



SCOTT CHRISTIAN UNIVERSITY

SCHOOL OF PROFESSIONAL STUDIES

BACHELOR OF INFORMATION COMMUNICATION TECHNOLOGY

UNIT CODE/NAME: BCT 325: NETWORK SYSTEMS ADMINISTRATION

January – April 2021/2022 End Semester Exam

- Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

QUESTION ONE

- a) Define the following terms in relation to network administration (8 Marks)
 - i. Network Analysis
 - ii. Boot loader
 - iii. Network Attached Storage
 - iv. Virtual servers
- b) Explain any three benefits of efficient data storage (6 Marks)
- c) State any six roles of network administrator (6 Marks)
- d) State the five parts of a network analyzer (5 Marks)
- e) What are the advantages and disadvantages of client server computing? (5 Marks)

QUESTION TWO

- a) Define opportunistic encryption (1 Mark)
- b) Explain any 3 encryption methods that a network administrator can use? (6 Marks)
- c) Name four basic network topologies. State the advantages and disadvantages of each (8 Marks)

QUESTION THREE

- a. Describe the following network management tools (4 Marks)
 - i. Event viewer
 - ii. Performance monitor
- b. Describe any three basic principles that guide system administrators (6 Marks)

c. Fill the table below

(5 Marks)

OSI reference layer No	OSI Layer	TCP/IP Layer	TCP/IP Protocol Example
1			Ethernet, Token Ring, etc
3	Network		
5,6,7		Application	
	Data link	Data link	
	Transport		TCP, UDP

QUESTION FOUR

- a) Poor username and password management is a typical problem in most enterprise networks. While sophisticated, centralized authentication systems (discussed later) can help reduce problems, there are basic guidelines that if followed can help tremendously. What are the rules that govern the use of usernames and passwords in enterprise networks?

(4Marks)

- b) A Well thought out security policies can significantly increase the security of a network. While policies can be both complex and cumbersome or basic and straight forward, it is often the simple aspects that prove most useful. Consider the combination of a centrally managed anti-virus update system and a host scanner to detect new or out of date systems. While this system would entail setup, central administration and software deployment capabilities, these are all generally available with today's Operating Systems. In general, policies and ideally automatic enforcement tools help reduce the obvious holes in system security so that one can concentrate on the more complex issues. Assume that you are the head of the network administration department of Scott University. The university wishes to come up with a network security policy. What items would you include in such a network security policy?

(6 Marks)

- c) What are the five important considerations when designing a network? (5 Marks)

QUESTION FIVE

- a) Describe the following terms as relates to system administration

(2Marks)

- i. Client
 - ii. Server
- b) With the help of a diagram, Explain Client Server Computing Architecture (6 Marks)
- c) What are the characteristics of client server architecture (4Marks)
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- d) State 3 challenges of system administration (3 Marks)