



FINAL
Examination Paper

(COVER PAGE)

Session : August 2012

Programme : Diploma In Information And Communication Technology (DICTN)

Course : CSC2102
ICT1105 : Fundamentals Of Networking

Date of Examination : December 12, 2012

Time : 2:00pm – 4:00pm Reading Time: Nil

Duration : 2 Hours

Special Instructions :

Answer any FOUR (4) questions.

Materials permitted : Nil

Materials provided : Nil

Examiner (s) : Mr. Victor Raj Kolintiar, Koh Chong Lin.

Moderator : Associate Professor Dr. Abdullah Gani

This paper consists of 3 printed pages, including the cover page.

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DIPLOMA IN COMPUTING & INFORMATION TECHNOLOGY PROGRAMME
(DICTN)

ICT1105 : FUNDAMENTALS OF NETWORKING
FINAL EXAMINATION: AUGUST 2012 SESSION

Instructions: This paper consists of **SIX (6)** questions. Answer any **FOUR (4)** questions in the answer booklet provided. All questions carry equal marks.

Question 1

- (a) What is a peer to peer network? (2 marks)
- (b) List **SIX (6)** functions of a **Network Operating System (NOS)**. (6 marks)
- (c) What is a host, node and connectivity device? (6 marks)
- (d) What is Network Management? List **NINE (9)** functions of network Management. (11 marks)

Question 2

- (a) List **TWO (2)** advantages and **TWO (2)** disadvantages of peer to peer networking. (4 marks)
- (b) Explain the following:
 - (i) Protocol (2 marks)
 - (ii) Data packets (2 marks)
 - (iii) Addressing (2 marks)
 - (iv) Transmission media (2 marks)
- (c) List **SIX (6)** additional tasks performed of a mail server besides sending and delivering emails. (6 marks)
- (d) List the **SEVEN (7)** layers of ISO OSI model and explain each of the layer's function(s). (7 marks)

Question 3

- (a) Differentiate between Segments, Packets & Frames? (9 marks)
- (b) Explain **THREE (3)** ways a Physical layers transmit signals. (6 marks)
- (c) What is a channel? How do we share bandwidth in a cable? (4 marks)
- (d) List and explain **THREE (3)** types of multiplexing. (6 marks)

Question 4

- (a) List **FIVE (5)** reasons why **Transmission Control Protocol/Internet Protocol (TCP/IP)** gains popularity protocol in communications? (5 marks)
- (b) Explain why **Dynamic Host Configuration Protocol (DHCP)** is better than **BOOTP** in automatically assigning IPs? (5 marks)
- (c) Give **THREE (3)** reasons why **DHCP** is popularly use? (3 marks)
- (d) Explain network backbone. What are the **FOUR (4)** types of network backbones? (12 marks)

Question 5

- (a) Define **Carrier Sense Multiple Access with Collision Detection (CSMA/CD)** and briefly explain how it works? (10 marks)
- (b) Explain network backbone. What are the **FOUR (4)** types of network backbones? (10 marks)
- (c) Define what is a Switching technique? List **THREE (3)** types of switching techniques. (5 marks)

Question 6

- (a) Define the following: (8 marks)
 - (i) Network Interface Card
 - (ii) Network repeater
 - (iii) Bridge
 - (iv) Switch
- (b) Give **THREE (3)** similarities and **THREE (3)** differences between **WAN** and **LAN**. (6 marks)
- (c) What is a Tier WAN and what is the advantage of it? (4 marks)
- (d) What is **Public Switched Telephone Network (PSTN)** and how does it work? (7 marks)

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