PRESENTATIONS/REPORTS: Circuit Boards — ELT2010–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ identifies appropriate construction methods to fabricate a circuit board
- ☐ uses a PC board to assemble a project using proper fabrication techniques

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>*Written*</u>*: spelling, punctuation, grammar, format (formal/informal)*
  <u>*Oral:*</u> *voice projection, body language appearance*
  <u>*Audio-visual:*</u> *techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Computer Systems — ELT2070–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ disassembles/assembles a working computer and performs basic troubleshooting techniques
- ☐ identifies and explains computer system components
- ☐ describes the internal architecture of a computer system

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>*Written*</u>*: spelling, punctuation, grammar, format (formal/informal)*
  <u>*Oral:*</u> *voice projection, body language appearance*
  <u>*Audio-visual:*</u> *techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Process Controls — ELT2080–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ identifies discrete components used in process control
- ☐ constructs a process control device using analog and sensor components

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>*Written*</u>*: spelling, punctuation, grammar, format (formal/informal)*
  <u>*Oral:*</u> *voice projection, body language appearance*
  <u>*Audio-visual:*</u> *techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Analog Communication Systems — ELT2090–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ identifies and explains the characteristics of analog communications systems including:
  - telephones
  - audio amplifiers
  - intercom systems
  - light and sound boards
  - automotive sensors

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>*Written*</u>*: spelling, punctuation, grammar, format (formal/informal)*
  <u>*Oral:*</u> *voice projection, body language appearance*
  <u>*Audio-visual:*</u> *techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Electromagnetic Communication Systems — ELT2100–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ constructs and tests electromagnetic communication systems such as:
  - AM, FM radio
  - short-wave radio
  - satellite communication
  - cellular telephone
  - CATV
  - two-way radio

Content (continued)

- ☐ explain wireless communication in terms of:
  - amplitude modulation
  - frequency modulation
  - frequency spectrum
  - sidebands

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>Written</u>: spelling, punctuation, grammar, format (formal/informal)
  <u>Oral:</u> voice projection, body language appearance
  <u>Audio-visual:</u> techniques, tools, clarity
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Security Systems — ELT2110–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ identifies and describes elements of a security system such as:
  - control panel
  - detection device
  - notification device
- ☐ identifies the appropriate switches, detectors beams and alarms used in a security system

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>*Written*</u>*: spelling, punctuation, grammar, format (formal/informal)*
  <u>*Oral:*</u> *voice projection, body language appearance*
  <u>*Audio-visual:*</u> *techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Lasers and Fibre Optics — ELT2120–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ list and describes the use of six types of lasers, such as:
  - helium
  - neon
  - krypton
  - cadmium
  - argon
  - carbon dioxide

Content (continued)

- ☐ identifies and describes the hazards associated with I, II, III and IV classes of lasers
- ☐ explains the principles of laser fibre optics, infrared and hologram light wave technology

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., *<u>Written</u>: spelling, punctuation, grammar, format (formal/informal)*
  <u>Oral:</u> voice projection, body language appearance
  <u>Audio-visual:</u> techniques, tools, clarity
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Robotic Sensor Controls ELT2140–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ identifies sensor control systems that use:
  - photoelectric
  - sound
  - tactile
  - thermal control device
- ☐ explains how sensor control systems are used to control a drive circuit
- ☐ describes the operation of sensory control devices

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>Written</u>: spelling, punctuation, grammar, format (formal/informal)
  <u>Oral:</u> voice projection, body language appearance
  <u>Audio-visual:</u> techniques, tools, clarity
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

PRESENTATIONS/REPORTS: Programmable Controls — ELT2150–1

TASK CHECKLIST

The student:

Preparation and Planning

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant in-school/community resources
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and uses proper technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

Content

- ☐ explains basic input and output hardware and programming for programmable logic control systems such as:
  - timing relay control of a lamp or solenoid
  - two-light source relay
  - single-location panic stop
  - one- and two-location start/stop of a single-phase motor
  - single-location forward/reverse/stop of a single-phase motor
  - single-location start/stop/jog of a single-phase motor

Presenting/Reporting

- ☐ demonstrates effective use of one or more communication media:
  e.g., <u>Written</u>*: spelling, punctuation, grammar, format (formal/informal)*
  <u>Oral:</u> *voice projection, body language appearance*
  <u>Audio-visual:</u> *techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list of relevant information sources

REFLECTIONS/COMMENTS:

Standard

Performance rating of 1 for each applicable task

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

TASKS	OBSERVED RATING				
Preparation and Planning	4	3	2	1	N/A
Content	4	3	2	1	N/A
Presenting/ Reporting	4	3	2	1	N/A

Note: The **new** 2004 Electro-Technologies Intermediate Assessment Tools have been placed at the end of Section G. to avoid repagination. Therefore, the **new** 2004 Electro-Technologies Intermediate Assessment Tools continue on pages G.47–G.51.

ASSESSMENT CHECKLIST: Network Structures **ELT2310–1**

Student Name: _____ Teacher: _____

Course/Project(s): _____ Date: _____

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	2
Teamwork	4 3 2 1 0	2
Basic Concepts	4 3 2 1 0	2
Application and Utilization	4 3 2 1 0	2

STANDARD IS 2 IN EACH APPLICABLE CRITERION UNLESS OTHERWISE STATED

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

CRITERIA

The student:

Management
- ☐ interprets and carries out instructions accurately
- ☐ plans and uses time effectively in a logical sequence
- ☐ complies with established network use policies and practices
- ☐ uses personal initiative to formulate questions and find answers
- ☐ gathers and responds to feedback regarding approach to task and project status
- ☐ attempts to solve problems prior to requesting help
- ☐ demonstrates ethical use of information technologies and sources

Teamwork
- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication skills
- ☐ exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing

Basic Concepts
- ☐ describes a computer network and solutions provided by computer networking
- ☐ compares the structure and function of:
  - peer-to-peer and server-based networks
  - LANs and WANs

Basic Concepts (continued)
- ☐ explains concepts and technical terms associated with analog and digital signaling
- ☐ illustrates the structure of data packets and frames
- ☐ identifies problems and solutions associated with data collision in a shared media environment
- ☐ describes and compares bus, star, ring, mesh, wireless and hybrid topologies
- ☐ describes and compares main features of Ethernet, token ring, FDDI, LocalTalk and wireless networks with respect to physical topology, methodology and access strategy, media type and speed
- ☐ identifies technical and professional career paths in computer networking and related employment opportunities and training requirements

Application and Utilization
- ☐ creates a timeline of milestones in the history of computer networking
- ☐ creates schematic diagrams for the physical layout of:
  - LANs, MANs and WANs
  - bus, star, ring, mesh, wireless and hybrid topologies
- ☐ converts binary and hexadecimal numbers to decimal numbers
- ☐ selects an appropriate topology and network architecture, and designs a network to address user needs, given a particular set of network requirements
- ☐ uses appropriate technical terms and acronyms

COMMENTS

ASSESSMENT CHECKLIST: Network Media & Devices **ELT2320–1**

Student Name: _____ Teacher: _____

Course/Project(s): _____ Date: _____

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	2
Teamwork	4 3 2 1 0	2
Basic Concepts	4 3 2 1 0	2
Application and Utilization	4 3 2 1 0	2

STANDARD IS 2 IN EACH APPLICABLE CRITERION UNLESS OTHERWISE STATED

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

CRITERIA

The student:

Management
- ☐ interprets and carries out instructions accurately
- ☐ plans and uses time effectively in a logical sequence
- ☐ complies with established network use policies and practices
- ☐ uses personal initiative to formulate questions and find answers
- ☐ gathers and responds to feedback regarding approach to task and project status
- ☐ attempts to solve problems prior to requesting help
- ☐ demonstrates ethical use of information technologies and sources

Teamwork
- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication skills
- ☐ exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing

Basic Concepts
- ☐ identifies the characteristics and uses of coaxial, twisted pair and fibre-optic cable
- ☐ identifies the characteristics and uses of common media connectors
- ☐ defines IEEE standards for Ethernet cabling
- ☐ defines EIA/TIA categories for UTP cable

Basic Concepts (continued)
- ☐ describes the media and function of network backbones and segments
- ☐ describes the features and functionality of
  - basic hardware components (i.e., NIC, hub, repeater, switch, bridge, router, gateway, wireless access point, modem)
  - power fault-tolerance equipment (i.e., surge suppressor, power conditioner, UPS)
- ☐ identifies basic cabling tools and test equipment
- ☐ identifies technical and professional career paths in network infrastructure design and installation, and related employment opportunities and training requirements

Application and Utilization
- ☐ given a practical network scenario:
  - chooses an appropriate cable type and connector to add a new client
  - selects an appropriate hardware component to use or replace an existing device
- ☐ demonstrates the correct sequence of steps to crimp and test Ethernet cable
- ☐ demonstrates compliant installation of jacks, outlets, cable and structured cable runs, patch panels and patch cords
- ☐ demonstrates appropriate use of test equipment in checking for continuity, proper grounding and correct cable termination
- ☐ creates a proposal for a new or refit cabling project
- ☐ designs, builds and troubleshoots a small Ethernet network
- ☐ uses appropriate technical terms and acronyms

COMMENTS

ASSESSMENT CHECKLIST: OSI Model (Open System Interconnection) **ELT2330–1**

Student Name: _____ Teacher: _____

Course/Project(s): _____ Date: _____

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	2
Teamwork	4 3 2 1 0	2
Basic Concepts	4 3 2 1 0	2
Application and Utilization	4 3 2 1 0	2

STANDARD IS 2 IN EACH APPLICABLE CRITERION UNLESS OTHERWISE STATED

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

CRITERIA

The student:

Management
- ☐ interprets and carries out instructions accurately
- ☐ plans and uses time effectively in a logical sequence
- ☐ complies with established network use policies and practices
- ☐ uses personal initiative to formulate questions and find answers
- ☐ gathers and responds to feedback regarding approach to task and project status
- ☐ attempts to solve problems prior to requesting help
- ☐ demonstrates ethical use of information technologies and sources

Teamwork
- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication skills
- ☐ exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing

Basic Concepts
- ☐ explains the purpose of the OSI model:
  - identifies the seven layers and their functions
  - matches components/devices with their layers
  - explains data transfer between layers

Basic Concepts (continued)
- ☐ identifies and describes physical layer components and design structure
- ☐ identifies and describes the function of protocols, hardware components and physical addressing associated with the data link layer
- ☐ identifies and describes the function of protocols, hardware components and logical addressing associated with the network layer
- ☐ explains the function of transport layer protocols in flow control, error handling and name resolution
- ☐ explains the function of protocols and services associated with the session, presentation and application layers
- ☐ identifies technical and professional career opportunities within the context of the OSI model

Application and Utilization
- ☐ analyzes network tasks with respect to the OSI model
- ☐ demonstrates ability to:
  - select appropriate cable, connectors and adapters
  - install and configure a network adapter
  - terminate an Ethernet network
  - test for connectivity
- ☐ given specific user requirements:
  - designs physical layer topology and components for a small Ethernet network
  - creates a plan for cabling based on Ethernet standards
- ☐ uses appropriate technical terms and acronyms

COMMENTS

ASSESSMENT CHECKLIST: Network Protocols **ELT2340–1**

Student Name: _____ Teacher: _____

Course/Project(s): _____ Date: _____

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	2
Teamwork	4 3 2 1 0	2
Basic Concepts	4 3 2 1 0	2
Application and Utilization	4 3 2 1 0	2

STANDARD IS 2 IN EACH APPLICABLE CRITERION UNLESS OTHERWISE STATED

Rating Scale

The student:

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

CRITERIA

The student:

Management
- ☐ interprets and carries out instructions accurately
- ☐ plans and uses time effectively in a logical sequence
- ☐ complies with established network use policies and practices
- ☐ uses personal initiative to formulate questions and find answers
- ☐ gathers and responds to feedback regarding approach to task and project status
- ☐ attempts to solve problems prior to requesting help
- ☐ demonstrates ethical use of information technologies and sources

Teamwork
- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication skills
- ☐ exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing

Basic Concepts
- ☐ describes and compares standard networking protocol suites (i.e., TCP/IP, IPX/SPX, NetBEUI, AppleTalk) in terms of:
  - routing
  - addressing schemes
  - interoperability
  - advantages and limitations

Basic Concepts (continued)
- ☐ gives reasons for the extensive use of the TCP/IP suite
- ☐ identifies the basic function of protocols that operate within the TCP/IP suite (e.g., TCP, UDP, IP, ARP, FTP, SMTP, POP, IMAP, ICMP, RIP, OSPF, HTTP)
- ☐ explains IP logical addressing:
  - conventions for IP addressing
  - characteristics of Class A, B and C addresses
  - classful versus classless approaches to subnetting
  - static versus dynamic approaches to IP addressing
- ☐ explains the function of:
  - address resolution
  - TCP/UDP port numbers

Application and Utilization
- ☐ analyzes communication tasks by examining their relationship to the OSI model
- ☐ demonstrates processes for:
  - converting between binary and decimal notation
  - subnetting Class A, B and C addresses
  - determining the subnet mask for a subnetwork
- ☐ diagrams and interprets an ARP cache
- ☐ plans and constructs a small peer-to-peer or server-based network:
  - applies criteria for planning the network and selecting a network protocol
  - installs and configures a workstation for the TCP/IP protocol
  - uses appropriate TCP/IP utilities (e.g., SNMP, PING, IPCONFIG, TRACERT, NETSTAT) to validate, troubleshoot and manage a network connection
- ☐ uses appropriate technical terms and acronyms

COMMENTS

ASSESSMENT CHECKLIST: Local Area Networks **ELT2350–1**

Student Name: _____ Teacher: _____

Course/Project(s): _____ Date: _____

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Basic Concepts
- ☐ identifies the structure and purpose of a LAN
- ☐ describes and compares ARCNet, LocalTalk, Ethernet, Token Ring, FDDI, ATM and WLAN technologies with respect to:
  - topology
  - protocols
  - media

Basic Concepts (continued)
- ☐ identifies the physical characteristics and user benefits associated with two or more emerging LAN technologies
- ☐ describes characteristics and specifications of an Ethernet LAN:
  - topology
  - cabling and hardware devices
  - application of CSMA/CD
  - data transmission issues
- ☐ explains strategies for improving LAN performance
  - segmentation and the use of collision domains
  - applications of bridge and switch technology
- ☐ describes the structure, function and benefits of a VLAN
- ☐ outlines a general strategy for network design

Application and Utilization
- ☐ applies the 5-4-3 rule for segmentation, and designs a small Ethernet collision domain network
- ☐ designs and implements a small Ethernet LAN:
  - selects appropriate topology and architecture
  - recommends a hardware and connectivity solution
  - implements the solution by connecting cabling and hardware devices
- ☐ analyzes and troubleshoots a LAN implementation problem related to:
  - topology or architecture
  - cabling or network infrastructure
  - workstation or other client connections
- ☐ uses appropriate technical terms and acronyms

COMMENTS