DEPARTMENT OF THE AIR FORCE
Headquarters, US Air Force
Washington DC 20330-1030

CFETP RI9S100
Change 1
29 April 2014

ACCESSIBLITY: Publications and forms are available on the e-publishing website at www.e-publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

APPLIES TO RI 9S100 CAREER FIELD EDUCATION AND TRAINING PLAN

This change is effective immediately and updates CFETP RI9S100 dated 1 June 2012.

1. Attachment changes. The following attachments were changed to reflect the proper verbage for '2b' tasks. Furthermore, the Systems Networking tasks training references were updated. No content was changed. In addition, the 'Systems Networking and Advance UNIX' JETS has been renamed to 'Systems Networking'.

Pages	Heading	Action
31-38	RI 9S100 Scientific Applications Fundamentals JETS	Replace
53-54	Subsurface Analysis JETS	Replace
55	Systems Networking JETS	Replace

2. Write in changes. The first two changes are typographical errors. Section 9.11 is being deleted due to JKDC write issues.

Pages	Heading	Action
13	14.2.2.	Replace '950' with '961'
26	2.9.7.	Change to read: **'2.9.7. Attachment 7.** 9S100 RI Systems Networking JETS. Used to identify training line items for the Systems Networking Course.'
27	10.	Delete 'and Advanced UNIX'
28	Attachments	Delete 'and Advanced UNIX'
42	Second task '3.8.4.2.1'	Replace with '3.8.4.2.2'
45	4.3.1.	Change 'Electromagnetics' to 'Electromagnetic Spectrum Collections Systems'
61	Section 9.11	Delete

2. TBA will be updated to reflect changes. If your unit is approved for paper 623s, file this change in the back of the CFETP after necessary actions are completed.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

DONALD J. BACON
Brig Gen, USAF
Director of ISR Strategy, Plans,
Doctrine, and Force Development

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
ELECTRONIC PRINCIPLES									
2.1.	**ELECTRONICS SUPPORT SUBJECTS** TR: TO 31-1-141-1, 00-25-234								
2.1.1.	Safety							B	
2.1.2.	First Aid							A	
2.1.3.	Electrostatic Discharge Control							B	
2.1.4.	Electromagnetic Effects							B	
2.1.5.	**Metric Notation** TR: TO 31-1-141-2, 31-1-141-5								
2.1.5.1.	Calculate Powers of Ten							2b	
2.1.5.2.	Electrical Prefixes							B	
2.2.	**TEST EQUIPMENT** TR: TO 31-1-141-1, 31-1-141-7, 31-1-141-8, 31-1-141-9, 31-1-141-10								
2.2.1.	Measure Electrical Values using Digital Multimeter							2b	
2.2.2.	Measure Electrical Values using Oscilloscope							2b	
2.2.3.	Measure Electrical Values using Signal Generator							2b	
2.3.	**BASIC CIRCUITS** TR: TO 31-1-141-2, 31-1-141-5, 31-1-141-9								
2.3.1.	**Direct Current (DC)**								
2.3.1.1.	Theory							B	
2.3.1.2.	Calculate DC Circuit Values							2b	
2.3.2.	**Alternating Current (AC)**								
2.3.2.1.	Theory							B	
2.3.2.2.	Calculate AC Circuit Values							2b	
2.4.	**BASIC CIRCUIT COMPONENTS** TR: TO 31-1-141-2, 31-1-141-5, 31-1-141-15								
2.4.1.	**Resistors**								
2.4.1.1.	Theory							B	
2.4.1.2.	Color Code							B	
2.4.1.3.	Troubleshoot Basic Resistive Circuits							2b	
2.4.2.	**Inductors**								
2.4.2.1.	Theory							B	
2.4.2.2.	Troubleshoot an Inductive Circuit							2b	
2.4.3.	**Capacitors**								
2.4.3.1.	Theory							B	
2.4.3.2.	Troubleshoot a Capacitive Circuit							2b	
2.4.4.	**Resistive-Capacitive-Inductive (RCL) Circuits Theory**								
2.4.4.1.	Basic							B	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.4.4.2.	Resonant							B	
2.4.4.3.	Frequency Sensitive Filter							B	
2.5.	**ELECTROMAGNETIC DEVICES** **TR: TO 31-1-141-2, 31-1-141-3, 31-1-141-9, 31-1-141-13, 31-1-141-15**								
2.5.1.	**Transformers**								
2.5.1.1.	Theory							B	
2.5.1.2.	Troubleshoot a Transformer							2b	
2.5.2.	**Relays and Solenoids**								
2.5.2.1.	Theory							B	
2.5.2.2.	Troubleshoot a Relay Circuit							2b	
2.5.3.	**Motor Theory**								
2.5.3.1.	Direct Current (DC)							B	
2.5.3.2.	Alternating Current (AC)							B	
2.5.4.	**Generator Theory**								
2.5.4.1.	Direct Current (DC)							B	
2.5.4.2.	Alternating Current (AC)							B	
2.5.5.	Special Purpose Motors							A	
2.5.6.	Transducer Theory **TR: TO 31-1-141, 31-1-141-4**							B	
2.6.	**SOLID STATE DEVICES** **TR: TO 31-1-141-4**								
2.6.1.	**Diodes**								
2.6.1.1.	Theory							B	
2.6.1.2.	Troubleshoot a Diode Circuit							2b	
2.6.2.	**Bipolar Junction Transistors**								
2.6.2.1.	Theory							B	
2.6.2.2.	Troubleshoot a Bipolar Junction Transistor Circuit							2b	
2.6.3.	**Special Purpose Device Theory**								
2.6.3.1.	Zener Diode							B	
2.6.3.2.	Light Emitting Diode (LED)							B	
2.6.3.3.	Liquid Crystal Display (LCD)							B	
2.6.3.4.	Integrated Circuits (IC)							B	
2.6.3.5.	Operational Amplifiers							B	
2.7.	**TRANSISTOR AMPLIFIER CIRCUITS** **TR: TO 31-1-141-1, 31-1-141-4**								
2.7.1.	Theory							B	
2.7.2.	Stabilization							B	
2.7.3.	Coupling							B	
2.8.	**POWER SUPPLY CIRCUITS** **TR: TO 31-1-141-3, 31-1-141-4, 31-1-141-9, 31-1-141-15**								
2.8.1.	**Theory**								

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.8.1.1.	Rectifiers							B	
2.8.1.2.	Filters							B	
2.8.1.3.	Voltage Regulators							B	
2.8.1.4	Troubleshoot a Power Supply							2b	
2.9.	**WAVE GENERATING CIRCUIT THEORY** **TR: TO 31-1-141-4, 31-1-141-10**								
2.9.1.	Oscillators							B	
2.9.2.	Multivibrators							A	
2.9.3.	Waveshaping Circuits							A	
2.10	**DIGITAL LOGIC CIRCUITS** **TR: TO 31-1-141-4, 31-1-141-9, 31-1-141-13**								
2.10.1.	**Theory**								
2.10.1.1.	Gates							B	
2.10.1.2.	Flip-flops							B	
2.10.1.3	Binary Numbering Systems							B	
2.10.2.	Digital to Analog (DA) and Analog to Digital (AD) Convertors Theory							B	
2.11.	**BASIC COMMUNICATIONS THEORY** **TR: TO 31-1-141-4, 31-1-141-7, 31-1-141-9, 31-1-141-11, 31-1-141-12, 31-1-141-13**								
2.11.1	Antennas							B	
2.11.2	Transmission Lines							B	
2.11.3	Data Busses							B	
2.11.4	Waveguides							B	
2.11.5	Modulation							B	
2.11.6.	**AM Receiver Signals**								
2.11.6.1	Measure Radio Frequency (RF)							1a	
2.11.6.2.	Measure Intermediate Frequency (IRF)							1a	
2.11.6.3.	Measure Audio Frequency (AF)							1a	
2.11.6.4.	Measure Local Oscillator (LO) Output							1a	
AF INDOCTRINATION									
2.12.	**TRAINING** **TR: AFI 36-2101, 36-2201**								
2.12.1.	**Responsibilities**								
2.12.1.1.	Trainee							A	
2.12.1.2.	Trainer							A	
2.12.1.3.	Supervisor							A	
2.12.2.	Evaluate Training Program							-	
2.12.3.	Identify Training Requirements							-	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.12.4.	**Plan and Supervise OJT**								
2.12.4.1.	Prepare Job Qualification Standards							-	
2.12.4.2.	Conduct Training							-	
2.12.4.3.	**Monitor Effectiveness of Training**								
2.12.4.3.1.	Career Knowledge							-	
2.12.4.3.2.	Job Proficiency Upgrade/Qualification							-	
2.12.4.3.3.	Evaluate Effectiveness of Training Programs							-	
2.13.	**AIR FORCE OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM** **TR: AFI 91-301**								
2.13.1.	Operational Risk Management (ORM) **TR: AFI 90-901**							B	
2.13.2.	Principles and Objectives of Safety Programs **TR: AFI 32-2001, 40-201, AFOSH Stds 91-50, 91-66, 127-56, TO 00-25-234, 31-1-141-1**							A	
2.13.3.	Lockout/Tagout Awareness **TR: 29 CFR 1910.147**							A	
2.13.4.	Hazardous Waste Operations and Emergency Response **TR: AFI 10-2501, 29 CFR 1910.120, AFOSH Std 48-8**							A	
2.13.5.	DOD Federal Hazards Communication Training Program **TR: DODI 6050.5**							A	
2.13.6.	Use Fire Extinguishers **TR: AFOSH Std 91-501**							b	
2.13.7.	Perform First Aid/CPR **TR: Current Air Force First Aid and CPR recognized organization training documents**							3c	
2.14.	**LOGISTICS**								
2.14.1.	Processes and Principles **TR: AFDD 2-4**							A	
2.14.2.	**Supply** **TR: AFMAN 23-110**								
2.14.2.1.	Basic AF Supply System Principles							A	
2.14.2.2.	Use AF Supply System Procedures							-	
2.15.	**PUBLICATIONS**								
2.15.1.	AF Publications **TR: AFI 33-360**							A	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.15.2.	MAJCOM Publications and Local Operating Instructions **TR: AFI 33-360**							A	
2.15.3.	TOs/TIs **TR: AFPD 21-3, TI 01-1-01, TO 00-5-1, 00-5-2, 00-5-2-2, 00-5-15-WA-1**							A	
2.16.	**SUPERVISION AND MANAGEMENT** **TR: AFP 35-49, AFPAM 36-2241**								
2.16.1.	Career Information and Progression **TR: AFI 36-2101, RI9S100 CFETP Part 1**							A	
2.16.2.	**Brief Newly Assigned Personnel** **TR: AFI 36-2903, 10-248, 36-2818, 91-301**								
2.16.2.1.	Mission							-	
2.16.2.2.	Orientation to Work Center							-	
2.16.2.3.	Security							-	
2.16.2.4.	Safety							-	
2.16.2.5.	Responsibilities							-	
2.16.3.	Assign Personnel to Positions							-	
2.16.4.	Orient New Personnel							-	
2.16.5.	**Plan/Schedule**								
2.16.5.1.	Work Assignments							-	
2.15.5.2.	Shifts							-	
2.16.5.3.	Priorities							-	
2.16.6.	**Establish/Interpret**								
2.16.6.1.	Work Methods/Controls							-	
2.16.6.2.	Performance Standards							-	
2.16.6.3.	Priorities							-	
2.16.6.4.	Local Operating Instructions							-	
2.16.7.	Evaluate Space/Personnel/Resource Requirements							-	
2.16.8.	Coordinate Work with Other Personnel							-	
2.16.9.	Resolve Technical Problems Encountered by Subordinate Personnel							-	
2.16.10.	**Prepare** **TR: AFH 33-337**								
2.16.10.1.	Trip Reports							-	
2.16.10.2.	Briefings/Tours							-	
2.16.10.3.	Personnel Action Requests							-	
2.16.10.4.	Correspondence							-	
2.16.10.5.	Messages							-	
2.16.11.	Perform Self-Assessments **TR: AFI 90-201**							-	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.16.12.	Contract Management **TR: AFMAN 64-108, FAR 37.101**							-	
2.16.13.	Project Authorizations **TR: Local Instructions**							-	
2.16.14.	Contractor Protocol **TR: AFMAN 64-108, FAR 37**							-	
2.17.	**SECURITY** **TR: AFI 31-401**								
2.17.1.	COMSEC/COMPUSEC **TR: AFI 33-201**							A	
2.17.2.	RI 9S100 OPSEC **TR: AFI 10-701, Applicable Security Classification Guide**							A	
2.17.3.	Information Security **TR: AFI 31-401, Applicable Security Classification Guide**							A	
TECHNICAL SKILLS									
2.18.	**SOLDERING AND CONNECTORS**								
2.18.1.	Solder and Desolder Connections **TR: AFOSH Stds 91-5, 91-501, 161-2; 00-25-259, 1-1A-14, 31-1-141-15**							2b	
2.18.2.	Assemble Solderless Connectors **TR: TO 1-1A-14, 31-1-141-15**							2b	
2.19.	**COMPUTER APPLICATIONS**								
2.19.1.	**Troubleshooting Methods and Procedures** **TR: TO 31-1-141 Series**								
2.19.1.1.	Decision Making/Problem Solving							B	
2.19.1.2.	Troubleshoot PC Hardware Theory/Technique							2b	
2.19.2.	**PCs**								
2.19.2.1.	Theory **TR: TO 31-1-141 Series, Upgrading and Repairing PCs (17th Ed), Que Publishing, 2006, Scott Mueller**							B	
2.19.2.2.	Computer/Network Security **TR: AFI 33-202, Computer Security Basics, (2nd Ed), O'Reilly and Associates, 2006, Rick Lehtinen, G.T. Gangemi, Sr.**							B	
2.19.2.3.	Computer Communications and Networks **TR: TCP/IP Network Administration, O'Reilly and Associates, 1994, Craig Hunt**							B	
2.19.2.4.	Maintain/Install Computer Hardware Systems **TR: TO 31-1-141 Series, Scott Mueller, Upgrading and Repairing PCs (17th Ed), Que Publishing**							2b	
2.19.3.	**Use PC System Software**								
2.19.3.1.	Use an Operating System							2b	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.19.3.2.	Use a Word Processor							2b	
2.19.3.3.	Use a Spreadsheet							2b	
2.19.3.4.	Database							B	
2.19.3.5.	Use a Presentation Application							2b	
2.19.3.6.	Use an E-mail Program							2b	
2.19.3.7.	Use Electronic Forms Programs							2b	
2.19.3.8.	Use Internet Browsers							2b	
2.19.3.9.	Internet Document Markup							-	
2.19.3.10.	Install Software							-	
2.19.3.11.	Use input/output/storage devices							-	
2.19.4.	**Workstations**								
2.19.4.1.	Theory **TR: Unix in a Nutshell (4th Ed), O'Reilly and Associates, 2005, Arnold Robins; LINUX in a Nutshell, O'Reilly and Associates, 2009, Siever, Figgins, Love, Robbins**							B	
2.19.4.2	Perform System Commands to Operate and Maintain a Workstation **TR: Unix in a Nutshell (4th Ed), O'Reilly and Associates, 2005, Arnold Robins; Learning the vi editor (6th Ed), O'Reilly and Associates, 2005, Linda Lamb, Arnold Robins; LINUX in a Nutshell, O'Reilly and Associates, 2009, Siever, Figgins, Love, Robbins; The Linux Command Line, No Starch Press, Inc, 2012, William Shotts, Jr.; Red Hat Linux Bible, Wiley, 1999, Christopher Negus**							2b	
2.19.4.3.	System Administration **TR: Essential System Administration, O'Reilly and Associates, 2002, Aeleen Frisch**							B	
TECHNICAL KNOWLEDGE									
2.20.	**MATHEMATICS** **TR: Precalculus (6th Ed), 2004, Houghton Mifflin Company, Hostetler, Robert P., Larson, Ron**								
2.20.1.	Solve Basic Algebra Problems							2b	
2.20.2.	Solve Basic Trigonometry Problems							2b	
2.20.3.	Determine Statistical Values for Data Sets							2b	
2.20.4.	Determine Event Probabilities							2b	
2.21.	**APPLIED SCIENCES** **TR: College Physics (4th Ed), 1990, Prentice Hall, Wilson, Jerry D., and Anthony J. Buffa; Modern Physics (2nd Ed), 1996, Wiley, Krane, Kenneth S.**								
2.21.1.	Classical Mechanics							B	
2.21.2.	Wave Mechanics							B	
2.21.3.	Thermodynamics							B	
2.21.4.	Electricity and Magnetism							B	
2.21.5.	Light and Optics							B	
2.21.6.	Modern Physics							B	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
2.22.	**PHENOMENOLOGY**								
2.22.1.	Geophysical **TR: Earthquakes, W.H. Freeman and Company, 1988, Richter, Charles F.; Elementary Seismology, W.H. Freeman and Company, 1958, Bolt, Bruce; Modern Global Seismology, Academic Press, 1995, Lay, Thorne, Wallace, Terry C.**							B	
2.22.2.	RADAR/RF **TR: Introduction to Radar Systems, McGraw-Hill, 1980, Skolnik, Merrill; Radar Handbook (2nd Ed), McGraw-Hill, 1990, Skolnik, Merrill; Introduction to Airborne Radar, Hughes Aircraft Co, 1983, Stimson, G.W.; Principles of Modern Radar, Chapman & Hall, 1987, Eaves, Jerry, Reedy, Edward**							B	
2.22.3.	Electro-Optic **TR: Modern Optical Engineering (2nd Ed), McGraw-Hill, 1990, Smith, Warren; Lasers, Wiley Interscience, 1988, Milonni, Peter and Eberly, Joseph; The Infrared Handbook, Environmental Research Institute of Michigan, 1985, Wolfe and Zissis, Editors**							B	
2.22.4.	Nuclear							B	
2.22.5.	Chemistry							B	
2.23.	**MISSIONS AND ORGANIZATIONS** **TR: Titles Classified**								
2.23.1.	Community Structure							A	
2.23.2.	Roles and Responsibilities							A	
2.23.3.	General Principles							A	
2.23.4.	National and Theatre Assets							A	
2.23.5.	Operational Applications							A	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
6.1.	**SECURITY**								
6.1.1.	RI9S100 OPSEC **TR: Applicable Security Classification Guide**							B	
6.2.	**SEISMIC** **TR: TI 2-NDC-TNG1; DO OI 10-2; CENI 10-102; Eiby, G.A., Earthquakes. Van Nustrand Reeinhold, 1980.; Richter, Charles F. Elementary Seismology. W.H. Freeman and Company, 1958.; Bolt, Bruce, Nuclear Explosions and Earthquakes. W.H. Freeman and Company, 1976.; Lay, Thorne and Wallace. Modern Global Seismology. Academic Press, 1995.; Simon, Ruth B. Earthquake Interpretations. Woodward-Clyde consultants, 1981.; Dahlman, Olda and hans Israelson. Monitoring Underground Nuclear Explosions. Elseevier Scientific Pub Co, 1977.**								
6.2.1.	**Theory and Application**								
6.2.1.1.	Field Subsystem							B	
6.2.1.2.	HQ Subsystem							B	
6.2.1.3.	Array Characteristics							B	
6.2.2.	**Data Analysis**								
6.2.2.1.	Theory and Application							B	
6.2.2.2.	Distinguish Signal from Noise and Background							2b	
6.2.2.3.	Differentiate Between Natural and Man-made Events							2b	
6.2.2.4.	Perform Signal Measurement							2b	
6.2.2.5.	Recognize/Identify Later Phases							2b	
6.2.2.6.	Determine Signal Types							2b	
6.2.2.7.	Determine Signal Azimuth							2b	
6.2.2.8.	Associate SP and LP Data							2b	
6.2.2.9.	Form Events							2b	
6.2.2.10.	**Apply Event Refinement Techniques**								
6.2.2.10.1	Determine Event Validity							2b	
6.2.2.10.2.	Determine Event Location							2b	
6.2.2.10.3.	Determine Event Distance							2b	
6.2.2.10.4.	Determine Event Depth							2b	
6.2.2.10.5.	Determine Event Magnitude							2b	
6.2.2.11.	Use Analysis Tools							2b	
6.2.2.12.	Validate Automatic Signal Detection							2b	
6.2.3.	Use Application Software							2b	
6.2.4.	Workflow Familiarization							A	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
6.3.	**HYDROACOUSTIC** **TR: DO OI 10-1; Paker, Sybil P. Ed. The McGraw Hill Encyclopedia of Ocean and Atmospheric Sciences. McGraw Hill, Inc, 1977.**								
6.3.1.	Theory and Application							A	
6.3.2.	Field Subsystem							A	
6.3.3.	HQ Subsystem							A	
6.3.4.	Locations							A	
6.3.5.	**Data Analysis**								
6.3.5.1.	Theory and Application							A	
6.3.5.2.	Signal Types							A	
6.3.5.3.	Data Processing							A	

1. Tasks, Knowledge and Technical References		2. Core tasks	3. Certification For OJT					4. Proficiency Codes Used to Indicate Training Provided	
			A	**B**	**C**	**D**	**E**	**A** Initial	**B** Qualification
			Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials		
7.1.	**SECURITY**								
7.1.1.	RI9S100 OPSEC **TR: Applicable Security Classification Guide**							B	
7.2.	**WORKSTATION OPERATING SYSTEM FUNDAMENTALS** **TR: Unix in a Nutshell (4th Ed), O'Reilly and Associates, 2005, Arnold Robins; LINUX in a Nutshell, O'Reilly and Associates, 2009, Siever, Figgins, Love, Robbins; The Linux Command Line, No Starch Press, Inc, 2012, William Shotts, Jr**								
7.2.1.	Identify Basic Characteristics							B	
7.2.2.	File Structure and File System							B	
7.3.	**WORKSTATION OPERATING SYSTEM** **TR: Unix in a Nutshell (4th Ed), O'Reilly and Associates, 2005, Arnold Robins; Learning the vi editor (6th Ed), O'Reilly and Associates, 2005, Linda Lamb, Arnold Robins; LINUX in a Nutshell, O'Reilly and Associates, 2009, Siever, Figgins, Love, Robbins; The Linux Command Line, No Starch Press, Inc, 2012, William Shotts, Jr. ; Red Hat Linux Bible, Wiley, 1999, Christopher Negus**								
7.3.1.	Use Operating System Commands							2b	
7.3.2.	Use vi Text Editor							2b	
7.3.3.	Customize the Operating System							2b	
7.4.	**SYSTEM ADMINISTRATION** **TR: Essential System Administration, O'Reilly and Associates, 2002, Aeleen Frisch; LINUX in a Nutshell, O'Reilly and Associates, 2009, Siever, Figgins, Love, Robbins; The Linux Command Line, No Starch Press, Inc, 2012, William Shotts, Jr.; Red Hat Linux Bible, Wiley, 1999, Christopher Negus; Red Hat Linux Networking and System Administration, 3rd edition, Wiley, 2005, Terry Collings and Kurt Wall**								
7.4.1.	Perform Startup/Shutdown Procedures							2b	
7.4.2	Maintain System Configuration							2b	
7.4.3.	Manage System Processes							2b	
7.4.4.	Manage System Devices							2b	
7.4.5.	Use Backup and Restore Utilities							2b	
7.4.6.	Maintain System Security							2b	
7.4.7.	Perform System Diagnostics							2b	
7.5.	**MAINTAIN WORKSTATION NETWORK** **TR: TCP/IP Network Administration (3rd Ed), O'Reilly and Associates, 2002, Craig Hunt; IP Routing, O'Reilly and Associates, 2002, Ravi Malhotra; Ethernet: The Definitive Guide, O'Reilly and Associates, 2002, Charles Spurgeon; Cisco Systems Inc. Manuals; Red Hat Linux Networking and System Administration, 3rd edition, Wiley, 2005, Terry Collings and Kurt Wall; Linux Network Administrator's Guide, 3rd edition, O'Reilly Media, Inc, 2005, Bautts, Dawson, Purdy**							2b	
7.6.	**WRITE SHELL SCRIPT** **TR: Linux Shell Scripting Cookbook, 2nd edition, Packt Publishing, 2013, Shantanu Tushar; Linux Command Line and Shell Scripting Bible, Wiley Publishing, 2008, Richard Blum**							2b	
7.7.	**INSTALL OPERATING SYSTEM** **TR: Essential System Administration, O'Reilly and Associates, 2002, Frisch, Aeleen.**							2b	