u>IDENTIFIER</u>	<u>TITLE</u>	<u>HRS</u>	<u>TYPE</u>
ANNEX Z - ADMIN			
21710Z01	In Processing	8.00	ADM
21710Z02	Out Processing/Graduation	8.00	ADM
21710Z03	Commanders Time	64.00	ADM
21710Z04	MCI Testing	3.00	ADM

Total Administrative Hours : 83.00

Total POI Hours : 791.00

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA01

HOURS: 0.50

TITLE: Course Introduction

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1

MEDIA: CPU, PPP

LESSON PURPOSE:

This class will cover a general overview of the course content, testing procedures including the end of course exam, and initial counseling.

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SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA02

HOURS: 0.50

TITLE: Maintenance Management Overview

METHOD HOURS S:I RATIO

L 0.50 8:1

MEDIA: CPU, PPP

LESSON PURPOSE:

This is a 1 hour period of instruction with 30 minutes on TD-2 and 30 minutes on TD-5. The purpose is to give the basic student some insight as to how maintenance management of ground ordnance equipment is conducted within the Marine Corps, what maintenance is, the elements of maintenance, maintenance management sub systems, and the categories of maintenance.

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SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA03

HOURS: 6.00

TITLE: Publications

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.50	8:1
PA	4.50	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the types of publications, in accordance with the references. (2171.01.04a)
2. Given applicable resources, identify when the types of publications would be used, in accordance with the references. (2171.01.04b)
3. Given applicable resources, locate specific publications, in accordance with the references. (2171.01.04c)
4. Given applicable resources, explain the elements of a technical manual, in accordance with the references. (2171.01.04d)
5. Given applicable resources, locate tasks in publications, in accordance with the references. (2171.01.04e)
6. Given applicable resources, identify how to locate repair parts, in accordance with the references. (2171.01.04f)
7. Given applicable resources, use source, maintenance and recoverability codes to request maintenance and dispose of repair parts, in accordance with the references. (2171.01.04g)
8. Given applicable resources, identify the purpose of the NAVMC form 10772, in accordance with the references. (2171.01.04h)

REFERENCE

REFERENCE #

1. Table of Marine Corps Ground Equipment Resource Reporting (MCGERR)

MCBUL 3000

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA03

HOURS: 6.00

TITLE: Publications

- | | |
|---|--------------|
| 2. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 3. The Marine Corps Technical Publications System | MCO P5215.17 |
| 4. Catalog of Publications | NAVMC 2761 |
| 5. Stock List 1-2 | SL-1-2 |
| 6. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 7. MIMMS (AIS) FMSS | UM 4790-5 |
| 8. Publication Library Management System | UM-PLMS |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA04

HOURS: 9.00

TITLE: Maintenance Administration

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	4.00	8:1
PA	5.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, complete selected NAVMC forms, in accordance with the references. (2171.01.04o)

REFERENCE

REFERENCE #

- | | |
|--|---------------|
| 1. Consumer Level Supply Policy Manual | MCO P4400.150 |
| 2. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 3. Stock List 1-2 | SL-1-2 |
| 4. Stock List 1-3 | SL-1-3 |
| 5. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 6. MIMMS (AIS) FMSS | UM 4790-5 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA05

HOURS: 1.00

TITLE: Modifications

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1
PA	0.50	8:2

MEDIA: CPU, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, state the types of modification categories, in accordance with the references. (2171.01.04l)
2. Given applicable resources, identify equipment requiring modification, in accordance with the references. (2171.01.04m)
3. Given applicable resources, complete modification records, in accordance with the references. (2171.01.04n)

REFERENCE

REFERENCE #

- | | |
|--|---------------|
| 1. Applicable Equipment Modification Instruction | APPLICABLE MI |
| 2. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 3. Test Set Night Vision Sight AN/TAM-3A | MI-08121-45/1 |
| 4. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 5. MIMMS (AIS) FMSS | UM 4790-5 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA06

HOURS: 1.00

TITLE: Calibrations

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1
PA	0.50	8:2

MEDIA: CPU, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, state the types of calibration, in accordance with the references. (2171.01.04i)
2. Given applicable resources, state when the types of calibration would be used, in accordance with the references. (2171.01.04j)
3. Given applicable resources, identify the TMDE that requires calibration, in accordance with the references. (2171.01.04k)

REFERENCE

REFERENCE #

- | | |
|--|--------------|
| 1. Marine Corps Test, Measurement, and Diagnostic Equipment Calibrations and Maintenance Program | MCO 4733.1 |
| 2. Tool Kit, Small Arms Repairer | SL-3-00607A |
| 3. Calibration Requirements Marine Corps TMDE Calibration and Maintenance Program | TI 4733-15/1 |
| 4. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 5. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 6. MIMMS (AIS) FMSS | UM 4790-5 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA07

HOURS: 1.00

TITLE: Shop Safety

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1
PA	0.50	8:2

MEDIA: CPU, HO, PPP, TV

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common shop procedures, in accordance with the references. (2171.01.01)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the type of personal protective equipment (PPE) required for handling hazardous materials, in accordance with the references. (2171.01.01a)
2. Given applicable resources, select the proper personal protective equipment (PPE) required when using specific tools, in accordance with the references. (2171.01.01b)
3. Given applicable resources, identify LASER hazards in the work place, in accordance with the references. (2171.01.01c)
4. Given applicable resources, identify radiation hazards in the work place, in accordance with the references. (2171.01.01d)

REFERENCE

REFERENCE #

- | | |
|--|----------------|
| 1. Department of Defense Federal Hazard Communication Training Program Students's Workbook | DOD 6050.5-W |
| 2. Local Policies/Procedures | LOCAL POLICIES |
| 3. Environmental Compliance and Protection Manual | MCO 5090.2 |
| 4. Occupational Radiation Protection Program | MCO 5100.8 |
| 5. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 6. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 7. Controls of Hazards to Health from Laser Radiation | TB MED 524 |
| 8. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 9. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA07

HOURS: 1.00

TITLE: Shop Safety

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA08

HOURS: 1.00

TITLE: Hazard Communications

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	0.50	8:1

MEDIA: CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common shop procedures, in accordance with the references. (2171.01.01)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, utilize material safety data sheets, in accordance with the references. (2171.01.01e)
2. Given applicable resources, respond to a hazardous materials/waste spill in the work place, in accordance with the references. (2171.01.01f)

REFERENCE

REFERENCE #

- | | |
|--|--------------|
| 1. Department of Defense Federal Hazard Communication Training Program Students's Workbook | DOD 6050.5-W |
| 2. Environmental Compliance and Protection Manual | MCO 5090.2 |
| 3. Occupational Radiation Protection Program | MCO 5100.8 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA09

HOURS: 3.00

TITLE: Common Tools

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	0.50	8:1
PA	1.50	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common shop procedures, in accordance with the references. (2171.01.01)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform preventative maintenance checks and services (PMCS) on tool sets, chests and kits, in accordance with the references. (2171.01.01g)
2. Given applicable resources, conduct inventories of tool sets, chests and kits, in accordance with the references. (2171.01.01h)
3. Given applicable resources, demonstrate the proper use of hand tools, in accordance with the references. (2171.01.01i)

REFERENCE

REFERENCE #

- | | |
|---|-----------------|
| 1. Applicable Stock List SL-3 | APPLICABLE SL-3 |
| 2. Applicable Equipment Technical Publications | APPLICABLE TM |
| 3. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 4. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 5. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA10

HOURS: 1.00

TITLE: Troubleshooting

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1

MEDIA: CPU, PPP, WB

LESSON PURPOSE:

The seven steps of troubleshooting and the principles behind these steps are taught to entry level mechanics and technicians to aid them in fault isolation. Troubleshooting is re-enforced in every annex for the remainder of the course.

REFERENCE

REFERENCE #

1. Applicable Equipment Technical Publications

APPLICABLE TM

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

EXAM ID: 21XXAA11

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21XXAA03 through 21XXAA09

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	1.90	8:1

MEDIA: AIO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common shop procedures, in accordance with the references. (2171.01.01)
2. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the types of publications, in accordance with the references. (2171.01.04a)
2. Given applicable resources, identify when the types of publications would be used, in accordance with the references. (2171.01.04b)
3. Given applicable resources, locate specific publications, in accordance with the references. (2171.01.04c)
4. Given applicable resources, explain the elements of a technical manual, in accordance with the references. (2171.01.04d)
5. Given applicable resources, locate tasks in publications, in accordance with the references. (2171.01.04e)
6. Given applicable resources, identify how to locate repair parts, in accordance with the references. (2171.01.04f)
7. Given applicable resources, use source, maintenance and recoverability codes to request maintenance and dispose of repair parts, in accordance with the references. (2171.01.04g)
8. Given applicable resources, identify the purpose of the NAVMC form 10772, in accordance with the references. (2171.01.04h)
9. Given applicable resources, state the types of calibration, in accordance with the references. (2171.01.04i)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

EXAM ID: 21XXAA11

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21XXAA03 through 21XXAA09

10. Given applicable resources, state when the types of calibration would be used, in accordance with the references. (2171.01.04j)
11. Given applicable resources, identify the TMDE that requires calibration, in accordance with the references. (2171.01.04k)
12. Given applicable resources, state the types of modification categories, in accordance with the references. (2171.01.04l)
13. Given applicable resources, identify equipment requiring modification, in accordance with the references. (2171.01.04m)
14. Given applicable resources, complete modification records, in accordance with the references. (2171.01.04n)
15. Given applicable resources, complete selected NAVMC forms, in accordance with the references. (2171.01.04o)

REFERENCE

REFERENCE #

- | | |
|--|-----------------|
| 1. Applicable Equipment Modification Instruction | APPLICABLE MI |
| 2. Applicable Stock List SL-3 | APPLICABLE SL-3 |
| 3. Applicable Equipment Technical Publications | APPLICABLE TM |
| 4. Department of Defense Federal Hazard Communication Training Program Students's Workbook | DOD 6050.5-W |
| 5. Federal Logistics Database | FEDLOG |
| 6. Table of Marine Corps Ground Equipment Resource Reporting (MCGERR) | MCBUL 3000 |
| 7. Occupational Radiation Protection Program | MCO 5100.8 |
| 8. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 9. Consumer Level Supply Policy Manual | MCO P4400.150 |
| 10. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 11. The Marine Corps Technical Publications System | MCO P5215.17 |
| 12. Test Set Night Vision Sight AN/TAM-3A | MI-08121-45/1 |
| 13. Stock List 1-2 | SL-1-2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

EXAM ID: 21XXAA11

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21XXAA03 through 21XXAA09

- | | |
|--|---------------|
| 14. Stock List 1-3 | SL-1-3 |
| 15. Calibration Requirements Marine Corps TMDE Calibration and Maintenance Program | TI 4733-15/1_ |
| 16. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 17. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 18. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 19. MIMMS (AIS) FMSS | UM 4790-5 |
| 20. Publication Library Management System | UM-PLMS |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA12

HOURS: 0.50

TITLE: Maintenance Management Overview II

METHOD HOURS S:I RATIO

L 0.50 8:1

MEDIA: CPU, PPP

LESSON PURPOSE:

This is a 1 hour period of instruction with 30 minutes on TD-2 and 30 minutes on TD-5. The purpose is to give the basic student some insight as to how maintenance management of ground ordnance equipment is conducted within the Marine Corps, what maintenance is, the elements of maintenance, maintenance management sub systems, and the categories of maintenance.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX A - COMMON KNOWLEDGE AND SKILLS BLOCK A

LESSON ID: 21XXAA13

HOURS: 0.50

TITLE: Movement to School

METHOD HOURS S:I RATIO

ADMIN 0.50 8:1

MEDIA: CPU, PPP

LESSON PURPOSE:

The Marines will march about 1/2 mile, from Building 3144 to Hatcher Hall to meet up with the ITRO portion of the course.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B01

HOURS: 3.00

TITLE: Nitrogen Purging and Charging

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	1.00	8:1
PA	1.00	8:2

MEDIA: AIO, CPU, HO, PPP, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform purging on fire control equipment, in accordance with the references. (2171.01.04p)
2. Given applicable resources, perform charging on fire control equipment, in accordance with the references. (2171.01.04q)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Applicable Equipment Technical Publications | APPLICABLE TM |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. General Procedures for Purging and Charging. | TM 750-116 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B02

HOURS: 20.00

TITLE: Electrical Theory

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ICW	7.00	8:1
L	8.00	8:1
PA	5.00	8:2

MEDIA: AIO, CPU, HO, IVD, PPP, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)
2. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)
3. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify electrical safety hazards, in accordance with the references. (2171.01.04r)
2. Given applicable resources, identify electro-static discharge effects, in accordance with the references. (2171.01.04s)
3. Given applicable resources, identify the sources of electricity, in accordance with the references. (2171.01.02a)
4. Given applicable resources, define voltage (electrical pressure), in accordance with the references. (2171.01.02b)
5. Given applicable resources, define amperage (electrical flow), in accordance with the references. (2171.01.02c)
6. Given applicable resources, define resistance (opposition to electrical flow), in accordance with the references. (2171.01.02d)
7. Given applicable resources, explain relationships of voltage, current, and resistance (Ohm's Law), in accordance with the references. (2171.01.02e)
8. Given applicable resources, use metric terms to identify electrical measurements, in accordance with the references. (2171.01.02f)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B02

HOURS: 20.00

TITLE: Electrical Theory

9. Given applicable resources, interpret basic terms associated with electricity, in accordance with the references. (2171.01.02g)
10. Given applicable resources, explain the difference between insulators and conductors, in accordance with the references. (2171.01.02h)
11. Given applicable resources, identify the characteristics of a simple circuit, in accordance with the references. (2171.01.03a)
12. Given applicable resources, identify the characteristics of a series circuit, in accordance with the references. (2171.01.03b)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics Fundamentals: Basic Principles-Direct Current | FM 11-60 |
| 3. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |
| 4. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B03

HOURS: 3.00

TITLE: Multimeter Operation

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	2.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, measure voltage with a multimeter, in accordance with the references. (2171.01.02j)
2. Given applicable resources, measure resistance with a multimeter, in accordance with the references. (2171.01.02k)
3. Given applicable resources, measure continuity with a multimeter, in accordance with the references. (2171.01.02l)
4. Given applicable resources, measure current with a multimeter, in accordance with the references. (2171.01.02m)

NOTE(S):

This class is taught in conjunction with Electrical Theory (21710B02).

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics Fundamentals: Basic Principles-Direct Current | FM 11-60 |
| 3. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

EXAM ID: 21710B04

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710B01 through 21710B03

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	0.90	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)
2. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)
3. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the sources of electricity, in accordance with the references. (2171.01.02a)
2. Given applicable resources, define voltage (electrical pressure), in accordance with the references. (2171.01.02b)
3. Given applicable resources, define amperage (electrical flow), in accordance with the references. (2171.01.02c)
4. Given applicable resources, define resistance (opposition to electrical flow), in accordance with the references. (2171.01.02d)
5. Given applicable resources, explain relationships of voltage, current, and resistance (Ohm's Law), in accordance with the references. (2171.01.02e)
6. Given applicable resources, use metric terms to identify electrical measurements, in accordance with the references. (2171.01.02f)
7. Given applicable resources, interpret basic terms associated with electricity, in accordance with the references. (2171.01.02g)
8. Given applicable resources, explain the difference between insulators and conductors, in accordance with the references. (2171.01.02h)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

EXAM ID: 21710B04

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710B01 through 21710B03

9. Given applicable resources, measure voltage with a multimeter, in accordance with the references. (2171.01.02j)
10. Given applicable resources, measure resistance with a multimeter, in accordance with the references. (2171.01.02k)
11. Given applicable resources, measure continuity with a multimeter, in accordance with the references. (2171.01.02l)
12. Given applicable resources, measure current with a multimeter, in accordance with the references. (2171.01.02m)
13. Given applicable resources, identify the characteristics of a simple circuit, in accordance with the references. (2171.01.03a)
14. Given applicable resources, identify the characteristics of a series circuit, in accordance with the references. (2171.01.03b)
15. Given applicable resources, perform purging on fire control equipment, in accordance with the references. (2171.01.04p)
16. Given applicable resources, perform charging on fire control equipment, in accordance with the references. (2171.01.04q)
17. Given applicable resources, identify electrical safety hazards, in accordance with the references. (2171.01.04r)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

EXAM ID: 21710B05

HOURS: 3.00

TITLE: Job Performance Test and review on 21710B02 through 21710B03

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	2.90	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)
2. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)
3. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the sources of electricity, in accordance with the references. (2171.01.02a)
2. Given applicable resources, define voltage (electrical pressure), in accordance with the references. (2171.01.02b)
3. Given applicable resources, define amperage (electrical flow), in accordance with the references. (2171.01.02c)
4. Given applicable resources, define resistance (opposition to electrical flow), in accordance with the references. (2171.01.02d)
5. Given applicable resources, explain relationships of voltage, current, and resistance (Ohm's Law), in accordance with the references. (2171.01.02e)
6. Given applicable resources, use metric terms to identify electrical measurements, in accordance with the references. (2171.01.02f)
7. Given applicable resources, interpret basic terms associated with electricity, in accordance with the references. (2171.01.02g)
8. Given applicable resources, explain the difference between insulators and conductors, in accordance with the references. (2171.01.02h)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

EXAM ID: 21710B05

HOURS: 3.00

TITLE: Job Performance Test and review on 21710B02 through 21710B03

9. Given applicable resources, measure voltage with a multimeter, in accordance with the references. (2171.01.02j)
10. Given applicable resources, measure resistance with a multimeter, in accordance with the references. (2171.01.02k)
11. Given applicable resources, measure continuity with a multimeter, in accordance with the references. (2171.01.02l)
12. Given applicable resources, measure current with a multimeter, in accordance with the references. (2171.01.02m)
13. Given applicable resources, identify the characteristics of a simple circuit, in accordance with the references. (2171.01.03a)
14. Given applicable resources, identify the characteristics of a series circuit, in accordance with the references. (2171.01.03b)
15. Given applicable resources, perform purging on fire control equipment, in accordance with the references. (2171.01.04p)
16. Given applicable resources, perform charging on fire control equipment, in accordance with the references. (2171.01.04q)
17. Given applicable resources, identify electrical safety hazards, in accordance with the references. (2171.01.04r)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B06

HOURS: 23.00

TITLE: Electronics Analysis

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ICW	7.00	8:1
L	9.00	8:1
PA	7.00	8:2

MEDIA: CPU, HO, IVD, PPP, SB, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)
2. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify electrical component characteristics (capacitors, diodes, transistors, LEDs, inductors, relays, fuses, ckt breakers, transformers, power supplies), in accordance with the references. (2171.01.02n)
2. Given applicable resources, identify characteristics of Direct Current (DC) versus Alternating Current (AC), in accordance with the references. (2171.01.02o)
3. Given applicable resources, identify schematic symbols, in accordance with the references. (2171.01.03c)
4. Given applicable resources, identify characteristics of a parallel circuits, in accordance with the references. (2171.01.03d)
5. Given applicable resources, identify characteristics of a series - parallel circuits, in accordance with the references. (2171.01.03e)
6. Given applicable resources, interpret schematic diagrams, in accordance with the references. (2171.01.03f)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

EXAM ID: 21710B07

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710B06

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	0.90	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)
2. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify electrical component characteristics (capacitors, diodes, transistors, LEDs, inductors, relays, fuses, ckt breakers, transformers, power supplies), in accordance with the references. (2171.01.02n)
2. Given applicable resources, identify characteristics of Direct Current (DC) versus Alternating Current (AC), in accordance with the references. (2171.01.02o)
3. Given applicable resources, identify schematic symbols, in accordance with the references. (2171.01.03c)
4. Given applicable resources, identify characteristics of a parallel circuits, in accordance with the references. (2171.01.03d)
5. Given applicable resources, identify characteristics of a series - parallel circuits, in accordance with the references. (2171.01.03e)
6. Given applicable resources, interpret schematic diagrams, in accordance with the references. (2171.01.03f)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

EXAM ID: 21710B08

HOURS: 3.00

TITLE: Job Performance Test and review on 21710B06

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	2.90	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)
2. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify electrical component characteristics (capacitors, diodes, transistors, LEDs, inductors, relays, fuses, ckt breakers, transformers, power supplies), in accordance with the references. (2171.01.02n)
2. Given applicable resources, identify characteristics of Direct Current (DC) versus Alternating Current (AC), in accordance with the references. (2171.01.02o)
3. Given applicable resources, identify schematic symbols, in accordance with the references. (2171.01.03c)
4. Given applicable resources, identify characteristics of a parallel circuits, in accordance with the references. (2171.01.03d)
5. Given applicable resources, identify characteristics of a series - parallel circuits, in accordance with the references. (2171.01.03e)
6. Given applicable resources, interpret schematic diagrams, in accordance with the references. (2171.01.03f)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B09

HOURS: 8.00

TITLE: Cable Repair, Daniel's kit

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.50	8:1
PA	6.50	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the Daniel's kit, in accordance with the references. (2171.01.04x)
2. Given applicable resources, use Daniel's kit to repair solderless cable connections, in accordance with the references. (2171.01.04y)

REFERENCE

REFERENCE #

1. Applicable Equipment Modification Instruction

APPLICABLE MI

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX B - COMMON KNOWLEDGE AND SKILLS BLOCK B

LESSON ID: 21710B10

HOURS: 1.00

TITLE: Inspection and Maintenance

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
PA	1.00	8:2

MEDIA: AIO

LESSON PURPOSE:

This time is used to prepare the classroom and the equipment for the next class.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C01

HOURS: 4.00

TITLE: Introduction to Test Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	3.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, operate power supplies, in accordance with the references. (2171.01.04t)
2. Given applicable resources, operate function generators, in accordance with the references. (2171.01.04u)
3. Given applicable resources, operate frequency counters, in accordance with the references. (2171.01.04v)
4. Given applicable resources, operate oscilloscopes, in accordance with the references. (2171.01.04w)

REFERENCE

REFERENCE #

1. Applicable Equipment Technical Publications

APPLICABLE TM

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C02

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710C01

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	0.90	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, operate power supplies, in accordance with the references. (2171.01.04t)
2. Given applicable resources, operate function generators, in accordance with the references. (2171.01.04u)
3. Given applicable resources, operate frequency counters, in accordance with the references. (2171.01.04v)
4. Given applicable resources, operate oscilloscopes, in accordance with the references. (2171.01.04w)

REFERENCE

REFERENCE #

1. Applicable Equipment Technical Publications

APPLICABLE TM

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C03

HOURS: 4.00

TITLE: LASER Eye Exam

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1
PA	3.50	8:2

MEDIA: AIO

LESSON PURPOSE:

The students are given the entry level eye exam to determine a baseline for the condition of their eyes.

REFERENCE

REFERENCE #

- | | |
|---|------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Occupational and Environmental Health Occupational Vision | TB MED 506 |
| 3. Controls of Hazards to Health from Laser Radiation | TB MED 524 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C04

HOURS: 12.00

TITLE: AC Theory

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ICW	4.50	8:1
L	3.00	8:1
PA	4.50	8:2

MEDIA: AIO, CPU, HO, IVD, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify AC waveform types, in accordance with the references. (2171.01.02q)
2. Given applicable resources, measure AC waveforms, in accordance with the references. (2171.01.02r)
3. Given applicable resources, define frequency, in accordance with the references. (2171.01.02s)
4. Given applicable resources, define AC and DC coupling, in accordance with the references. (2171.01.02t)
5. Given applicable resources, define duty cycle, in accordance with the references. (2171.01.02u)
6. Given applicable resources, define AC inductance, in accordance with the references. (2171.01.02v)
7. Given applicable resources, describe the difference between analog and digital signals, in accordance with the references. (2171.01.02w)
8. Given applicable resources, perform electronic troubleshooting, in accordance with the references. (2171.01.02x)

REFERENCE

REFERENCE #

1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997

DC/AC TEXTBOOK

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C04

HOURS: 12.00

TITLE: AC Theory

2. Communications-Electronics: Basic Principles-Alternating
Current

FM 11-61

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C05

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710C04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	0.90	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify AC waveform types, in accordance with the references. (2171.01.02q)
2. Given applicable resources, measure AC waveforms, in accordance with the references. (2171.01.02r)
3. Given applicable resources, define frequency, in accordance with the references. (2171.01.02s)
4. Given applicable resources, define AC and DC coupling, in accordance with the references. (2171.01.02t)
5. Given applicable resources, define duty cycle, in accordance with the references. (2171.01.02u)
6. Given applicable resources, define AC inductance, in accordance with the references. (2171.01.02v)
7. Given applicable resources, describe the difference between analog and digital signals, in accordance with the references. (2171.01.02w)
8. Given applicable resources, perform electronic troubleshooting, in accordance with the references. (2171.01.02x)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C05

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710C04

Current

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C06

HOURS: 3.00

TITLE: Job Performance Test and review on 21710C04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	2.90	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic devices/components, in accordance with the references. (2171.01.02)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify AC waveform types, in accordance with the references. (2171.01.02q)
2. Given applicable resources, measure AC waveforms, in accordance with the references. (2171.01.02r)
3. Given applicable resources, define frequency, in accordance with the references. (2171.01.02s)
4. Given applicable resources, define AC and DC coupling, in accordance with the references. (2171.01.02t)
5. Given applicable resources, define duty cycle, in accordance with the references. (2171.01.02u)
6. Given applicable resources, define AC inductance, in accordance with the references. (2171.01.02v)
7. Given applicable resources, describe the difference between analog and digital signals, in accordance with the references. (2171.01.02w)
8. Given applicable resources, perform electronic troubleshooting, in accordance with the references. (2171.01.02x)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C06

HOURS: 3.00

TITLE: Job Performance Test and review on 21710C04

Current

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C07

HOURS: 12.00

TITLE: Electronic Components/Circuits

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ICW	4.50	8:1
L	3.00	8:1
PA	4.50	8:2

MEDIA: AIO, CPU, HO, IVD, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify operational amplifier functioning, in accordance with the references. (2171.01.03g)
2. Given applicable resources, identify transformer operation and rectifier circuits, in accordance with the references. (2171.01.03h)
3. Given applicable resources, identify oscillator functioning, in accordance with the references. (2171.01.03i)
4. Given applicable resources, identify a wave shaping circuit, in accordance with the references. (2171.01.03j)
5. Given applicable resources, identify electric motors/generator functioning, in accordance with the references. (2171.01.03k)
6. Given applicable resources, identify electrical relays/time delay relay circuits, in accordance with the references. (2171.01.03l)
7. Given applicable resources, identify the functioning of capacitive/inductive filters, in accordance with the references. (2171.01.03m)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C08

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710C07

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	0.90	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify operational amplifier functioning, in accordance with the references. (2171.01.03g)
2. Given applicable resources, identify transformer operation and rectifier circuits, in accordance with the references. (2171.01.03h)
3. Given applicable resources, identify oscillator functioning, in accordance with the references. (2171.01.03i)
4. Given applicable resources, identify a wave shaping circuit, in accordance with the references. (2171.01.03j)
5. Given applicable resources, identify electric motors/generator functioning, in accordance with the references. (2171.01.03k)
6. Given applicable resources, identify electrical relays/time delay relay circuits, in accordance with the references. (2171.01.03l)
7. Given applicable resources, identify the functioning of capacitive/inductive filters, in accordance with the references. (2171.01.03m)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C09

HOURS: 3.00

TITLE: Job Performance test and review on 21710C07

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.20	8:1
X(P)	2.80	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify operational amplifier functioning, in accordance with the references. (2171.01.03g)
2. Given applicable resources, identify transformer operation and rectifier circuits, in accordance with the references. (2171.01.03h)
3. Given applicable resources, identify oscillator functioning, in accordance with the references. (2171.01.03i)
4. Given applicable resources, identify a wave shaping circuit, in accordance with the references. (2171.01.03j)
5. Given applicable resources, identify electric motors/generator functioning, in accordance with the references. (2171.01.03k)
6. Given applicable resources, identify electrical relays/time delay relay circuits, in accordance with the references. (2171.01.03l)
7. Given applicable resources, identify the functioning of capacitive/inductive filters, in accordance with the references. (2171.01.03m)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. DC/AC Foundations of Electronics, R. Jesse Phagan, Goodheart-Willcox Company, 1997 | DC/AC TEXTBOOK |
| 2. Communications-Electronics: Basic Principles-Alternating Current | FM 11-61 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C10

HOURS: 12.00

TITLE: Digital Electronics

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ICW	4.50	8:1
L	3.00	8:1
PA	4.50	8:2

MEDIA: AIO, CPU, HO, IVD, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the functioning of semiconductor devices for digital circuits, in accordance with the references. (2171.01.03o)
2. Given applicable resources, define intergrated circuit functioning, in accordance with the references. (2171.01.03p)
3. Given applicable resources, define operational amplifier circuit functioning, in accordance with the references. (2171.01.03q)
4. Given applicable resources, explain IC timer (555 timer) functioning, in accordance with the references. (2171.01.03r)
5. Given applicable resources, identify boolean algebra tables, in accordance with the references. (2171.01.03s)
6. Given applicable resources, identify flip flop functioning, in accordance with the references. (2171.01.03t)
7. Given applicable resources, identify sequential logic circuits, in accordance with the references. (2171.01.03u)
8. Given applicable resources, identify combinational logic circuits, in accordance with the references. (2171.01.03v)
9. Given applicable resources, perform digital troubleshooting, in accordance with the references. (2171.01.03x)

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C10

HOURS: 12.00

TITLE: Digital Electronics

1. DC/AC Foundations of Electronics, R. Jesse Phagan,
Goodheart-Willcox Company, 1997 DC/AC TEXTBOOK
2. Communications-Electronics: Basic Principles-Alternating
Current FM 11-61

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C11

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710C10

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	0.90	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the functioning of semiconductor devices for digital circuits, in accordance with the references. (2171.01.03o)
2. Given applicable resources, define intergrated circuit functioning, in accordance with the references. (2171.01.03p)
3. Given applicable resources, define operational amplifier circuit functioning, in accordance with the references. (2171.01.03q)
4. Given applicable resources, explain IC timer (555 timer) functioning, in accordance with the references. (2171.01.03r)
5. Given applicable resources, identify boolean algebra tables, in accordance with the references. (2171.01.03s)
6. Given applicable resources, identify flip flop functioning, in accordance with the references. (2171.01.03t)
7. Given applicable resources, identify sequential logic circuits, in accordance with the references. (2171.01.03u)
8. Given applicable resources, identify combinational logic circuits, in accordance with the references. (2171.01.03v)
9. Given applicable resources, perform digital troubleshooting, in accordance with the references. (2171.01.03x)

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C11

HOURS: 1.00

TITLE: Job Knowledge Test and review on 21710C10

1. DC/AC Foundations of Electronics, R. Jesse Phagan,
Goodheart-Willcox Company, 1997 DC/AC TEXTBOOK
2. Communications-Electronics: Basic Principles-Alternating
Current FM 11-61

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C12

HOURS: 3.00

TITLE: Job Performance Test and review on 21710C10

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	2.90	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze electronic circuits, in accordance with the references. (2171.01.03)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the functioning of semiconductor devices for digital circuits, in accordance with the references. (2171.01.03o)
2. Given applicable resources, define intergrated circuit functioning, in accordance with the references. (2171.01.03p)
3. Given applicable resources, define operational amplifier circuit functioning, in accordance with the references. (2171.01.03q)
4. Given applicable resources, explain IC timer (555 timer) functioning, in accordance with the references. (2171.01.03r)
5. Given applicable resources, identify boolean algebra tables, in accordance with the references. (2171.01.03s)
6. Given applicable resources, identify flip flop functioning, in accordance with the references. (2171.01.03t)
7. Given applicable resources, identify sequential logic circuits, in accordance with the references. (2171.01.03u)
8. Given applicable resources, identify combinational logic circuits, in accordance with the references. (2171.01.03v)
9. Given applicable resources, perform digital troubleshooting, in accordance with the references. (2171.01.03x)

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C12

HOURS: 3.00

TITLE: Job Performance Test and review on 21710C10

1. DC/AC Foundations of Electronics, R. Jesse Phagan,
Goodheart-Willcox Company, 1997 DC/AC TEXTBOOK
2. Communications-Electronics: Basic Principles-Alternating
Current FM 11-61

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C13

HOURS: 27.00

TITLE: Soldering

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	2.00	8:2
L	3.00	8:1
PA	22.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the types of solder, in accordance with the references. (2171.01.04z)
2. Given applicable resources, maintain soldering tips/tools, in accordance with the references. (2171.01.04aa)
3. Given applicable resources, perform wire tinning, in accordance with the references. (2171.01.04bb)
4. Given applicable resources, use soldering tools to solder electrical connections, in accordance with the references. (2171.01.04cc)
5. Given applicable resources, desolder electrical connections, in accordance with the references. (2171.01.04dd)

REFERENCE

REFERENCE #

- | | |
|--|-----------------|
| 1. Applicable Equipment Modification Instruction | APPLICABLE MI |
| 2. Applicable Stock List SL-3 | APPLICABLE SL-3 |
| 3. Applicable Equipment Technical Publications | APPLICABLE TM |
| 4. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 5. Solder and Soldering | TB SIG-222 |
| 6. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 7. MIMMS (AIS) FMSS | UM 4790-5 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

EXAM ID: 21710C14

HOURS: 8.00

TITLE: Job Performance Test and review on 21710C13

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1
X(P)	7.50	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, comply with common maintenance procedures, in accordance with the references. (2171.01.04)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the Daniel's kit, in accordance with the references. (2171.01.04x)
2. Given applicable resources, use soldering tools to solder electrical connections, in accordance with the references. (2171.01.04cc)
3. Given applicable resources, perform wire tinning, in accordance with the references. (2171.01.04bb)
4. Given applicable resources, maintain soldering tips/tools, in accordance with the references. (2171.01.04aa)
5. Given applicable resources, desolder electrical connections, in accordance with the references. (2171.01.04dd)

REFERENCE

REFERENCE #

- | | |
|--|-----------------|
| 1. Applicable Equipment Modification Instruction | APPLICABLE MI |
| 2. Applicable Stock List SL-3 | APPLICABLE SL-3 |
| 3. Applicable Equipment Technical Publications | APPLICABLE TM |
| 4. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 5. Solder and Soldering | TB SIG-222 |
| 6. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 7. MIMMS (AIS) FMSS | UM 4790-5 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX C - COMMON KNOWLEDGE AND SKILLS BLOCK C

LESSON ID: 21710C15

HOURS: 1.00

TITLE: Inspection and Maintenance

METHOD HOURS S:I RATIO

ADMIN 1.00 8:1

MEDIA: AIO

LESSON PURPOSE:

This time is used to prepare the classroom and the equipment for the next class.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D01

HOURS: 8.00

TITLE: Introduction to the M1A1 Abrams Tank

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	7.00	8:2

MEDIA: AIO, CPU, HO, SB, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the M1A1 tank fire control system, in accordance with the references. (2171.02.32a)
2. Given applicable resources, identify the publications associated with the M1A1 tank fire control system components, in accordance with the references. (2171.02.32b)
3. Given applicable resources, identify the locations of the M1A1 tank fire control system components, in accordance with the references. (2171.02.32c)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Tank, Combat, M1A1 (Turret) | TM 08953A-24/4-2 |
| 2. M1A1 Tank Fire Control | TM 08953A-34/7-1 |
| 3. M1A1 Tank Sighting & Fire Control | TM 08953A-34P/8 |
| 4. Operator's Manual, Tank, Combat, Full-tracked, M1A1 | TM 9-2350-264-10-1 |
| 5. Operator's Manual, Tank, Combat, Full-tracked, M1A1 | TM 9-2350-264-10-2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D02

HOURS: 8.00

TITLE: Functions of the Fire Control System

METHOD HOURS S:I RATIO

L 8.00 8:1

MEDIA: AIO, CPU, HO, SB, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, operate the M1A1 tank fire control system, in accordance with the references. (2171.02.32d)
2. Given applicable resources, identify the theory of operation of the M1A1 tank fire control system, in accordance with the references. (2171.02.32e)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Tank, Combat, M1A1 (Turret) | TM 08953A-24/4-2 |
| 2. M1A1 Tank Fire Control | TM 08953A-34/7-1 |
| 3. M1A1 Tank Sighting & Fire Control | TM 08953A-34P/8 |
| 4. Operator's Manual, Tank, Combat, Full-TrackeD, M1A1 | TM 9-2350-264-10-1 |
| 5. Operator's Manual, Tank, Combat, Full-TrackeD, M1A1 | TM 9-2350-264-10-2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D03

HOURS: 8.00

TITLE: Fire Control Interconnect Diagram

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	7.00	8:2

MEDIA: AIO, CPU, HO, SB, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, analyze the fire control system interconnect diagrams, in accordance with the references. (2171.02.32i)
2. Given applicable resources, identify electronic components of the fire control system on interconnect diagrams, in accordance with the references. (2171.02.32j)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. M1 Fire Control Systems | TM 9-1200-206-34-3 |
| 2. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 3. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D04

HOURS: 8.00

TITLE: Direct Support Electrical Systems Test Set (DSESTS)

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	2.00	8:1
PA	6.00	8:2

MEDIA: AIO, CPU, HO, SB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain direct support electronic system test set (DSESTS), in accordance with the references. (2171.02.33)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the DSESTS, in accordance with the references. (2171.02.33a)
2. Given applicable resources, operate the DSESTS, in accordance with the references. (2171.02.33b)
3. Given applicable resources, identify the theory of operation of the DSESTS, in accordance with the references. (2171.02.33c)
4. Given applicable resources, troubleshoot/isolate malfunctions on the DSESTS, in accordance with the references. (2171.02.33d)
5. Given applicable resources, repair malfunctions on the DSESTS, in accordance with the references. (2171.02.33e)
6. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the DSESTS, in accordance with the references. (2171.02.33f)
7. Given applicable resources, perform quality control (QC) checks on the DSESTS, in accordance with the references. (2171.02.33g)

REFERENCE

REFERENCE #

- | | |
|-------------------------------------|----------------------|
| 1. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 2. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 3. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |
| 4. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-30&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D04

HOURS: 8.00

TITLE: Direct Support Electrical Systems Test Set (DSESTS)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D05

HOURS: 5.00

TITLE: Gunner's Primary Sight (GPS)

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	4.00	8:2

MEDIA: AIO, CPU, HO, SB, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the gunner's primary sight, in accordance with the references. (2171.02.32f)
2. Given applicable resources, troubleshoot/isolate malfunctions on the gunner's primary sight, in accordance with the references. (2171.02.32g)
3. Given applicable resources, repair malfunctions on the gunner's primary Sight, in accordance with the references. (2171.02.32h)

REFERENCE

REFERENCE #

- | | |
|--|----------------------|
| 1. Tank, Combat, M1A1 (Turret) | TM 08953A-24/4-2 |
| 2. M1A1 Tank Fire Control | TM 08953A-34/7-1 |
| 3. M1A1 Tank Sighting & Fire Control | TM 08953A-34P/8 |
| 4. M1 Fire Control Systems | TM 9-1200-206-34-1 |
| 5. M1 Fire Control Systems | TM 9-1200-206-34-2 |
| 6. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 7. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |
| 8. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 9. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D06

HOURS: 1.00

TITLE: LASER Safety

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1

MEDIA: CPU, HO, SB, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the hazard classifications of LASER's, in accordance with the references. (2171.02.32k)
2. Given applicable resources, define the LASER safety applications, in accordance with the references. (2171.02.32l)
3. Given applicable resources, identify the theory of operation of LASER's, in accordance with the references. (2171.02.32m)
4. Given applicable resources, state the different types of LASER's, in accordance with the references. (2171.02.32n)

REFERENCE

REFERENCE #

- | | |
|--|------------|
| 1. Occupational and Environmental Health Occupational Vision | TB MED 506 |
| 2. Controls of Hazards to Health from Laser Radiation | TB MED 524 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D07

HOURS: 19.00

TITLE: Non-Thermal Line Replaceable Units (LRU)

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	6.00	8:1
PA	13.00	8:2

MEDIA: AIO, AT, C, CPU, F, HO, MU, SB, TV, VCR, VT, WB, WC

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of non-thermal LRUs, in accordance with the references. (2171.02.32w)
2. Given applicable resources, perform assembly/disassembly procedures on non-thermal LRUs, in accordance with the references. (2171.02.32x)
3. Given applicable resources, troubleshoot/isolate malfunctions on non-thermal LRUs, in accordance with the references. (2171.02.32y)
4. Given applicable resources, repair malfunctions on non-thermal LRUs, in accordance with the references. (2171.02.32z)
5. Given applicable resources, perform quality control (QC) inspection on non-thermal LRUs, in accordance with the references. (2171.02.32aa)

REFERENCE

REFERENCE #

- | | |
|---|----------------------|
| 1. M1 Fire Control Systems | TM 9-1200-206-34-1 |
| 2. M1 Fire Control Systems | TM 9-1200-206-34-2 |
| 3. M1 Fire Control Systems | TM 9-1200-206-34P-2 |
| 4. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 5. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 6. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 7. Test Set Electronic, AN/USM-615 | TM 9-4931-586-12-4&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D08

HOURS: 20.00

TITLE: Thermal Imaging System

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	9.00	8:1
PA	11.00	8:2

MEDIA: AIO, AT, C, CPU, F, HO, MU, SB, TV, VCR, VT, WB, WC

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the thermal imaging system, in accordance with the references. (2171.02.32o)
2. Given applicable resources, identify the theory of operation of the thermal imaging system, in accordance with the references. (2171.02.32p)
3. Given applicable resources, troubleshoot/isolate malfunctions on the thermal imaging system, in accordance with the references. (2171.02.32q)
4. Given applicable resources, repair malfunctions on the thermal imaging system, in accordance with the references. (2171.02.32r)
5. Given applicable resources, perform quality control (QC) inspection on the thermal imaging system, in accordance with the references. (2171.02.32bb)

REFERENCE

REFERENCE #

- | | |
|---|----------------------|
| 1. Tank, Combat, M1A1 (Turret) | TM 08953A-24/4-2 |
| 2. M1A1 Tank Fire Control | TM 08953A-34/7-1 |
| 3. M1A1 Tank Sighting & Fire Control | TM 08953A-34P/8 |
| 4. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 5. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 6. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

LESSON ID: 21710D09

HOURS: 4.00

TITLE: Abrams Optics

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	3.00	8:2

MEDIA: AIO, CPU, HO, SB, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the theory of operation of Abrams optical devices, in accordance with the references. (2171.02.32s)
2. Given applicable resources, perform assembly/disassembly procedures on Abrams optical devices, in accordance with the references. (2171.02.32t)
3. Given applicable resources, perform check out procedures/LTI on Abrams optical devices, in accordance with the references. (2171.02.32u)
4. Given applicable resources, perform quality control (QC) inspection on Abrams optical devices, in accordance with the references. (2171.02.32v)

REFERENCE

REFERENCE #

- | | |
|--|---------------------|
| 1. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 2. M1A1 Tank Sighting & Fire Control | TM 08953A-34P/8 |
| 3. General Procedures for Purging and Charging. | TM 750-116 |
| 4. M1 Fire Control Systems | TM 9-1200-206-34-1 |
| 5. M1 Fire Control Systems | TM 9-1200-206-34-2 |
| 6. M1 Fire Control Systems | TM 9-1200-206-34P-2 |
| 7. Operator's Manual, Tank, Combat, Full-Tracked, M1A1 | TM 9-2350-264-10-1 |
| 8. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 9. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

EXAM ID: 21710D10

HOURS: 15.00

TITLE: Job Performance Test and review on 21710D01 through 21710D09

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.20	8:1
X(P)	14.80	8:2

MEDIA: AIO, CPU, HO, SB, TV, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)
2. Given applicable resources, maintain direct support electronic system test set (DSESTS), in accordance with the references. (2171.02.33)

REFERENCE

REFERENCE #

- | | |
|--|----------------------|
| 1. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 2. Controls of Hazards to Health from Laser Radiation | TB MED 524 |
| 3. GPIA-LAV Electronic System Test Set | TM 10262A-14&P/1 |
| 4. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 5. M1 Fire Control Systems | TM 9-1200-206-34-1 |
| 6. M1 Fire Control Systems | TM 9-1200-206-34-2 |
| 7. Operator's Manual, Tank, Combat, Full-TrackeD, M1A1 | TM 9-2350-264-10-1 |
| 8. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 9. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 10. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |
| 11. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-30&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

EXAM ID: 21710D11

HOURS: 3.00

TITLE: Job Knowledge Test and review on 21710D01 through 21710D09

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.20	8:1
X(W)	2.80	8:1

MEDIA: AIO, CPU, HO, SB, TV, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1A1 Abrahms tank fire control system, in accordance with the references. (2171.02.32)
2. Given applicable resources, maintain direct support electronic system test set (DSESTS), in accordance with the references. (2171.02.33)

REFERENCE

REFERENCE #

- | | |
|---|----------------------|
| 1. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 2. Occupational and Environmental Health Occupational Vision | TB MED 506 |
| 3. Controls of Hazards to Health from Laser Radiation | TB MED 524 |
| 4. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 5. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 6. General Procedures for Purging and Charging. | TM 750-116 |
| 7. M1 Fire Control Systems | TM 9-1200-206-34-1 |
| 8. M1 Fire Control Systems | TM 9-1200-206-34-2 |
| 9. M1 Fire Control Systems | TM 9-1200-206-34P-2 |
| 10. Operator's Manual, Tank, Combat, Full-Track, M1A1 | TM 9-2350-264-10-1 |
| 11. Operator's Manual, Tank, Combat, Full-Track, M1A1 | TM 9-2350-264-10-2 |
| 12. Operator's Manual, Tank, Combat, Full-Track, M1A1 | TM 9-2350-264-2 |
| 13. Operator's Manual, Tank, Combat, Full-Track, M1A1 | TM 9-2350-264-24-2 |
| 14. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |
| 15. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 16. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 17. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |
| 18. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-30&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX D - M1A1 ABRAMS TANK

EXAM ID: 21710D11

HOURS: 3.00

TITLE: Job Knowledge Test and review on 21710D01 through 21710D09

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E01

HOURS: 7.00

TITLE: Introduction to the M220E4 TOW II Weapons System

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	3.00	8:1
PA	3.50	8:2

MEDIA: AIO, CPU, HO, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the TOW system, in accordance with the references. (2171.02.11a)
2. Given applicable resources, operate the TOW system, in accordance with the references. (2171.02.11b)
3. Given applicable resources, identify the theory of operation of the TOW system, in accordance with the references. (2171.02.11c)
4. Given applicable resources, perform assembly/disassembly on the TOW system, in accordance with the references. (2171.02.11e)
5. Given applicable resources, identify the theory of operation of the traversing unit, in accordance with the references. (2171.02.11k)
6. Given applicable resources, identify the theory of operation of the optical sight, in accordance with the references. (2171.02.11t)
7. Given applicable resources, identify the theory of operation of the missile guidance set, in accordance with the references. (2171.02.11aa)
8. Given applicable resources, identify the theory of operation of the night sight, in accordance with the references. (2171.02.11z)

REFERENCE

REFERENCE #

- | | |
|--|------------------|
| 1. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 2. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E01

HOURS: 7.00

TITLE: Introduction to the M220E4 TOW II Weapons System

- | | |
|---|--------------------|
| 3. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 4. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 5. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 6. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 7. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E02

HOURS: 7.00

TITLE: Introduction to TOW II Weapon System Test Equipment/Support Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	3.00	8:1
PA	3.50	8:2

MEDIA: AIO, CPU, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/TSM-140B TOW field test set (TFTS), in accordance with the references. (2171.02.14)
2. Given applicable resources, maintain AN/TSM-152 missile guidance set test set (MGSTS), in accordance with the references. (2171.02.15)
3. Given applicable resources, maintain PP-8333/U battery analyzer-charger (CHRISTIE), in accordance with the references. (2171.02.42)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the TFTS, in accordance with the references. (2171.02.14a)
2. Given applicable resources, operate the TFTS, in accordance with the references. (2171.02.14b)
3. Given applicable resources, identify the components of the MGSTS, in accordance with the references. (2171.02.15a)
4. Given applicable resources, operate MGSTS, in accordance with the references. (2171.02.15b)
5. Given applicable resources, identify the components of the battery charger, in accordance with the references. (2171.02.42a)
6. Given applicable resources, operate the battery charger, in accordance with the references. (2171.02.42b)

REFERENCE

REFERENCE #

- | | |
|--|----------------|
| 1. Test Set, Guided Missile System AN/TSM-140B | SL-3-07723A |
| 2. CASP/2000H(M) Christie Electronics | TM 09591A-12/1 |
| 3. CASP/2000H (M) Christie Electronics | TM 09591A-34/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E02

HOURS: 7.00

TITLE: Introduction to TOW II Weapon System Test Equipment/Support Equipment

- | | |
|---|----------------------|
| 4. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 5. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 6. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 7. Shop Equipment, GMS Contact Support Set | TM 9-4935-450-24P |
| 8. Test Set GMS AN/TSM-140A or -140B | TM 9-4935-452-14 |
| 9. TOW Field Test Set, TFTS Test Adapter | TM 9-4935-452-24P |
| 10. TOW 2 Heavy Antitank/Assault Weapons Systems | TM 9-4935-455-14 |
| 11. TOW 2 Subsystem Test Set | TM 9-4935-474-14-2-1 |
| 12. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 13. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E03

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710E01 through 21710E02

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(W)	2.00	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)
2. Given applicable resources, maintain AN/TSM-140B TOW field test set (TFTS), in accordance with the references. (2171.02.14)
3. Given applicable resources, maintain AN/TSM-152 missile guidance set test set (MGSTS), in accordance with the references. (2171.02.15)
4. Given applicable resources, maintain PP-8333/U battery analyzer-charger (CHRISTIE), in accordance with the references. (2171.02.42)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the TOW system, in accordance with the references. (2171.02.11a)
2. Given applicable resources, operate the TOW system, in accordance with the references. (2171.02.11b)
3. Given applicable resources, identify the theory of operation of the TOW system, in accordance with the references. (2171.02.11c)
4. Given applicable resources, perform assembly/disassembly on the TOW system, in accordance with the references. (2171.02.11e)
5. Given applicable resources, identify the theory of operation of the traversing unit, in accordance with the references. (2171.02.11k)
6. Given applicable resources, identify the theory of operation of the optical sight, in accordance with the references. (2171.02.11t)
7. Given applicable resources, identify the theory of operation of the night sight, in accordance with the references. (2171.02.11z)
8. Given applicable resources, identify the theory of operation of the missile guidance set, in accordance with the references. (2171.02.11aa)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E03

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710E01 through 21710E02

9. Given applicable resources, identify the components of the TFTS, in accordance with the references. (2171.02.14a)
10. Given applicable resources, operate the TFTS, in accordance with the references. (2171.02.14b)
11. Given applicable resources, identify the components of the MGSTS, in accordance with the references. (2171.02.15a)
12. Given applicable resources, operate MGSTS, in accordance with the references. (2171.02.15b)

REFERENCE

REFERENCE #

- | | |
|--|----------------------|
| 1. Test Set, Guided Missile System AN/TSM-140B | SL-3-07723A |
| 2. CASP/2000H(M) Christie Electronics | TM 09591A-12/1 |
| 3. CASP/2000H (M) Christie Electronics | TM 09591A-34/2 |
| 4. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 5. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 6. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 7. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 8. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 9. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 10. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 11. Shop Equipment, GMS Contact Support Set | TM 9-4935-450-24P |
| 12. Test Set GMS AN/TSM-140A or -140B | TM 9-4935-452-14 |
| 13. TOW Field Test Set, TFTS Test Adapter | TM 9-4935-452-24P |
| 14. TOW 2 Heavy Antitank/Assault Weapons Systems | TM 9-4935-455-14 |
| 15. TOW 2 Subsystem Test Set | TM 9-4935-474-14-2-1 |
| 16. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 17. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E04

HOURS: 45.00

TITLE: M220E4 TOW II Weapons System Scheduled PMCS

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	5.00	8:2
L	5.00	8:1
PA	35.00	8:2

MEDIA: AIO, CPU, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform check out procedures/LTI on the TOW system, in accordance with the references. (2171.02.11d)
2. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the TOW system, in accordance with the references. (2171.02.11h)
3. Given applicable resources, perform quality control (QC) inspection on the TOW system, in accordance with the references. (2171.02.11i)
4. Given applicable resources, identify components of the traversing unit, in accordance with the references. (2171.02.11j)
5. Given applicable resources, operate bridge clamp holdback fixture, in accordance with the references. (2171.02.11l)
6. Given applicable resources, perform check out procedures/LTI on the traversing unit, in accordance with the references. (2171.02.11m)
7. Given applicable resources, perform assembly/disassembly procedures on the traversing unit, in accordance with the references. (2171.02.11n)
8. Given applicable resources, perform alignment procedures on the traversing unit, in accordance with the references. (2171.02.11q)
9. Given applicable resources, perform quality control (QC) inspection on the traversing unit, in accordance with the references. (2171.02.11r)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E04

HOURS: 45.00

TITLE: M220E4 TOW II Weapons System Scheduled PMCS

10. Given applicable resources, identify components of the optical sight, in accordance with the references. (2171.02.11s)
11. Given applicable resources, perform quality control (QC) inspection on the optical sight, in accordance with the references. (2171.02.11y)
12. Given applicable resources, perform check out/LTI procedures on the missile guidance set, in accordance with the references. (2171.02.11bb)
13. Given applicable resources, perform quality control (QC) inspection on the missile guidance set, in accordance with the references. (2171.02.11gg)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 2. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 3. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 4. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 5. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 6. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 7. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E05

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710E04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(W)	2.00	8:1

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform check out procedures/LTI on the TOW system, in accordance with the references. (2171.02.11d)
2. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the TOW system, in accordance with the references. (2171.02.11h)
3. Given applicable resources, perform quality control (QC) inspection on the TOW system, in accordance with the references. (2171.02.11i)
4. Given applicable resources, identify components of the traversing unit, in accordance with the references. (2171.02.11j)
5. Given applicable resources, operate bridge clamp holdback fixture, in accordance with the references. (2171.02.11l)
6. Given applicable resources, perform check out procedures/LTI on the traversing unit, in accordance with the references. (2171.02.11m)
7. Given applicable resources, perform assembly/disassembly procedures on the traversing unit, in accordance with the references. (2171.02.11n)
8. Given applicable resources, perform alignment procedures on the traversing unit, in accordance with the references. (2171.02.11q)
9. Given applicable resources, perform quality control (QC) inspection on the traversing unit, in accordance with the references. (2171.02.11r)
10. Given applicable resources, identify components of the optical sight, in accordance with the references. (2171.02.11s)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E05

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710E04

11. Given applicable resources, perform quality control (QC) inspection on the optical sight, in accordance with the references. (2171.02.11y)
12. Given applicable resources, perform check out/LTI procedures on the missile guidance set, in accordance with the references. (2171.02.11bb)
13. Given applicable resources, perform quality control (QC) inspection on the missile guidance set, in accordance with the references. (2171.02.11gg)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 2. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 3. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 4. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 5. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 6. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 7. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E06

HOURS: 12.00

TITLE: Job Performance Test and review on 21710E04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(P)	12.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform check out procedures/LTI on the TOW system, in accordance with the references. (2171.02.11d)
2. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the TOW system, in accordance with the references. (2171.02.11h)
3. Given applicable resources, perform quality control (QC) inspection on the TOW system, in accordance with the references. (2171.02.11i)
4. Given applicable resources, identify components of the traversing unit, in accordance with the references. (2171.02.11j)
5. Given applicable resources, operate bridge clamp holdback fixture, in accordance with the references. (2171.02.11l)
6. Given applicable resources, perform check out procedures/LTI on the traversing unit, in accordance with the references. (2171.02.11m)
7. Given applicable resources, perform assembly/disassembly procedures on the traversing unit, in accordance with the references. (2171.02.11n)
8. Given applicable resources, perform alignment procedures on the traversing unit, in accordance with the references. (2171.02.11q)
9. Given applicable resources, perform quality control (QC) inspection on the traversing unit, in accordance with the references. (2171.02.11r)
10. Given applicable resources, identify components of the optical sight, in accordance with the references. (2171.02.11s)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E06

HOURS: 12.00

TITLE: Job Performance Test and review on 21710E04

11. Given applicable resources, perform quality control (QC) inspection on the optical sight, in accordance with the references. (2171.02.11y)
12. Given applicable resources, perform check out/LTI procedures on the missile guidance set, in accordance with the references. (2171.02.11bb)
13. Given applicable resources, perform quality control (QC) inspection on the missile guidance set, in accordance with the references. (2171.02.11gg)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 2. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 3. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 4. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 5. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 6. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 7. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E07

HOURS: 12.00

TITLE: Repair of the M220E4 TOW II Weapon System

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	2.00	8:1
PA	9.00	8:2

MEDIA: AIO, CPU, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, troubleshoot/isolate malfunctions on the TOW system, in accordance with the references. (2171.02.11f)
2. Given applicable resources, repair malfunctions on the TOW system, in accordance with the references. (2171.02.11g)
3. Given applicable resources, perform quality control (QC) inspection on the TOW system, in accordance with the references. (2171.02.11i)
4. Given applicable resources, troubleshoot/isolate malfunctions on the traversing unit, in accordance with the references. (2171.02.11o)
5. Given applicable resources, repair malfunctions on the traversing unit, in accordance with the references. (2171.02.11p)
6. Given applicable resources, perform quality control (QC) inspection on the traversing unit, in accordance with the references. (2171.02.11r)
7. Given applicable resources, perform assembly/disassembly procedures on the optical sight, in accordance with the references. (2171.02.11u)
8. Given applicable resources, troubleshoot/isolate malfunctions on the optical sight, in accordance with the references. (2171.02.11v)
9. Given applicable resources, repair malfunctions on the optical sight, in accordance with the references. (2171.02.11w)
10. Given applicable resources, perform quality control (QC) inspection on the optical

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E07

HOURS: 12.00

TITLE: Repair of the M220E4 TOW II Weapon System

sight, in accordance with the references. (2171.02.11y)

11. Given applicable resources, troubleshoot/isolate malfunctions on the missile guidance set, in accordance with the references. (2171.02.11dd)
12. Given applicable resources, perform assembly/disassembly procedures on the missile guidance set, in accordance with the references. (2171.02.11cc)
13. Given applicable resources, repair malfunctions on the missile guidance set, in accordance with the references. (2171.02.11ee)
14. Given applicable resources, perform quality control (QC) inspection on the missile guidance set, in accordance with the references. (2171.02.11gg)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 2. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 3. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 4. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 5. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 6. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 7. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E08

HOURS: 5.00

TITLE: Job Performance Test and review on 21710E07

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(P)	5.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M220E4 TOW weapon system, in accordance with the references. (2171.02.11)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, troubleshoot/isolate malfunctions on the TOW system, in accordance with the references. (2171.02.11f)
2. Given applicable resources, repair malfunctions on the TOW system, in accordance with the references. (2171.02.11g)
3. Given applicable resources, perform quality control (QC) inspection on the TOW system, in accordance with the references. (2171.02.11i)
4. Given applicable resources, troubleshoot/isolate malfunctions on the traversing unit, in accordance with the references. (2171.02.11o)
5. Given applicable resources, repair malfunctions on the traversing unit, in accordance with the references. (2171.02.11p)
6. Given applicable resources, perform quality control (QC) inspection on the traversing unit, in accordance with the references. (2171.02.11r)
7. Given applicable resources, troubleshoot/isolate malfunctions on the optical sight, in accordance with the references. (2171.02.11v)
8. Given applicable resources, repair malfunctions on the optical sight, in accordance with the references. (2171.02.11w)
9. Given applicable resources, perform quality control (QC) inspection on the optical sight, in accordance with the references. (2171.02.11y)
10. Given applicable resources, troubleshoot/isolate malfunctions on the missile guidance set, in accordance with the references. (2171.02.11dd)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

EXAM ID: 21710E08

HOURS: 5.00

TITLE: Job Performance Test and review on 21710E07

11. Given applicable resources, repair malfunctions on the missile guidance set, in accordance with the references. (2171.02.11ee)

12. Given applicable resources, perform quality control (QC) inspection on the missile guidance set, in accordance with the references. (2171.02.11gg)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 2. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 3. Launcher, Tubular, Guided Missile | TM 9-1425-450-24P |
| 4. TOW 2 Weapon System, M220E4 | TM 9-1425-450-34-1 |
| 5. Tow 2 Weapon System | TM 9-1425-450-34-2 |
| 6. (LOAP) f/TOW 2 Weapons System | TM 9-1425-450-L |
| 7. TOW 2 Weapon System Checkout and Troubleshooting | TM 9-1425-451-34 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E09

HOURS: 5.00

TITLE: Test and Support Equipment Scheduled PMCS

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	3.50	8:2

MEDIA: AIO, HO, TP, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/TSM-140B TOW field test set (TFTS), in accordance with the references. (2171.02.14)
2. Given applicable resources, maintain AN/TSM-152 missile guidance set test set (MGSTS), in accordance with the references. (2171.02.15)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, troubleshoot/isolate malfunctions on the TFTS, in accordance with the references. (2171.02.14c)
2. Given applicable resources, repair malfunctions on the TFTS, in accordance with the references. (2171.02.14d)
3. Given applicable resources, perform preventative maintenance checks and services (PMCS) on the TFTS, in accordance with the references. (2171.02.14e)
4. Given applicable resources, perform alignment procedures on the TFTS, in accordance with the references. (2171.02.14f)
5. Given applicable resources, perform quality control (QC) inspection on the TFTS, in accordance with the references. (2171.02.14g)
6. Given applicable resources, troubleshoot/isolate malfunctions on the MGSTS, in accordance with the references. (2171.02.15c)
7. Given applicable resources, repair malfunctions on the MGSTS, in accordance with the references. (2171.02.15d)
8. Given applicable resources, perform preventive maintenance checks and services (PMCS) on the MGSTS, in accordance with the references. (2171.02.15e)
9. Given applicable resources, perform quality control (QC) inspection on the MGSTS, in accordance with the references. (2171.02.15f)

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E09

HOURS: 5.00

TITLE: Test and Support Equipment Scheduled PMCS

REFERENCE

REFERENCE #

1. Test Set, Guided Missile System AN/TSM-140B	SL-3-07723A
2. Launcher, Tubular, Guided Missile	TM 9-1425-450-24P
3. TOW 2 Weapon System, M220E4	TM 9-1425-450-34-1
4. TOW 2 Weapon System Checkout and Troubleshooting	TM 9-1425-451-34
5. Shop Equipment, GMS Contact Support Set	TM 9-4935-450-24P
6. Test Set GMS AN/TSM-140A or -140B	TM 9-4935-452-14
7. TOW Field Test Set, TFTS Test Adapter	TM 9-4935-452-24P
8. TOW 2 Heavy Antitank/Assault Weapons Systems	TM 9-4935-455-14
9. TOW 2 Subsystem Test Set	TM 9-4935-474-14-2-1
10. Electrostatic Discharge (ESD) Awareness	TM 9999-15/1
11. Electrostatic Discharge (ESD) Awareness	TM 9999-15/2

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX E - TOW II WEAPONS SYSTEM

LESSON ID: 21710E10

HOURS: 1.00

TITLE: Maintenance Shelters

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain electro-optical equipment maintenance shelter, in accordance with the references. (2171.02.44)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the maintenance shelter, in accordance with the references. (2171.02.44a)
2. Given applicable resources, operate the maintenance shelter, in accordance with the references. (2171.02.44b)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |
| 2. TOW Weapon System Maintenance Shelter | SL-3-08194B |
| 3. Night Sight Maintenance Facility AN/TAM-6(V)-3 | SL-3-08485A |
| 4. ShopSet, Equipment, Electro-Optics Field Maintenance 3rd and 4th Echelon | SL-3-09129A |
| 5. Dragon/TOW Weapons Systems Maintenance Shelter | SL-4-08193A/08194A |
| 6. Night Sight Maintenance Facility, AN/TAM-6 | TM 9-4935-454-24P |
| 7. Improved Contact Support Set and Night Sight Maintenance Facility | TM 9-4935-472-14-1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F01

HOURS: 2.00

TITLE: Passive Night Vision Equipment (NVE)

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	0.50	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain passive night vision equipment, in accordance with the references. (2171.02.21)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the AN/PVS-14, in accordance with the references. (2171.02.21a)
2. Given applicable resources, operate the AN/PVS-14, in accordance with the references. (2171.02.21b)
3. Given applicable resources, identify the components of the AN/PVS-7B, in accordance with the references. (2171.02.21g)
4. Given applicable resources, operate the AN/PVS-7B, in accordance with the references. (2171.02.21h)
5. Given applicable resources, identify the components of starlight scopes (AN/PVS-4/AN/TVS-5A), in accordance with the references. (2171.02.21m)
6. Given applicable resources, operate starlight scopes (AN/PVS-4/AN/TVS-5A), in accordance with the references. (2171.02.21n)

NOTE(S):

The night vision equipment taught here is ambient light activated.

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Night Vision Goggles, AN/PVS-7B | TM 09500A-23&P/2 |
| 2. Monocular, Night Vision Device, AN/PVS-14 | TM 10271A-23&P/2 |
| 3. Night Vision Sight, AN/PVS-4 | TM 11-5855-213-23P |
| 4. Night Vision Sight, Crew Served, AN/TVS-5 | TM 11-5855-214-23P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F01

HOURS: 2.00

TITLE: Passive Night Vision Equipment (NVE)

- | | |
|---|---------------------|
| 5. Night Vision Goggles, AN/PVS-5 | TM 11-5855-238-23&P |
| 6. Viewer, Drivers Night Vision, AN/VVS-2 | TM 11-5855-249-10 |
| 7. Viewer, Drivers Night Vision, AN/VVS-2(v)1 | TM 11-5855-249-20 |
| 8. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 9. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F02

HOURS: 2.00

TITLE: Passive NVE Test and Support Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	0.50	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain TS-4348/UVC electronic systems test set, in accordance with the references. (2171.02.38)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the test set, in accordance with the references. (2171.02.38a)
2. Given applicable resources, operate the test set, in accordance with the references. (2171.02.38b)
3. Given applicable resources, troubleshoot/isolate malfunctions on the test set, in accordance with the references. (2171.02.38c)
4. Given applicable resources, repair malfunctions on the test set, in accordance with the references. (2171.02.38d)
5. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the test set, in accordance with the references. (2171.02.38e)
6. Given applicable resources, perform quality control (QC) inspection on the test set, in accordance with the references. (2171.02.38f)

REFERENCE

REFERENCE #

1. Test Set, Electronic, TS-4348/UV

TM 11-5855-299-12&P

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F03

HOURS: 5.00

TITLE: Passive NVE Scheduled PMCS

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	3.50	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain passive night vision equipment, in accordance with the references. (2171.02.21)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the AN/PVS-14, in accordance with the references. (2171.02.21e)
2. Given applicable resources, perform quality control (QC) inspection on the AN/PVS-14, in accordance with the references. (2171.02.21f)
3. Given applicable resources, perform preventative maintenance checks and services (PMCS) on the AN/PVS-7B, in accordance with the references. (2171.02.21k)
4. Given applicable resources, perform quality control (QC) inspection on the AN/PVS-7B, in accordance with the references. (2171.02.21l)
5. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the starlight scopes, in accordance with the references. (2171.02.21q)
6. Given applicable resources, perform quality control (QC) inspection on the starlight scopes, in accordance with the references. (2171.02.21r)

REFERENCE

REFERENCE #

- | | |
|--|---------------------|
| 1. Night Vision Goggles, AN/PVS-7B | TM 09500A-23&P/2 |
| 2. Monocular, Night Vision Device, AN/PVS-14 | TM 10271A-23&P/2 |
| 3. Night Vision Sight, AN/PVS-4 | TM 11-5855-213-23P |
| 4. Night Vision Sight, Crew Served, AN/TVS-5 | TM 11-5855-214-23P |
| 5. Night Vision Goggles, AN/PVS-5 | TM 11-5855-238-23&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F03

HOURS: 5.00

TITLE: Passive NVE Scheduled PMCS

- | | |
|---|-------------------|
| 6. Viewer, Drivers Night Vision, AN/VVS-2 | TM 11-5855-249-10 |
| 7. Viewer, Drivers Night Vision, AN/VVS-2(v)1 | TM 11-5855-249-20 |
| 8. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 9. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F04

HOURS: 5.00

TITLE: Passive NVE Corrective Maintenance

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	3.50	8:2

MEDIA: AIO, HO, TP, TV, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain passive night vision equipment, in accordance with the references. (2171.02.21)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, troubleshoot/isolate malfunctions on the AN/PVS-14, in accordance with the references. (2171.02.21c)
2. Given applicable resources, repair malfunctions on the AN/PVS-14, in accordance with the references. (2171.02.21d)
3. Given applicable resources, perform quality control (QC) inspection on the AN/PVS-14, in accordance with the references. (2171.02.21f)
4. Given applicable resources, troubleshoot/isolate malfunctions on the AN/PVS-7B, in accordance with the references. (2171.02.21i)
5. Given applicable resources, repair malfunctions on the AN/PVS-7B, in accordance with the references. (2171.02.21j)
6. Given applicable resources, perform quality control (QC) inspection on the AN/PVS-7B, in accordance with the references. (2171.02.21l)
7. Given applicable resources, troubleshoot/isolate malfunctions on the starlight scopes, in accordance with the references. (2171.02.21o)
8. Given applicable resources, repair malfunctions on the starlight scopes, in accordance with the references. (2171.02.21p)
9. Given applicable resources, perform quality control (QC) inspection on the starlight scopes, in accordance with the references. (2171.02.21r)

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F04

HOURS: 5.00

TITLE: Passive NVE Corrective Maintenance

- | | |
|--|---------------------|
| 1. Night Vision Goggles, AN/PVS-7B | TM 09500A-23&P/2 |
| 2. Monocular, Night Vision Device, AN/PVS-14 | TM 10271A-23&P/2 |
| 3. Night Vision Sight, AN/PVS-4 | TM 11-5855-213-23P |
| 4. Night Vision Sight, Crew Served, AN/TVS-5 | TM 11-5855-214-23P |
| 5. Night Vision Goggles, AN/PVS-5 | TM 11-5855-238-23&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

EXAM ID: 21710F05

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710F01 through 21710F04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(W)	2.00	8:1

MEDIA: HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain passive night vision equipment, in accordance with the references. (2171.02.21)
2. Given applicable resources, maintain TS-4348/UVC electronic systems test set, in accordance with the references. (2171.02.38)

REFERENCE

REFERENCE #

- | | |
|---|---------------------|
| 1. Night Vision Goggles, AN/PVS-7B | TM 09500A-23&P/2 |
| 2. Monocular, Night Vision Device, AN/PVS-14 | TM 10271A-23&P/2 |
| 3. Night Vision Sight, AN/PVS-4 | TM 11-5855-213-23P |
| 4. Night Vision Sight, Crew Served, AN/TVS-5 | TM 11-5855-214-23P |
| 5. Night Vision Goggles, AN/PVS-5 | TM 11-5855-238-23&P |
| 6. Viewer, Drivers Night Vision, AN/VVS-2 | TM 11-5855-249-10 |
| 7. Viewer, Drivers Night Vision, AN/VVS-2(v)1 | TM 11-5855-249-20 |
| 8. Test Set, Electronic, TS-4348/UV | TM 11-5855-299-12&P |
| 9. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 10. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 12. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

EXAM ID: 21710F06

HOURS: 5.00

TITLE: Job Performance Test and review on 21710F01 through 21710F04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(P)	5.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain passive night vision equipment, in accordance with the references. (2171.02.21)
2. Given applicable resources, maintain TS-4348/UVC electronic systems test set, in accordance with the references. (2171.02.38)

REFERENCE

REFERENCE #

- | | |
|---|---------------------|
| 1. Night Vision Goggles, AN/PVS-7B | TM 09500A-23&P/2 |
| 2. Monocular, Night Vision Device, AN/PVS-14 | TM 10271A-23&P/2 |
| 3. Night Vision Sight, AN/PVS-4 | TM 11-5855-213-23P |
| 4. Night Vision Sight, Crew Served, AN/TVS-5 | TM 11-5855-214-23P |
| 5. Night Vision Goggles, AN/PVS-5 | TM 11-5855-238-23&P |
| 6. Viewer, Drivers Night Vision, AN/VVS-2 | TM 11-5855-249-10 |
| 7. Viewer, Drivers Night Vision, AN/VVS-2(v)1 | TM 11-5855-249-20 |
| 8. Test Set, Electronic, TS-4348/UV | TM 11-5855-299-12&P |
| 9. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 10. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 12. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F07

HOURS: 5.00

TITLE: Thermal Night Vision Equipment (NVE)

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	4.00	8:1
PA	0.50	8:2

MEDIA: AIO, CPU, HO, PPP, TP, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain thermal sights, in accordance with the references. (2171.02.43)
2. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of thermal sights, in accordance with the references. (2171.02.43a)
2. Given applicable resources, operate thermal sights, in accordance with the references. (2171.02.43b)
3. Given applicable resources, identify the theory of operation of thermal sights, in accordance with the references. (2171.02.43c)
4. Given applicable resources, identify the components of the night sight equipment set, in accordance with the references. (2171.02.12a)
5. Given applicable resources, operate the night sight equipment set, in accordance with the references. (2171.02.12b)
6. Given applicable resources, identify the theory of operation for the night sight, in accordance with the references. (2171.02.12c)

REFERENCE

REFERENCE #

- | | |
|--|----------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Receiver, Infrared, AN/PAS-18 | TM 09688A-24&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F07

HOURS: 5.00

TITLE: Thermal Night Vision Equipment (NVE)

- | | |
|---|--------------------|
| 5. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 6. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 7. Battery Power Conditioner | TM 9-5855-884-24 |
| 8. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F08

HOURS: 2.00

TITLE: Thermal NVE Test and Support Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	0.50	8:2

MEDIA: AIO, CPU, HO, PPP, TP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/TAM-3B night sight test set, in accordance with the references. (2171.02.05)
2. Given applicable resources, maintain AN/TAM-5 amplifier test set, in accordance with the references. (2171.02.17)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the test set, in accordance with the references. (2171.02.05a)
2. Given applicable resources, operate test set, in accordance with the references. (2171.02.05b)
3. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the test set, in accordance with the references. (2171.02.05c)
4. Given applicable resources, identify the components of the amplifier test set, in accordance with the references. (2171.02.17a)
5. Given applicable resources, operate the amplifier test set, in accordance with the references. (2171.02.17b)
6. Given applicable resources, troubleshoot/isolate malfunctions on the amplifier test set, in accordance with the references. (2171.02.17c)
7. Given applicable resources, repair malfunctions on the amplifier test set, in accordance with the references. (2171.02.17d)
8. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the amplifier test set, in accordance with the references. (2171.02.17e)
9. Given applicable resources, perform quality control (QC) inspection on the

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F08

HOURS: 2.00

TITLE: Thermal NVE Test and Support Equipment

amplifier test set, in accordance with the references. (2171.02.17f)

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Test Set, Night Vision Sight, AN/TAM-3B | SL-3-08121C |
| 2. AN/TAM-5 Amplifier Test Set | TM 9-4935-455-24P |
| 3. Night Vision Sight, AN/TAM-3/3A/3B. | TM 9-5855-255-14 |
| 4. Night Vision Sight, AN/TAM-3/3A/3B | TM 9-5855-255-24P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F09

HOURS: 21.00

TITLE: Thermal NVE Scheduled PMCS

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	0.50	8:1
PA	20.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)
2. Given applicable resources, maintain thermal sights, in accordance with the references. (2171.02.43)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the night sight equipment set, in accordance with the references. (2171.02.12j)
2. Given applicable resources, perform alignment procedures on the night sight equipment set, in accordance with the references. (2171.02.12k)
3. Given applicable resources, perform quality control (QC) inspection on the night sight equipment set, in accordance with the references. (2171.02.12l)
4. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on thermal sights, in accordance with the references. (2171.02.43g)
5. Given applicable resources, perform quality control (QC) inspection on thermal sights, in accordance with the references. (2171.02.43h)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Receiver, Infrared, AN/PAS-18 | TM 09688A-24&P |
| 5. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F09

HOURS: 21.00

TITLE: Thermal NVE Scheduled PMCS

- | | |
|---|------------------|
| 6. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 7. Battery Power Conditioner | TM 9-5855-884-24 |
| 8. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F10

HOURS: 21.00

TITLE: Thermal NVE Corrective Maintenance

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	0.50	8:1
PA	20.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)
2. Given applicable resources, maintain thermal sights, in accordance with the references. (2171.02.43)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform assembly/disassembly procedures of the night sight equipment set, in accordance with the references. (2171.02.12g)
2. Given applicable resources, troubleshoot/isolate malfunctions on the night sight equipment set, in accordance with the references. (2171.02.12h)
3. Given applicable resources, repair malfunctions on the night sight equipment set, in accordance with the references. (2171.02.12i)
4. Given applicable resources, perform quality control (QC) inspection on the night sight equipment set, in accordance with the references. (2171.02.12l)
5. Given applicable resources, perform assembly/disassembly procedures on thermal sights, in accordance with the references. (2171.02.43d)
6. Given applicable resources, troubleshoot/isolate malfunctions on thermal sights, in accordance with the references. (2171.02.43e)
7. Given applicable resources, repair malfunctions on thermal sights, in accordance with the references. (2171.02.43f)
8. Given applicable resources, perform quality control (QC) inspection on thermal sights, in accordance with the references. (2171.02.43h)

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F10

HOURS: 21.00

TITLE: Thermal NVE Corrective Maintenance

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Receiver, Infrared, AN/PAS-18 | TM 09688A-24&P |
| 5. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 6. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 7. Battery Power Conditioner | TM 9-5855-884-24 |
| 8. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

EXAM ID: 21710F11

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710F07 through 21710F10

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(W)	2.00	8:1

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)
2. Given applicable resources, maintain AN/TAM-3B night sight test set, in accordance with the references. (2171.02.05)
3. Given applicable resources, maintain AN/TAM-5 amplifier test set, in accordance with the references. (2171.02.17)
4. Given applicable resources, maintain thermal sights, in accordance with the references. (2171.02.43)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Test Set, Night Vision Sight, AN/TAM-3B | SL-3-08121C |
| 2. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 3. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 4. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 5. Receiver, Infrared, AN/PAS-18 | TM 09688A-24&P |
| 6. Shop Equipment, GMS Contact Support Set | TM 9-4935-450-24P |
| 7. TOW 2 Heavy Antitank/Assault Weapons Systems | TM 9-4935-455-14 |
| 8. AN/TAM-5 Amplifier Test Set | TM 9-4935-455-24P |
| 9. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 10. Night Vision Sight, AN/TAM-3/3A/3B. | TM 9-5855-255-14 |
| 11. Night Vision Sight, AN/TAM-3/3A/3B | TM 9-5855-255-24P |
| 12. Test Set Boresight Collimator, TS-3784/TAS | TM 9-5855-286-14 |
| 13. Test Set, Boresight Collimator, TS-3784/TAS | TM 9-5855-286-24P |
| 14. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 15. Battery Power Conditioner | TM 9-5855-884-24 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

EXAM ID: 21710F11

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710F07 through 21710F10

- | | |
|---|------------------|
| 16. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 17. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 18. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

EXAM ID: 21710F12

HOURS: 5.00

TITLE: Job Performance Test and review on 21710F07 through 21710F10

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(P)	5.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/TAM-3B night sight test set, in accordance with the references. (2171.02.05)
2. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)
3. Given applicable resources, maintain AN/TAM-5 amplifier test set, in accordance with the references. (2171.02.17)
4. Given applicable resources, maintain thermal sights, in accordance with the references. (2171.02.43)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Test Set, Night Vision Sight, AN/TAM-3B | SL-3-08121C |
| 2. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 3. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 4. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 5. Receiver, Infrared, AN/PAS-18 | TM 09688A-24&P |
| 6. Shop Equipment, GMS Contact Support Set | TM 9-4935-450-24P |
| 7. TOW 2 Heavy Antitank/Assault Weapons Systems | TM 9-4935-455-14 |
| 8. AN/TAM-5 Amplifier Test Set | TM 9-4935-455-24P |
| 9. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 10. Night Vision Sight, AN/TAM-3/3A/3B. | TM 9-5855-255-14 |
| 11. Night Vision Sight, AN/TAM-3/3A/3B | TM 9-5855-255-24P |
| 12. Test Set Boresight Collimator, TS-3784/TAS | TM 9-5855-286-14 |
| 13. Test Set, Boresight Collimator, TS-3784/TAS | TM 9-5855-286-24P |
| 14. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 15. Battery Power Conditioner | TM 9-5855-884-24 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

EXAM ID: 21710F12

HOURS: 5.00

TITLE: Job Performance Test and review on 21710F07 through 21710F10

- | | |
|---|------------------|
| 16. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 17. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 18. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F13

HOURS: 2.00

TITLE: Night Vision Equipment Set (NVES) Ancillary Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	0.50	8:1
PA	1.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the theory of operation for the boresight collimator, in accordance with the references. (2171.02.12d)
2. Given applicable resources, identify the theory of operation for the battery power conditioner (BPC), in accordance with the references. (2171.02.12e)
3. Given applicable resources, identify the theory of operation for the vehicle power conditioner (VPC), in accordance with the references. (2171.02.12f)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 5. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 6. Battery Power Conditioner | TM 9-5855-884-24 |
| 7. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F14

HOURS: 2.00

TITLE: NVES Ancillary Equipment Test and Support Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	0.50	8:1
PA	1.00	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain TS-3784/TAS boresight collimator test set, in accordance with the references. (2171.02.16)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the boresight collimator test set, in accordance with the references. (2171.02.16a)
2. Given applicable resources, operate the boresight collimator test set, in accordance with the references. (2171.02.16b)
3. Given applicable resources, troubleshoot/isolate malfunctions on the boresight collimator test set, in accordance with the references. (2171.02.16c)
4. Given applicable resources, repair malfunctions on the boresight collimator test set, in accordance with the references. (2171.02.16d)
5. Given applicable resources, perform preventative maintenance checks and services (PMCS) on the boresight collimator test set, in accordance with the references. (2171.02.16e)
6. Given applicable resources, perform quality control (QC) inspection on the boresight collimator test set, in accordance with the references. (2171.02.16f)

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Test Set Boresight Collimator, TS-3784/TAS | TM 9-5855-286-14 |
| 2. Test Set, Boresight Collimator, TS-3784/TAS | TM 9-5855-286-24P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F15

HOURS: 1.00

TITLE: NVES Ancillary Equipment Scheduled PMCS

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the night sight equipment set, in accordance with the references. (2171.02.12j)
2. Given applicable resources, perform quality control (QC) inspection on the night sight equipment set, in accordance with the references. (2171.02.12l)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 5. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 6. Battery Power Conditioner | TM 9-5855-884-24 |
| 7. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F16

HOURS: 9.00

TITLE: NVES Ancillary Equipment Corrective Maintenance

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	0.50	8:1
PA	8.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, perform assembly/disassembly procedures of the night sight equipment set, in accordance with the references. (2171.02.12g)
2. Given applicable resources, troubleshoot/isolate malfunctions on the night sight equipment set, in accordance with the references. (2171.02.12h)
3. Given applicable resources, repair malfunctions on the night sight equipment set, in accordance with the references. (2171.02.12i)
4. Given applicable resources, perform quality control (QC) inspection on the night sight equipment set, in accordance with the references. (2171.02.12j)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 5. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 6. Battery Power Conditioner | TM 9-5855-884-24 |
| 7. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F17

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710F13 through 21710F16

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(W)	2.00	8:1

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)
2. Given applicable resources, maintain TS-3784/TAS boresight collimator test set, in accordance with the references. (2171.02.16)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 5. Test Set Boresight Collimator, TS-3784/TAS | TM 9-5855-286-14 |
| 6. Test Set, Boresight Collimator, TS-3784/TAS | TM 9-5855-286-24P |
| 7. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 8. Battery Power Conditioner | TM 9-5855-884-24 |
| 9. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX F - NIGHT SIGHT SYSTEMS

LESSON ID: 21710F18

HOURS: 5.00

TITLE: Job Performance Test and review on 2171F13 through 21710F16

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
X(P)	5.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/UAS-12 series night sight equipment set, in accordance with the references. (2171.02.12)
2. Given applicable resources, maintain TS-3784/TAS boresight collimator test set, in accordance with the references. (2171.02.16)

REFERENCE

REFERENCE #

- | | |
|--|--------------------|
| 1. Equipment Set, Night Vision Set, AN/UAS-12C | SL-3-08554F |
| 2. Night Vision Sight, AN/TAS-4 | TM 08157B-24/1 |
| 3. Night Vision Sights AN/TAS-4C &4D | TM 08157D-24/2 |
| 4. Night Vision Sight AN/UAS-12C | TM 9-5855-1450-24P |
| 5. Test Set Boresight Collimator, TS-3784/TAS | TM 9-5855-286-14 |
| 6. Test Set, Boresight Collimator, TS-3784/TAS | TM 9-5855-286-24P |
| 7. Vehicle Power Conditioner | TM 9-5855-883-24 |
| 8. Battery Power Conditioner | TM 9-5855-884-24 |
| 9. Collimator, Boresight SU-93/TAS | TM 9-5855-885-24 |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX G - JAVELIN WEAPON SYSTEM

LESSON ID: 21710G01

HOURS: 4.00

TITLE: Javelin Introduction

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	3.00	8:2
L	1.00	8:1

MEDIA: CPU, IETM RDR, J-CD, PPP, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M98A1 Javelin weapon system, in accordance with the references. (2171.02.46)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the Javelin weapon system, in accordance with the references. (2171.02.46a)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Javelin Weapon System | TM 09397B-12/1 |
| 2. Javelin Weapon System | TM 09397B-34&P/2 |
| 3. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-12 |
| 4. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-14&P |
| 5. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-34&P |
| 6. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX G - JAVELIN WEAPON SYSTEM

LESSON ID: 21710G02

HOURS: 5.00

TITLE: Javelin Operation

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	4.25	8:2
L	0.75	8:1

MEDIA: AIO, CPU, HO, IETM RDR, J-CD, LASER, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M98A1 Javelin weapon system, in accordance with the references. (2171.02.46)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, operate the Javelin weapon system, in accordance with the references. (2171.02.46b)
2. Given applicable resources, identify the theory operation of the Javelin weapon system, in accordance with the references. (2171.02.46c)
3. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the command launch unit, in accordance with the references. (2171.02.46g)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Javelin Weapon System | TM 09397B-12/1 |
| 2. Javelin Weapon System | TM 09397B-34&P/2 |
| 3. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-12 |
| 4. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-14&P |
| 5. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-34&P |
| 6. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX G - JAVELIN WEAPON SYSTEM

LESSON ID: 21710G03

HOURS: 8.00

TITLE: Command Launch Unit(CLU) Theory

METHOD HOURS S:I RATIO

L 8.00 8:1

MEDIA: AIO, CPU, HO, IETM RDR, J-CD, LASER, PPP

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M98A1 Javelin weapon system, in accordance with the references. (2171.02.46)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the theory operation of the command launch unit, in accordance with the references. (2171.02.46d)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Javelin Weapon System | TM 09397B-12/1 |
| 2. Javelin Weapon System | TM 09397B-34&P/2 |
| 3. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-12 |
| 4. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-14&P |
| 5. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-34&P |
| 6. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX G - JAVELIN WEAPON SYSTEM

LESSON ID: 21710G04

HOURS: 15.00

TITLE: Command Launch Unit (CLU) Maintenance

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
PA	15.00	8:2

MEDIA: AIO, HO, IETM RDR, J-CD, LASER, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M98A1 Javelin weapon system, in accordance with the references. (2171.02.46)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, troubleshoot/isolate malfunctions on the command launch unit, in accordance with the references. (2171.02.46e)
2. Given applicable resources, repair malfunctions on the command launch unit, in accordance with the references. (2171.02.46f)
3. Given applicable resources, perform quality control (QC) checks on the Command Launch Unit, in accordance with the references. (2171.02.46h)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Javelin Weapon System | TM 09397B-12/1 |
| 2. Javelin Weapon System | TM 09397B-34&P/2 |
| 3. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-12 |
| 4. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-14&P |
| 5. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-34&P |
| 6. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX G - JAVELIN WEAPON SYSTEM

EXAM ID: 21710G05

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710G01 through 21710G04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	1.90	8:1

MEDIA: IETM RDR, J-CD, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M98A1 Javelin weapon system, in accordance with the references. (2171.02.46)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Javelin Weapon System | TM 09397B-12/1 |
| 2. Javelin Weapon System | TM 09397B-34&P/2 |
| 3. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-12 |
| 4. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-14&P |
| 5. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-34&P |
| 6. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX G - JAVELIN WEAPON SYSTEM

EXAM ID: 21710G06

HOURS: 8.00

TITLE: Job Performance Test and review on 21710G01 through 21710G04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	7.90	8:2

MEDIA: AIO, IETM RDR, J-CD, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M98A1 Javelin weapon system, in accordance with the references. (2171.02.46)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Javelin Weapon System | TM 09397B-12/1 |
| 2. Javelin Weapon System | TM 09397B-34&P/2 |
| 3. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-12 |
| 4. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-14&P |
| 5. (IETM) for the Javelin Anti-Tank Weapon System | TM 9-1425-688-34&P |
| 6. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H01

HOURS: 1.00

TITLE: AN/GVS-5 LASER Rangefinder

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.25	8:2
L	0.25	8:1
PA	0.50	8:2

MEDIA: AIO, CPU, HO, OP, PPP, TP, TV, VCR, VT

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/GVS-5 LASER infrared observation set, in accordance with the references. (2171.02.19)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the LASER infrared observation set, in accordance with the references. (2171.02.19a)
2. Given applicable resources, operate the LASER infrared observation set, in accordance with the references. (2171.02.19b)
3. Given applicable resources, identify the theory of operation LASER infrared observation set, in accordance with the references. (2171.02.19c)
4. Given applicable resources, troubleshoot/isolate malfunctions on the LASER infrared observation set, in accordance with the references. (2171.02.19d)
5. Given applicable resources, repair malfunction on the LASER infrared observation set, in accordance with the references. (2171.02.19e)
6. Given applicable resources, perform scheduled preventative maintenance checks and services (PMCS) on the LASER infrared observation set, in accordance with the references. (2171.02.19f)
7. Given applicable resources, perform quality control (QC) inspection on the LASER infrared observation set, in accordance with the references. (2171.02.19g)

NOTE(S):

This class conducted in conjunction with 21710H02.

REFERENCE

REFERENCE #

1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers DOD INST 6055.11

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H01

HOURS: 1.00

TITLE: AN/GVS-5 LASER Rangefinder

- | | |
|--|--------------------|
| 2. Operator Manual, Laser Infared Observation Set, AN/GVS-5 | TM 11-5860-201-10 |
| 3. Organizational Manual, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-20 |
| 4. Direct Support Maintenance, Laser Infared Observation Set, AN/GVS-5 | TM 11-5860-201-30 |
| 5. Direct Support Maintenance, Laser Infared Observation Set, AN/GVS-5 | TM 11-5860-201-30P |
| 6. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 7. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H02

HOURS: 11.00

TITLE: AN/GVS-5 Support Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.75	8:2
L	1.00	8:1
PA	9.25	8:2

MEDIA: AIO, HO, OP, PPP, TP

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain TS-3620/GVS-5 test set, in accordance with the references. (2171.02.37)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the test set, in accordance with the references. (2171.02.37a)
2. Given applicable resources, operate the test set, in accordance with the references. (2171.02.37b)
3. Given applicable resources, troubleshoot/isolate malfunctions on the test set, in accordance with the references. (2171.02.37c)
4. Given applicable resources, repair malfunctions on the test set, in accordance with the references. (2171.02.37d)
5. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the test set, in accordance with the references. (2171.02.37e)
6. Given applicable resources, perform quality control (QC) checks on the test set, in accordance with the references. (2171.02.37f)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Operator Manual, Laser Infared Observation Set, AN/GVS-5 | TM 11-5860-201-10 |
| 3. Organizational Manual, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-20 |
| 4. Direct Support Maintenance, Laser Infared Observation Set, AN/GVS-5 | TM 11-5860-201-30 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H02

HOURS: 11.00

TITLE: AN/GVS-5 Support Equipment

- | | |
|---|---------------------|
| 5. Direct Support Maintenance, Laser Infared Observation Set, AN/GVS-5 | TM 11-5860-201-30P |
| 6. Operator Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-12 |
| 7. Organizational Maintenance Parts, Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-20P |
| 8. Direct Support Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-30 |
| 9. Direct Support Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-30P |
| 10. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 12. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H03

HOURS: 2.00

TITLE: AN/PAQ-3 Modular Universal LASER Equipment (MULE)

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.25	8:2
L	0.75	8:1
PA	1.00	8:2

MEDIA: AIO, CPU, HO, OP, PPP, TP, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/PAQ-3 modular universal LASER equipment (MULE), in accordance with the references. (2171.02.18)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components on the MULE, in accordance with the references. (2171.02.18a)
2. Given applicable resources, identify the theory on operation of the MULE, in accordance with the references. (2171.02.18b)
3. Given applicable resources, troubleshoot/isolate malfunctions on the MULE, in accordance with the references. (2171.02.18c)
4. Given applicable resources, repair malfunctions on the MULE, in accordance with the references. (2171.02.18d)
5. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the MULE, in accordance with the references. (2171.02.18e)
6. Given applicable resources, perform quality control (QC) inspection on the MULE, in accordance with the references. (2171.02.18f)

REFERENCE

REFERENCE #

- | | |
|---|------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Operator and Organizational Maintenance Instruction for MULE | TM 08579A-12/1 |
| 3. Modular Universal Laser Equipment | TM 08579A-24P/3A |
| 4. AN/PAQ-3 (MULE) & Fault Isolation Test Set | TM 08579A-34/2A |
| 5. North Finding Module MX-18204/GSQ | TM 08911A-12/1 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H03

HOURS: 2.00

TITLE: AN/PAQ-3 Modular Universal LASER Equipment (MULE)

- | | |
|--|------------------|
| 6. North Finding Module MX-18204/GSQ | TM 08911A-34&P/2 |
| 7. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 8. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 9. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H04

HOURS: 15.00

TITLE: AN/PAQ-3 MULE Support Equipment

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.00	8:1
PA	13.50	8:2

MEDIA: AIO, CPU, HO, OP, PPP, TP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain modular universal LASER equipment (MULE) intermediate maintenance kit, in accordance with the references. (2171.02.20)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the intermediate maintenance kit, in accordance with the references. (2171.02.20a)
2. Given applicable resources, operate the intermediate maintenance kit, in accordance with the references. (2171.02.20b)
3. Given applicable resources, troubleshoot/isolate malfunctions on the intermediate maintenance kit, in accordance with the references. (2171.02.20c)
4. Given applicable resources, repair malfunctions on the intermediate maintenance kit, in accordance with the references. (2171.02.20d)
5. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the intermediate maintenance kit, in accordance with the references. (2171.02.20e)
6. Given applicable resources, perform quality control (QC) inspection on the intermediate maintenance kit, in accordance with the references. (2171.02.20f)

REFERENCE

REFERENCE #

- | | |
|---|------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |
| 3. Operator and Organizational Maintenance Instruction for MULE | TM 08579A-12/1 |
| 4. Modular Universal Laser Equipment | TM 08579A-24P/3A |
| 5. AN/PAQ-3 (MULE) & Fault Isolation Test Set | TM 08579A-34/2A |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

LESSON ID: 21710H04

HOURS: 15.00

TITLE: AN/PAQ-3 MULE Support Equipment

- | | |
|---|------------------|
| 6. Intermediate Maintenance Kit, Modular Universal Laser Equipment (MULE) | TM 08579A-34/4A |
| 7. North Finding Module MX-18204/GSQ | TM 08911A-12/1 |
| 8. North Finding Module MX-18204/GSQ | TM 08911A-34&P/2 |
| 9. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 10. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 11. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

EXAM ID: 21710H05

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710H01 through 21710H04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	1.90	8:1

MEDIA: AIO, HO, TP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/PAQ-3 modular universal LASER equipment (MULE), in accordance with the references. (2171.02.18)
2. Given applicable resources, maintain AN/GVS-5 LASER infrared observation set, in accordance with the references. (2171.02.19)
3. Given applicable resources, maintain modular universal LASER equipment (MULE) intermediate maintenance kit, in accordance with the references. (2171.02.20)
4. Given applicable resources, maintain TS-3620/GVS-5 test set, in accordance with the references. (2171.02.37)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |
| 3. Operator and Organizational Maintenance Instruction for MULE | TM 08579A-12/1 |
| 4. Modular Universal Laser Equipment | TM 08579A-24P/3A |
| 5. AN/PAQ-3 (MULE) & Fault Isolation Test Set | TM 08579A-34/2A |
| 6. Intermediate Maintenance Kit, Modular Universal Laser Equipment (MULE) | TM 08579A-34/4A |
| 7. North Finding Module MX-18204/GSQ | TM 08911A-12/1 |
| 8. North Finding Module MX-18204/GSQ | TM 08911A-34&P/2 |
| 9. Operator Manual, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-10 |
| 10. Organizational Manual, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-20 |
| 11. Direct Support Maintenance, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-30 |
| 12. Direct Support Maintenance, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-30P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

EXAM ID: 21710H05

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710H01 through 21710H04

- | | |
|--|---------------------|
| 13. Operator Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-12 |
| 14. Organizational Maintenance Parts, Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-20P |
| 15. Direct Support Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-30 |
| 16. Direct Support Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-30P |
| 17. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 18. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 19. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

EXAM ID: 21710H06

HOURS: 7.00

TITLE: Job Performance Test and review on 21710H01 through 21710H04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	6.90	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain AN/PAQ-3 modular universal LASER equipment (MULE), in accordance with the references. (2171.02.18)
2. Given applicable resources, maintain AN/GVS-5 LASER infrared observation set, in accordance with the references. (2171.02.19)
3. Given applicable resources, maintain modular universal LASER equipment (MULE) intermediate maintenance kit, in accordance with the references. (2171.02.20)
4. Given applicable resources, maintain TS-3620/GVS-5 test set, in accordance with the references. (2171.02.37)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |
| 3. Operator and Organizational Maintenance Instruction for MULE | TM 08579A-12/1 |
| 4. Modular Universal Laser Equipment | TM 08579A-24P/3A |
| 5. AN/PAQ-3 (MULE) & Fault Isolation Test Set | TM 08579A-34/2A |
| 6. Intermediate Maintenance Kit, Modular Universal Laser Equipment (MULE) | TM 08579A-34/4A |
| 7. North Finding Module MX-18204/GSQ | TM 08911A-12/1 |
| 8. North Finding Module MX-18204/GSQ | TM 08911A-34&P/2 |
| 9. Operator Manual, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-10 |
| 10. Organizational Manual, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-20 |
| 11. Direct Support Maintenance, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-30 |
| 12. Direct Support Maintenance, Laser Infrared Observation Set, AN/GVS-5 | TM 11-5860-201-30P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX H - LASER DEVICES

EXAM ID: 21710H06

HOURS: 7.00

TITLE: Job Performance Test and review on 21710H01 through 21710H04

- | | |
|--|---------------------|
| 13. Operator Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-12 |
| 14. Organizational Maintenance Parts, Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-20P |
| 15. Direct Support Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-30 |
| 16. Direct Support Maintenance Test Set, Laser Infared Observation Device TS-3620/GVS-5 | TM 11-6625-2684-30P |
| 17. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 18. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 19. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

LESSON ID: 21710I01

HOURS: 7.00

TITLE: Light Armored Vehicle/LAV-AT Introduction

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	2.00	8:1
PA	4.00	8:2

MEDIA: AIO, CPU, HO, PPP, SIM, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the different variants of the LAV, in accordance with the references. (2171.02.34a)
2. Given applicable resources, identify the components of the light armored vehicle anti tank (LAV-AT) fire control system, in accordance with the references. (2171.02.34b)
3. Given applicable resources, operate the LAV-AT turret, in accordance with the references. (2171.02.34c)
4. Given applicable resources, perform check out procedures/LTI on the LAV-AT, in accordance with the references. (2171.02.34d)
5. Given applicable resources, identify sight synchronization test set, in accordance with the references. (2171.02.34e)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |
| 4. Light Armored Vehicle (LAV) Thermal Sight System | SL-4-8H161B |
| 5. Operator's Manual LAV-25 Turret | TM 08594A-10/1_ |
| 6. Organizational Maintenance Light Armored Vehicle LAV-25 Turret | TM 08594A-20/3_ |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

LESSON ID: 21710I01

HOURS: 7.00

TITLE: Light Armored Vehicle/LAV-AT Introduction

- | | |
|--|----------------------|
| 7. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret | TM 08594A-34/8 |
| 8. Operator's Manual Light Armored Vehicle Anti-Tank Turret | TM 08652A-10/1A |
| 9. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret | TM 08652A-20/3A |
| 10. Intermediate Maintenance, Light Armored Vehicle (LAV) AT Turret | TM 08652A-34/5 |
| 11. GPIA-LAV Electronic System Test Set | TM 10262A-14&P/1 |
| 12. GPIA-LAV Electronic System Test Set | TM 10262A-14/2 |
| 13. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 14. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 15. Light Armored Vehicle (LAV) Thermal Sight System | TM 8H161B-20 |
| 16. Light Armored Vehicle (LAV) Thermal Sight System | TM 8H161B-34 |
| 17. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 18. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 19. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 20. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 21. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |
| 22. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 23. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

LESSON ID: 21710I02

HOURS: 11.00

TITLE: Maintain the LAV-AT

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.50	8:2
L	1.50	8:1
PA	9.00	8:2

MEDIA: AIO, HO, MU, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the image transfer assembly, in accordance with the references. (2171.02.34f)
2. Given applicable resources, perform assembly/disassembly procedures on the image transfer assembly, in accordance with the references. (2171.02.34g)
3. Given applicable resources, troubleshoot/isolate malfunctions on the image transfer assembly, in accordance with the references. (2171.02.34h)
4. Given applicable resources, repair malfunctions on the image transfer assembly, in accordance with the references. (2171.02.34i)
5. Given applicable resources, identify sight synchronization alignment on the LAV-25, in accordance with the references. (2171.02.34j)
6. Given applicable resources, perform sight synchronization alignment on the LAV-25, in accordance with the references. (2171.02.34k)
7. Given applicable resources, perform alignment procedures for the image transfer assembly, in accordance with the references. (2171.02.34l)
8. Given applicable resources, perform the boresight procedures for the image transfer assembly, in accordance with the references. (2171.02.34m)
9. Given applicable resources, perform quality control (QC) checks on the image transfer assembly, in accordance with the references. (2171.02.34n)

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

LESSON ID: 21710I02

HOURS: 11.00

TITLE: Maintain the LAV-AT

1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers DOD INST 6055.11
2. Purging Kit, Fire Control SC 4931-95-CL-J54
3. Test Equipment Intermediate Maintenance Kit SL-3-08892A
4. Light Armored Vehicle (LAV) Thermal Sight System SL-4-8H161B
5. Operator's Manual LAV-25 Turret TM 08594A-10/1_
6. Organizational Maintenance Light Armored Vehicle LAV-25 Turret TM 08594A-20/3_
7. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret TM 08594A-34/8
8. Operator's Manual Light Armored Vehicle Anti-Tank Turret TM 08652A-10/1A
9. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret TM 08652A-20/3A
10. Intermediate Maintenance, Light Armored Vehicle (LAV) AT Turret TM 08652A-34/5
11. GPIA-LAV Electronic System Test Set TM 10262A-14&P/1
12. GPIA-LAV Electronic System Test Set TM 10262A-14/2
13. Ground Equipment Record Procedures Manual TM 4700-15/1
14. M36E3 Periscope for UGWS TM 8F419B-35&P
15. Light Armored Vehicle (LAV) Thermal Sight System TM 8H161B-20
16. Light Armored Vehicle (LAV) Thermal Sight System TM 8H161B-34
17. Periscope, Tank: M36 TM 9-1240-314-35P
18. TOW Weapon System Guided Missile System TM 9-1425-450-12
19. Test Set, Electronic, AN/USM-615 TM 9-4931-586-12-1&P
20. Test Set, Electronic, AN/USM-615 TM 9-4931-586-12-2&P
21. Test Set Electronic, AN/USM 615 TM 9-4931-586-12-4&P
22. Electrostatic Discharge (ESD) Awareness TM 9999-15/1
23. Electrostatic Discharge (ESD) Awareness TM 9999-15/2

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I03

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710I01 through 21710I02

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	1.90	8:1

MEDIA: AIO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the different variants of the LAV, in accordance with the references. (2171.02.34a)
2. Given applicable resources, identify the components of the light armored vehicle anti tank (LAV-AT) fire control system, in accordance with the references. (2171.02.34b)
3. Given applicable resources, operate the LAV-AT turret, in accordance with the references. (2171.02.34c)
4. Given applicable resources, perform check out procedures/LTI on the LAV-AT, in accordance with the references. (2171.02.34d)
5. Given applicable resources, identify the components of the image transfer assembly, in accordance with the references. (2171.02.34f)
6. Given applicable resources, perform assembly/disassembly procedures on the image transfer assembly, in accordance with the references. (2171.02.34g)
7. Given applicable resources, perform alignment procedures for the image transfer assembly, in accordance with the references. (2171.02.34l)
8. Given applicable resources, perform the boresight procedures for the image transfer assembly, in accordance with the references. (2171.02.34m)

REFERENCE

REFERENCE #

1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers DOD INST 6055.11

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I03

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710I01 through 21710I02

- | | |
|--|----------------------|
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |
| 4. Light Armored Vehicle (LAV) Thermal Sight System | SL-4-8H161B |
| 5. Operator's Manual LAV-25 Turret | TM 08594A-10/1_ |
| 6. Organizational Maintenance Light Armored Vehicle LAV-25 Turret | TM 08594A-20/3_ |
| 7. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret | TM 08594A-34/8 |
| 8. Operator's Manual Light Armored Vehicle Anti-Tank Turret | TM 08652A-10/1A |
| 9. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret | TM 08652A-20/3A |
| 10. Intermediate Maintenance Light Armored Vehicle (LAV) AT Turret | TM 08652A-34/5 |
| 11. GPIA-LAV Electronic System Test Set | TM 10262A-14&P/1 |
| 12. GPIA-LAV Electronic System Test Set | TM 10262A-14/2 |
| 13. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 14. Light Armored Vehicle (LAV) Thermal Sight System | TM 8H161B-20 |
| 15. Light Armored Vehicle (LAV) Thermal Sight System | TM 8H161B-34 |
| 16. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 17. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 18. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 19. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 20. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |
| 21. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 22. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I04

HOURS: 7.00

TITLE: Job Performance Test and review on 21710I01 through 21710I02

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	6.90	8:2

MEDIA: MU, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the different variants of the LAV, in accordance with the references. (2171.02.34a)
2. Given applicable resources, identify the components of the light armored vehicle anti tank (LAV-AT) fire control system, in accordance with the references. (2171.02.34b)
3. Given applicable resources, operate the LAV-AT turret, in accordance with the references. (2171.02.34c)
4. Given applicable resources, perform check out procedures/LTI on the LAV-AT, in accordance with the references. (2171.02.34d)
5. Given applicable resources, identify the components of the image transfer assembly, in accordance with the references. (2171.02.34f)
6. Given applicable resources, identify sight synchronization alignment on the LAV-25, in accordance with the references. (2171.02.34j)
7. Given applicable resources, perform sight synchronization alignment on the LAV-25, in accordance with the references. (2171.02.34k)
8. Given applicable resources, perform assembly/disassembly procedures on the image transfer assembly, in accordance with the references. (2171.02.34g)
9. Given applicable resources, perform alignment procedures for the image transfer assembly, in accordance with the references. (2171.02.34l)
10. Given applicable resources, perform the boresight procedures for the image transfer

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I04

HOURS: 7.00

TITLE: Job Performance Test and review on 21710I01 through 21710I02

assembly, in accordance with the references. (2171.02.34m)

REFERENCE

REFERENCE #

- | | |
|---|----------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |
| 4. Light Armored Vehicle (LAV) Thermal Sight System | SL-4-8H161B |
| 5. Operator's Manual LAV-25 Turret | TM 08594A-10/1_ |
| 6. Organizational Maintenance Light Armored Vehicle LAV-25 Turret | TM 08594A-20/3_ |
| 7. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret | TM 08594A-34/8 |
| 8. Operator's Manual Light Armored Vehicle Anti-Tank Turret | TM 08652A-10/1A |
| 9. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret | TM 08652A-20/3A |
| 10. Intermediate Maintenance, Light Armored Vehicle (LAV) AT Turret | TM 08652A-34/5 |
| 11. GPIA-LAV Electronic System Test Set | TM 10262A-14&P/1 |
| 12. GPIA-LAV Electronic System Test Set | TM 10262A-14/2 |
| 13. Ground Equipment Record Procedures Manual | TM 4700-15/1 |
| 14. M36E3 Periscope for UGWS | TM 8F419B-35&P |
| 15. Light Armored Vehicle (LAV) Thermal Sight System | TM 8H161B-20 |
| 16. Light Armored Vehicle (LAV) Thermal Sight System | TM 8H161B-34 |
| 17. Periscope, Tank: M36 | TM 9-1240-314-35P |
| 18. TOW Weapon System Guided Missile System | TM 9-1425-450-12 |
| 19. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-1&P |
| 20. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-12-2&P |
| 21. Test Set Electronic, AN/USM 615 | TM 9-4931-586-12-4&P |
| 22. Test Set, Electronic, AN/USM-615 | TM 9-4931-586-30&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I04

HOURS: 7.00

TITLE: Job Performance Test and review on 21710I01 through 21710I02

- | | |
|---|--------------|
| 23. Electrostatic Discharge (ESD) Awareness | TM 9999-15/1 |
| 24. Electrostatic Discharge (ESD) Awareness | TM 9999-15/2 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

LESSON ID: 21710I05

HOURS: 12.00

TITLE: Inspection and Maintenance of the LAV Thermal Sights

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	11.00	8:2

MEDIA: AIO, CPU, HO, PPP, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the GPIA-LAV, in accordance with the references. (2171.02.34o)
2. Given applicable resources, identify the components of the DIM-36 thermal sight, in accordance with the references. (2171.02.34p)
3. Given applicable resources, identify the theory of operation of the DIM-36 thermal sight, in accordance with the references. (2171.02.34q)
4. Given applicable resources, troubleshoot/isolate malfunctions on the DIM-36 thermal sight, in accordance with the references. (2171.02.34r)
5. Given applicable resources, repair malfunctions on the DIM-36 thermal sight, in accordance with the references. (2171.02.34s)
6. Given applicable resources, perform quality control (QC) checks on the DIM-36 thermal sight, in accordance with the references. (2171.02.34t)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Table of Marine Corps Ground Equipment Resource Reporting (MCGERR) | MCBUL 3000 |
| 3. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 4. Test Set, Night Vision Sight, AN/TAM-3B | SL-3-08121C |
| 5. Test Equipment Intermediate Maintenance Kit | SL-3-08892A |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

LESSON ID: 21710I05

HOURS: 12.00

TITLE: Inspection and Maintenance of the LAV Thermal Sights

6. Light Armored Vehicle (LAV) Thermal Sight System	SL-4-8H161B
7. Operator's Manual LAV-25 Turret	TM 08594A-10/1_
8. Organizational Maintenance Light Armored Vehicle LAV-25 Turret	TM 08594A-20/3_
9. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret	TM 08594A-34/8
10. Operator's Manual Light Armored Vehicle Anti-Tank Turret	TM 08652A-10/1A
11. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret	TM 08652A-20/3A
12. Intermediate Maintenance Light Armored Vehicle (LAV) AT Turret	TM 08652A-34/5
13. GPIA-LAV Electronic System Test Set	TM 10262A-14&P/1
14. GPIA-LAV Electronic System Test Set	TM 10262A-14/2
15. Ground Equipment Record Procedures Manual	TM 4700-15/1
16. M36E3 Periscope for UGWS	TM 8F419B-35&P
17. Light Armored Vehicle (LAV) Thermal Sight System	TM 8H161B-20
18. Light Armored Vehicle (LAV) Thermal Sight System	TM 8H161B-34
19. Periscope, Tank: M36	TM 9-1240-314-35P
20. TOW Weapon System Guided Missile System	TM 9-1425-450-12
21. Test Set, Electronic, AN/USM-615	TM 9-4931-586-12-1&P
22. Test Set, Electronic, AN/USM-615	TM 9-4931-586-12-2&P
23. Test Set Electronic, AN/USM-615	TM 9-4931-586-12-4&P
24. Test Set, Electronic, AN/USM-615	TM 9-4931-586-30&P
25. Night Vision Sight, AN/TAM-3/3A/3B.	TM 9-5855-255-14
26. Night Vision Sight, AN/TAM-3/3A/3B	TM 9-5855-255-24P
27. Electrostatic Discharge (ESD) Awareness	TM 9999-15/1
28. Electrostatic Discharge (ESD) Awareness	TM 9999-15/2

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I06

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710I05

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(W)	1.90	8:1

MEDIA: MU, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the GPIA-LAV, in accordance with the references. (2171.02.34o)
2. Given applicable resources, identify the components of the DIM-36 thermal sight, in accordance with the references. (2171.02.34p)
3. Given applicable resources, identify the theory of operation of the DIM-36 thermal sight, in accordance with the references. (2171.02.34q)
4. Given applicable resources, troubleshoot/isolate malfunctions on the DIM-36 thermal sight, in accordance with the references. (2171.02.34r)
5. Given applicable resources, repair malfunctions on the DIM-36 thermal sight, in accordance with the references. (2171.02.34s)
6. Given applicable resources, perform quality control (QC) checks on the DIM-36 thermal sight, in accordance with the references. (2171.02.34t)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Table of Marine Corps Ground Equipment Resource Reporting (MCGERR) | MCBUL 3000 |
| 3. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 4. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 5. Test Set, Night Vision Sight, AN/TAM-3B | SL-3-08121C |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I06

HOURS: 2.00

TITLE: Job Knowledge Test and review on 21710I05

6. Test Equipment Intermediate Maintenance Kit	SL-3-08892A
7. Light Armored Vehicle (LAV) Thermal Sight System	SL-4-8H161B
8. Operator's Manual LAV-25 Turret	TM 08594A-10/1_
9. Organizational Maintenance Light Armored Vehicle LAV-25 Turret	TM 08594A-20/3_
10. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret	TM 08594A-34/8
11. Operator's Manual Light Armored Vehicle Anti-Tank Turret	TM 08652A-10/1A
12. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret	TM 08652A-20/3A
13. Intermediate Maintenance Light Armored Vehicle (LAV) AT Turret	TM 08652A-34/5
14. GPIA-LAV Electronic System Test Set	TM 10262A-14&P/1
15. GPIA-LAV Electronic System Test Set	TM 10262A-14/2
16. Ground Equipment Record Procedures Manual	TM 4700-15/1
17. M36E3 Periscope for UGWS	TM 8F419B-35&P
18. Light Armored Vehicle (LAV) Thermal Sight System	TM 8H161B-20
19. Light Armored Vehicle (LAV) Thermal Sight System	TM 8H161B-34
20. Periscope, Tank: M36	TM 9-1240-314-35P
21. TOW Weapon System Guided Missile System	TM 9-1425-450-12
22. Test Set, Electronic, AN/USM-615	TM 9-4931-586-12-1&P
23. Test Set, Electronic, AN/USM-615	TM 9-4931-586-12-2&P
24. Test Set Electronic, AN/USM-615	TM 9-4931-586-12-4&P
25. Test Set, Electronic, AN/USM-615	TM 9-4931-586-30&P
26. Night Vision Sight, AN/TAM-3/3A/3B.	TM 9-5855-255-14
27. Night Vision Sight, AN/TAM-3/3A/3B	TM 9-5855-255-24P
28. Electrostatic Discharge (ESD) Awareness	TM 9999-15/1
29. Electrostatic Discharge (ESD) Awareness	TM 9999-15/2

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I07

HOURS: 8.00

TITLE: Job Performance Test and review on 21710I05

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	7.90	8:2

MEDIA: AIO, HO, MU, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain light armored vehicle (LAV) series fire control system, in accordance with the references. (2171.02.34)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the GPIA-LAV, in accordance with the references. (2171.02.34o)
2. Given applicable resources, identify the components of the DIM-36 thermal sight, in accordance with the references. (2171.02.34p)
3. Given applicable resources, identify the theory of operation of the DIM-36 thermal sight, in accordance with the references. (2171.02.34q)
4. Given applicable resources, troubleshoot/isolate malfunctions on the DIM-36 thermal sight, in accordance with the references. (2171.02.34r)
5. Given applicable resources, repair malfunctions on the DIM-36 thermal sight, in accordance with the references. (2171.02.34s)
6. Given applicable resources, perform quality control (QC) checks on the DIM-36 thermal sight, in accordance with the references. (2171.02.34t)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers | DOD INST 6055.11 |
| 2. Table of Marine Corps Ground Equipment Resource Reporting (MCGERR) | MCBUL 3000 |
| 3. MIMMS Field Procedures Manual | MCO P4790.2_ |
| 4. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 5. Test Set, Night Vision Sight, AN/TAM-3B | SL-3-08121C |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX I - LIGHT ARMORED VEHICLE

EXAM ID: 21710I07

HOURS: 8.00

TITLE: Job Performance Test and review on 21710I05

6. Test Equipment Intermediate Maintenance Kit	SL-3-08892A
7. Light Armored Vehicle (LAV) Thermal Sight System	SL-4-8H161B
8. Operator's Manual LAV-25 Turret	TM 08594A-10/1_
9. Organizational Maintenance Light Armored Vehicle LAV-25 Turret	TM 08594A-20/3_
10. Intermediate Maintenance Light Armored Vehicle LAV-25 Turret	TM 08594A-34/8
11. Operator's Manual Light Armored Vehicle Anti-Tank Turret	TM 08652A-10/1A
12. Organizational Maintenance Light Armored Vehicle Anti-Tank Turret	TM 08652A-20/3A
13. Intermediate Maintenance Light Armored Vehicle (LAV) AT Turret	TM 08652A-34/5
14. GPIA-LAV Electronic System Test Set	TM 10262A-14&P/1
15. GPIA-LAV Electronic System Test Set	TM 10262A-14/2
16. Ground Equipment Record Procedures Manual	TM 4700-15/1
17. M36E3 Periscope for UGWS	TM 8F419B-35&P
18. Light Armored Vehicle (LAV) Thermal Sight System	TM 8H161B-20
19. Light Armored Vehicle (LAV) Thermal Sight System	TM 8H161B-34
20. Periscope, Tank: M36	TM 9-1240-314-35P
21. TOW Weapon System Guided Missile System	TM 9-1425-450-12
22. Test Set, Electronic, AN/USM-615	TM 9-4931-586-12-1&P
23. Test Set, Electronic, AN/USM-615	TM 9-4931-586-12-2&P
24. Test Set Electronic, AN/USM-615	TM 9-4931-586-12-4&P
25. Test Set, Electronic, AN/USM-615	TM 9-4931-586-30&P
26. Night Vision Sight, AN/TAM-3/3A/3B.	TM 9-5855-255-14
27. Night Vision Sight, AN/TAM-3/3A/3B	TM 9-5855-255-24P
28. Electrostatic Discharge (ESD) Awareness	TM 9999-15/1
29. Electrostatic Discharge (ESD) Awareness	TM 9999-15/2

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J01

HOURS: 0.50

TITLE: Cross Leveling Test Fixture

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.25	8:2
L	0.25	8:1

MEDIA: AIO, HO

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain cross-leveling fixture, in accordance with the references. (2171.02.39)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the fixture, in accordance with the references. (2171.02.39a)
2. Given applicable resources, operate the fixture, in accordance with the references. (2171.02.39b)
3. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the fixture, in accordance with the references. (2171.02.39c)

REFERENCE

REFERENCE #

- | | |
|---|-------------------|
| 1. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 2. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 3. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 4. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |
| 5. General Maintenance Procedures for Fire Control Material | TM 9-254 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J02

HOURS: 10.50

TITLE: Maintain the M1A1 Gunners Quadrant

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	1.00	8:1
PA	8.50	8:2

MEDIA: AIO, CPU, HO, PPP, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1 series gunner's quadrant, in accordance with the references. (2171.02.22)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the gunner's quadrant, in accordance with the references. (2171.02.22a)
2. Given applicable resources, operate the gunner's quadrant, in accordance with the references. (2171.02.22b)
3. Given applicable resources, perform check out procedures/LTI on the gunner's quadrant, in accordance with the references. (2171.02.22c)
4. Given applicable resources, troubleshoot/isolate malfunctions on the gunner's quadrant, in accordance with the references. (2171.02.22d)
5. Given applicable resources, repair malfunctions on the gunner's quadrant, in accordance with the references. (2171.02.22e)
6. Given applicable resources, perform alignment procedures on the gunner's quadrant, in accordance with the references. (2171.02.22f)
7. Given applicable resources, perform quality control (QC) inspection on the gunner's quadrant, in accordance with the references. (2171.02.22g)

REFERENCE

REFERENCE #

- | | |
|---|----------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 3. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 4. Quadrant M1A1 & M1A2 | TM 02193C-14&P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

LESSON ID: 21710J02

HOURS: 10.50

TITLE: Maintain the M1A1 Gunners Quadrant

5. Howitzer, Medium, Towed, 155mm M198

TM 9-1240-375-34

6. Howitzer, Medium, Towed, 155mm M198

TM 9-1240-375-34P

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

EXAM ID: 21710J03

HOURS: 4.00

TITLE: Job Performance Test and review on 21710J01 through 21710J02

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
PA	4.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M1 series gunner's quadrant, in accordance with the references. (2171.02.22)

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 3. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 4. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 5. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J04

HOURS: 14.00

TITLE: Maintain the M18 Elevation Quadrant

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	1.00	8:1
PA	13.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M198 howitzer fire control system, in accordance with the references. (2171.02.31)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the M18 quadrant, in accordance with the references. (2171.02.31i)
2. Given applicable resources, operate the M18 quadrant, in accordance with the references. (2171.02.31j)
3. Given applicable resources, perform check out procedures/LTI for the M18 quadrant, in accordance with the references. (2171.02.31k)
4. Given applicable resources, troubleshoot/isolate malfunctions on the M18 quadrant, in accordance with the references. (2171.02.31l)
5. Given applicable resources, repair malfunctions on the M18 quadrant, in accordance with the references. (2171.02.31m)
6. Given applicable resources, perform quality control (QC) checks on the M18 quadrant, in accordance with the references. (2171.02.31n)

NOTE(S):

The M18 is a component of the M198 fire control system. Training one component in detail allows for a transfer of knowledge on the remaining components. This class is done in conjunction with 21710J07. The lecture portions of both classes are given one after another. The students are then split into two groups. One half of the class works on the M18 and the other half works on the M137. At the end of their practical application time, they are tested on the piece of gear that they have been working with. After they have been tested on the first piece of gear, they are given the same amount of practical application time on the other piece of gear and then tested on it.

REFERENCE

REFERENCE #

1. Marine Corps Radiation Safety Program

MCO 5104.3

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

LESSON ID: 21710J04

HOURS: 14.00

TITLE: Maintain the M18 Elevation Quadrant

2. Purging Kit, Fire Control	SC 4931-95-CL-J54
3. Aiming Circle, M2A2, w/Equipment	SL-3-00476C
4. Fixture, Azimuth Testing, w/Equipment	SL-3-02194A
5. Fixture, Cross Leveling and Elevation	SL-3-02220A
6. Fundamentals of Machine Tools	TC 9-524
7. Special Handling Considerations Tritium Fire Control	TI 5104-15/2
8. Quadrant M1A1 & M1A2	TM 02193C-14&P
9. M1A1 Collimator, Infinity, Aiming	TM 04914B-34&P
10. Ground Equipment Record Procedures Manual	TM 4700-15/1
11. Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM	TM 9-1025-211-20&P
12. Howitzer, Medium, Towed, M198 155MM Intermediate Maintenance	TM 9-1025-211-34
13. Howitzer, Medium, Towed, M198 155MM PARTS	TM 9-1025-211-34P
14. Howitzer, Medium, Towed, 155mm M198	TM 9-1240-375-34
15. Howitzer, Medium, Towed, 155mm M198	TM 9-1240-375-34P
16. Operator's Manual, M2 with Equipment and M2A2 with Equipment	TM 9-1290-262-10
17. Aiming Circle, M2A2, with Equipment	TM 9-1290-262-24&P
18. Use and Care of Hand Tools and Measuring Tools	TM 9-243
19. General Maintenance Procedures for Fire Control Material	TM 9-254
20. Elementary Optics and Application to Fire Control Instruments	TM 9-258

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

EXAM ID: 21710J05

HOURS: 3.50

TITLE: Job Performance Test and review on 21710J04

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	3.40	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M198 howitzer fire control system, in accordance with the references. (2171.02.31)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the M18 quadrant, in accordance with the references. (2171.02.31i)
2. Given applicable resources, operate the M18 quadrant, in accordance with the references. (2171.02.31j)
3. Given applicable resources, perform check out procedures/LTI for the M18 quadrant, in accordance with the references. (2171.02.31k)
4. Given applicable resources, troubleshoot/isolate malfunctions on the M18 quadrant, in accordance with the references. (2171.02.31l)
5. Given applicable resources, repair malfunctions on the M18 quadrant, in accordance with the references. (2171.02.31m)
6. Given applicable resources, perform quality control (QC) checks on the M18 quadrant, in accordance with the references. (2171.02.31n)

NOTE(S):

The M18 is a component of the M198 fire control system. This test is done in conjunction with 21710J08.

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. Aiming Circle, M2A2, w/Equipment | SL-3-00476C |
| 4. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

EXAM ID: 21710J05

HOURS: 3.50

TITLE: Job Performance Test and review on 21710J04

- | | |
|--|--------------------|
| 5. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 6. Fundamentals of Machine Tools | TC 9-524 |
| 7. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 8. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 9. M1A1 Collimator, Infinity, Aiming | TM 04914B-34&P |
| 10. Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM | TM 9-1025-211-20&P |
| 11. Howitzer, Medium, Towed, M198 155MM Intermediate Maintenance | TM 9-1025-211-34 |
| 12. Howitzer, Medium, Towed, M198 155MM PARTS | TM 9-1025-211-34P |
| 13. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 14. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |
| 15. Operator's Manual, M2 with Equipment and M2A2 with Equipment | TM 9-1290-262-10 |
| 16. Aiming Circle, M2A2, with Equipment | TM 9-1290-262-24&P |
| 17. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 18. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 19. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J06

HOURS: 0.25

TITLE: Azimuth Test Fixture

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	0.15	8:2
L	0.10	8:1

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain azimuth test fixture, in accordance with the references. (2171.02.40)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the fixture, in accordance with the references. (2171.02.40a)
2. Given applicable resources, operate the fixture, in accordance with the references. (2171.02.40b)
3. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the fixture, in accordance with the references. (2171.02.40c)

REFERENCE

REFERENCE #

- | | |
|---|-------------|
| 1. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |
| 2. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 3. General Maintenance Procedures for Fire Control Material | TM 9-254 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J07

HOURS: 13.75

TITLE: Maintain the M137 Panoramic Telescope

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	1.00	8:1
PA	11.75	8:2

MEDIA: AIO, HO, WB, WBK

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M198 howitzer fire control system, in accordance with the references. (2171.02.31)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the M137 panoramic telescope, in accordance with the references. (2171.02.31o)
2. Given applicable resources, operate the M137 panoramic telescope, in accordance with the references. (2171.02.31p)
3. Given applicable resources, perform check out procedures/LTI for the M137 panoramic telescope, in accordance with the references. (2171.02.31q)
4. Given applicable resources, troubleshoot/isolate malfunctions on the M137 panoramic telescope, in accordance with the references. (2171.02.31r)
5. Given applicable resources, repair malfunctions on the M137 panoramic telescope, in accordance with the references. (2171.02.31s)
6. Given applicable resources, perform quality control (QC) checks on the M137 panoramic telescope, in accordance with the references. (2171.02.31t)

NOTE(S):

The M137 is a component of the M198 fire control system. Training one component in detail allows for a transfer of knowledge on the remaining components. This class is done in conjunction with 21710J04. The lecture portions of both classes are given one after another. The students are then split into two groups. One half of the class works on the M18 and the other half works on the M137. At the end of their practical application time, they are tested on the piece of gear that they have been working with. After they have been tested on the first piece of gear, they are given the same amount of practical application time on the other piece of gear and then tested on it.

REFERENCE

REFERENCE #

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

LESSON ID: 21710J07

HOURS: 13.75

TITLE: Maintain the M137 Panoramic Telescope

- | | |
|--|--------------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. Aiming Circle, M2A2, w/Equipment | SL-3-00476C |
| 4. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |
| 5. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 6. Fundamentals of Machine Tools | TC 9-524 |
| 7. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 8. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 9. M1A1 Collimator, Infinity, Aiming | TM 04914B-34&P |
| 10. Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM | TM 9-1025-211-20&P |
| 11. Howitzer, Medium, Towed, M198 155MM Intermediate Maintenance | TM 9-1025-211-34 |
| 12. Howitzer, Medium, Towed, M198 155MM PARTS | TM 9-1025-211-34P |
| 13. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 14. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |
| 15. Operator's Manual, M2 w/Equipment and M2A2 w/Equipment | TM 9-1290-262-10 |
| 16. Aiming Circle, M2A2, w/Equipment | TM 9-1290-262-24&P |
| 17. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 18. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 19. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

EXAM ID: 21710J08

HOURS: 3.50

TITLE: Job Performance Test and review on 21710J06 through 21710J07

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	3.40	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M198 howitzer fire control system, in accordance with the references. (2171.02.31)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the M137 panoramic telescope, in accordance with the references. (2171.02.31o)
2. Given applicable resources, operate the M137 panoramic telescope, in accordance with the references. (2171.02.31p)
3. Given applicable resources, perform check out procedures/LTI for the M137 panoramic telescope, in accordance with the references. (2171.02.31q)
4. Given applicable resources, troubleshoot/isolate malfunctions on the M137 panoramic telescope, in accordance with the references. (2171.02.31r)
5. Given applicable resources, repair malfunctions on the M137 panoramic telescope, in accordance with the references. (2171.02.31s)
6. Given applicable resources, perform quality control (QC) checks on the M137 panoramic telescope, in accordance with the references. (2171.02.31t)

NOTE(S):

The M137 is a component of the M198 fire control system. This test is done in conjunction with 21710J05.

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |
| 3. Aiming Circle, M2A2, w/Equipment | SL-3-00476C |
| 4. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

EXAM ID: 21710J08

HOURS: 3.50

TITLE: Job Performance Test and review on 21710J06 through 21710J07

- | | |
|--|--------------------|
| 5. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 6. Fundamentals of Machine Tools | TC 9-524 |
| 7. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 8. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 9. M1A1 Collimator, Infinity, Aiming | TM 04914B-34&P |
| 10. Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM | TM 9-1025-211-20&P |
| 11. Howitzer, Medium, Towed, M198 155MM Intermediate Maintenance | TM 9-1025-211-34 |
| 12. Howitzer, Medium, Towed, M198 155MM PARTS | TM 9-1025-211-34P |
| 13. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 14. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |
| 15. Operator's Manual, M2 w/Equipment and M2A2 w/Equipment | TM 9-1290-262-10 |
| 16. Aiming Circle, M2A2, w/Equipment | TM 9-1290-262-24&P |
| 17. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 18. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 19. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

LESSON ID: 21710J09

HOURS: 20.00

TITLE: Maintain M198 Howitzer Fire Control System

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	2.00	8:1
PA	18.00	8:2

MEDIA: AIO, HO, TV, VCR, VT, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M198 howitzer fire control system, in accordance with the references. (2171.02.31)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the howitzer fire control system, in accordance with the references. (2171.02.31a)
2. Given applicable resources, operate the howitzer fire control system, in accordance with the references. (2171.02.31b)
3. Given applicable resources, identify the theory of operation of the howitzer fire control system, in accordance with the references. (2171.02.31c)
4. Given applicable resources, troubleshoot/isolate malfunctions on the howitzer fire control system, in accordance with the references. (2171.02.31d)
5. Given applicable resources, repair malfunctions on the howitzer fire control system, in accordance with the references. (2171.02.31e)
6. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the howitzer fire control system, in accordance with the references. (2171.02.31f)
7. Given applicable resources, perform alignment procedures of the howitzer fire control system, in accordance with the references. (2171.02.31g)
8. Given applicable resources, perform quality control (QC) checks on the howitzer fire control system, in accordance with the references. (2171.02.31h)

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

LESSON ID: 21710J09

HOURS: 20.00

TITLE: Maintain M198 Howitzer Fire Control System

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|--|--------------------|
| 3. Aiming Circle, M2A2, w/Equipment | SL-3-00476C |
| 4. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |
| 5. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 6. Fundamentals of Machine Tools | TC 9-524 |
| 7. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 8. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 9. M1A1 Collimator, Infinity, Aiming | TM 04914B-34&P |
| 10. Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM | TM 9-1025-211-20&P |
| 11. Howitzer, Medium, Towed, M198 155MM Intermediate Maintenance | TM 9-1025-211-34 |
| 12. Howitzer, Medium, Towed, M198 155MM PARTS | TM 9-1025-211-34P |
| 13. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 14. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |
| 15. Operator's Manual, M2 w/Equipment and M2A2 w/Equipment | TM 9-1290-262-10 |
| 16. Aiming Circle, M2A2, w/Equipment | TM 9-1290-262-24&P |
| 17. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 18. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 19. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

EXAM ID: 21710J10

HOURS: 7.00

TITLE: Job Performance Test and review on 21710J09

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	6.90	8:2

MEDIA: AIO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M198 howitzer fire control system, in accordance with the references. (2171.02.31)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify the components of the howitzer fire control system, in accordance with the references. (2171.02.31a)
2. Given applicable resources, operate the howitzer fire control system, in accordance with the references. (2171.02.31b)
3. Given applicable resources, identify the theory of operation of the howitzer fire control system, in accordance with the references. (2171.02.31c)
4. Given applicable resources, troubleshoot/isolate malfunctions on the howitzer fire control system, in accordance with the references. (2171.02.31d)
5. Given applicable resources, repair malfunctions on the howitzer fire control system, in accordance with the references. (2171.02.31e)
6. Given applicable resources, perform scheduled preventive maintenance checks and services (PMCS) on the howitzer fire control system, in accordance with the references. (2171.02.31f)
7. Given applicable resources, perform alignment procedures of the howitzer fire control system, in accordance with the references. (2171.02.31g)
8. Given applicable resources, perform quality control (QC) checks on the howitzer fire control system, in accordance with the references. (2171.02.31h)

REFERENCE

REFERENCE #

- | | |
|--|-------------------|
| 1. Marine Corps Radiation Safety Program | MCO 5104.3 |
| 2. Purging Kit, Fire Control | SC 4931-95-CL-J54 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITZERS

EXAM ID: 21710J10

HOURS: 7.00

TITLE: Job Performance Test and review on 21710J09

- | | |
|--|--------------------|
| 3. Aiming Circle, M2A2, w/Equipment | SL-3-00476C |
| 4. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |
| 5. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 6. Fundamentals of Machine Tools | TC 9-524 |
| 7. Special Handling Considerations Tritium Fire Control | TI 5104-15/2 |
| 8. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 9. M1A1 Collimator, Infinity, Aiming | TM 04914B-34&P |
| 10. Organizational Maintenance Manual, Howitzer, Medium, Towed, M198 155MM | TM 9-1025-211-20&P |
| 11. Howitzer, Medium, Towed, M198 155MM Intermediate Maintenance | TM 9-1025-211-34 |
| 12. Howitzer, Medium, Towed, M198 155MM PARTS | TM 9-1025-211-34P |
| 13. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34 |
| 14. Howitzer, Medium, Towed, 155mm M198 | TM 9-1240-375-34P |
| 15. Operator's Manual, M2 w/Equipment and M2A2 w/Equipment | TM 9-1290-262-10 |
| 16. Aiming Circle, M2A2, w/Equipment | TM 9-1290-262-24&P |
| 17. Use and Care of Hand Tools and Measuring Tools | TM 9-243 |
| 18. General Maintenance Procedures for Fire Control Material | TM 9-254 |
| 19. Elementary Optics and Application to Fire Control Instruments | TM 9-258 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J11

HOURS: 12.00

TITLE: Maintenance of the M2A2 Aiming Circle

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
D	1.00	8:2
L	1.00	8:1
PA	10.00	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M2A2 aiming circle, in accordance with the references. (2171.02.24)

ENABLING LEARNING OBJECTIVE(S):

1. Given applicable resources, identify components of the aiming circle, in accordance with the references. (2171.02.24a)
2. Given applicable resources, operate the aiming circle, in accordance with the references. (2171.02.24b)
3. Given applicable resources, perform check out procedures/LTI on the aiming circle, in accordance with the references. (2171.02.24c)
4. Given applicable resources, troubleshoot/isolate malfunctions on the aiming circle, in accordance with the references. (2171.02.24d)
5. Given applicable resources, repair malfunctions on the aiming circle, in accordance with the references. (2171.02.24e)
6. Given applicable resources, perform alignment procedures on the aiming circle, in accordance with the references. (2171.02.24f)
7. Given applicable resources, perform quality control (QC) checks on the aiming circle, in accordance with the references. (2171.02.24g)

REFERENCE

REFERENCE #

- | | |
|---|-------------|
| 1. Table of Marine Corps Ground Equipment Resource Reporting (MCGERR) | MCBUL 3000 |
| 2. Aiming Circle, M2A2, w/Equipment | SL-3-00476C |
| 3. Fixture, Azimuth Testing, w/Equipment | SL-3-02194A |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J11

HOURS: 12.00

TITLE: Maintenance of the M2A2 Aiming Circle

- | | |
|---|--------------------|
| 4. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 5. M2A2 Aiming Circle | TM 00476C-24&P |
| 6. Quadrant M1A1 & M1A2 | TM 02193C-14&P |
| 7. Operator's Manual, M2 w/Equipment and M2A2 w/Equipment | TM 9-1290-262-10 |
| 8. Aiming Circle, M2A2, w/Equipment | TM 9-1290-262-24&P |
| 9. General Maintenance Procedures for Fire Control Material | TM 9-254 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

EXAM ID: 21710J12

HOURS: 6.00

TITLE: Job Performance Test and review on 21710J11

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.10	8:1
X(P)	5.90	8:2

MEDIA: AIO, HO, WB

TERMINAL LEARNING OBJECTIVE(S):

1. Given applicable resources, maintain M2A2 aiming circle, in accordance with the references. (2171.02.24)

REFERENCE

REFERENCE #

- | | |
|---|--------------------|
| 1. Fixture, Cross Leveling and Elevation | SL-3-02220A |
| 2. Operator's Manual, M2 w/Equipment and M2A2 w/Equipment | TM 9-1290-262-10 |
| 3. Aiming Circle, M2A2, w/Equipment | TM 9-1290-262-24&P |
| 4. General Maintenance Procedures for Fire Control Material | TM 9-254 |

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX J - HOWITIZERS

LESSON ID: 21710J13

HOURS: 3.00

TITLE: Inspection and Maintenance of the M49 Observation Telescope

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
L	0.50	8:1
PA	2.50	8:2

MEDIA: AIO, CPU, PPP

LESSON PURPOSE:

This class is lesson purpose, if taught to standard it would be associated with TLO 2171.02.23 Given applicable resources, maintain M49 Observation Telescope, in accordance with the references.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX Z - ADMIN

EVENT ID: 21710Z01

HOURS: 8.00

EVENT: In Processing

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ADMIN	8.00	8:1

MEDIA:

NOTE(S):

During this time period the Marine will fill out all necessary paperwork, receive a financial and medical brief, receive an academic in brief from the academic coordinator and receive command welcome aboard briefs from the CO and the 1stSgt.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX Z - ADMIN

EVENT ID: 21710Z02

HOURS: 8.00

EVENT: Out Processing/Graduation

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ADMIN	8.00	8:1

MEDIA:

NOTE(S):

The students will receive their orders, check out of medical, dental, supply, various organizations aboard APG and graduate.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX Z - ADMIN

EVENT ID: 21710Z03

HOURS: 64.00

EVENT: Commanders Time

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
CMDR	64.00	8:1

MEDIA:

NOTE(S):

There are 64 sessions where commanders time will be implemented in the schedule for a total of 64 non-academic hours. During this time the Marines will conduct PT and have uniform inspections. The commanders time is only used during the Marine Unique portions of the school, A and E through L annex.

ELECTRO-OPTICAL ORDNANCE REPAIRER

SECTION IV - CONCEPT CARDS

ANNEX Z - ADMIN

EVENT ID: 21710Z04

HOURS: 3.00

EVENT: MCI Testing

<u>METHOD</u>	<u>HOURS</u>	<u>S:I RATIO</u>
ADMIN	3.00	8:1

MEDIA: HO

NOTE(S):

MCI Electronic Math is taught in this course to help the student to better grasp overall knowledge of the course. 3 hrs are allotted to test this MCI to ensure the student has grasped the knowledge prior to moving into the night sights' annex.

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION V - STUDENT PERFORMANCE EVALUATION

1. SCOPE. There are two measurement methods used in the Electro-Optical Repair Course. Individual lessons are evaluated by either performance evaluation calling for the student to duplicate the job performance requirements or test items on written examinations given during class.

2. MASTERY LEARNING. The evaluative philosophy utilized in this course stresses student achievement of all learning objectives. Students must master 100% of all Terminal Learning Objectives (TLOs) presented during all periods of instruction. Evaluations are used to determine mastery of the learning objectives, and not rank order the students. While the Marines are in the ITRO portion (B, C, and D annex), of the course a minimum score of 70% is required to pass an exam, when the Marines are in the non-ITRO portion of the course the minimum score of 80% is required to pass an exam.

3. EVALUATION OF STUDENTS. Each student is evaluated on each annex's learning objectives before proceeding to the next annex. This is accomplished through written test items concerning the subject material and through informal observation of student performance during performance testing.

a. Written Evaluations. Knowledge-based learning objectives are evaluated by written examinations given through the course that contain written test items.

b. Practical Application. Students will be informally evaluated and provided feedback by instructors through observation of student performance during practical application.

c. Performance Evaluation. A performance test covering all performance based learning objectives is conducted at the end of each annex. Students are evaluated via a performance checklist completed by the instructors. Instructors evaluate student performance and provide feedback and remedial instruction. The student who does not master a given subject must exert more effort and will be given one additional opportunity to achieve mastery of the learning objectives through remedial instruction. It is the responsibility of the Electro-Optical Ordnance Repair Course staff to render every assistance to each student needing help to achieve mastery.

d. A complete listing of all exams given can be found in section IV.

ELECTRO-OPTICAL ORDNANCE REPAIRER PROGRAM OF INSTRUCTION

SECTION VI - DISTRIBUTION LIST

<u>DISTRIBUTION</u>	<u>QUANTITY</u>
CG, TECOM (C464)	3
CG, Training Command (C475)	3
COMMARFORLANT	1
COMMARFORPAC	1
COMMARFORRES	1
Marine Corps Institute (MCI)	1