



MODULE NAME:	MODULE CODE:
OPERATING SYSTEMS	NWEG5111
OPERATING SYSTEMS	NWEG5111p

**ASSESSMENT TYPE: ASSIGNMENT 1 (PAPER ONLY)**

**TOTAL MARK ALLOCATION: 100 MARKS**

**TOTAL HOURS: 10 HOURS**

*By submitting this assignment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity Policy (IIE023), as well as any rules and regulations published in the student portal.*

**INSTRUCTIONS:**

- No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks. No more than 10% of the assignment may consist of direct quotes.*
- Make a copy of your assignment before handing it in.*
- Assignments must be typed unless otherwise specified.*
- All work must be adequately and correctly referenced.*
- Begin each section on a new page.*
- Follow all instructions on the assignment cover sheet.*
- This is an individual assignment – For group assignments, the group may not exceed 4 members and all will be awarded the same mark.*

Questions		(Marks: 100)
<b>Answer all of the questions below.</b>		
<b>Q.1</b>	What is the difference between Coaxial cable and Fiber-optic cable?	(10)
<b>Q.2</b>	What are the most common types of software license agreements?	(10)
<b>Q.3</b>	Show the sequence of start, data, and stop bits that are generated during asynchronous transmission of the character string "LUNCH."	(10)
<b>Q.4</b>	List at least <b>two (2)</b> examples each of simplex, half-duplex, and full-duplex connections <b>NOT</b> mentioned in this module prescribed textbook.	(10)
<b>Q.5</b>	Using a laptop computer with a wireless connection into the company's local area network, you download a Web page from the Internet. List all the different network connections involved in this operation.	(10)
<b>Q.6</b>	What is the characteristics, advantages, and disadvantages of the following?  i. Circuit-switched Network ii. Datagram Packet-Switched Network iii. Virtual Packet-Switched Network	(20)
<b>Q.7</b>	Using a computer networks to perform an application, many pieces come together to assist in the operation.  A network architecture or communication model places the appropriate network pieces in layers.  1. Draw and List the layers of the OSI model. 2. List the layers of the TCP/IP Protocol and describe the duties of each layer. 3. List the OSI layer that performs each of the following functions: a. Data compression b. Multiplexing c. Routing	(30)

	<ul style="list-style-type: none"><li>d. Definition of a signal's electrical characteristics</li><li>e. E-mail</li><li>f. Error detection</li><li>g. End-to-end flow control</li></ul> <p>4. For each of the functions, list the TCP/IP protocol suite layer that performs that function.</p>	
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