FINAL
Examination Paper

(COVER PAGE)

Session : April 2014

Programme : Diploma In Information And Communication Technology (DICTN)

Course : ICT1105 : Fundamentals Of Networking

Date of Examination : July 24, 2014

Time : 8:00am – 10:00am    Reading Time: Nil

Duration : 2 Hours

Special Instructions : 

Answer any FOUR (4) questions.

Materials permitted : Nil

Materials provided : Nil

Examiner (s) : Mr. Koh Chong Lin, Samuel Kan Wen Hung

Moderator : Associate Professor Dr. Abdullah Gani

This paper consists of 5 printed pages, including the cover page.
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DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY (DICTN)
ICT1105 / CSC2102 : FUNDAMENTALS OF NETWORKING
FINAL EXAMINATION: APRIL 2014 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) Name the connector shown in the diagram below. (2 marks)

(b) Name the cable connected to the connector. (2 marks)

(c) List the wiring colour codes from position 1 to position 8 based on TIA/EIA-568-A or T-568B Wiring Standard. (8 marks)

(d) Explain the function of a Router and how the router is connected? (4 marks)

(e) List SIX (6) functions of Network Operating System (NOS) in client/server networks. (9 marks)

Question 2

(a) Discuss the THREE (3) categories of disaster recovery contingencies. (9 marks)

(b) Identify and explain the THREE (3) different backup methods. (6 marks)

(c) Describe the NINE (9) steps for troubleshooting network problems with the CORRECT SEQUENCE. (10 marks)
Question 3

(a) Identify and explain THREE (3) main functions of presentation layer of OSI model. (9 marks)

(b) Name the cable below. (2 marks)

(c) Label the following diagram 1 to 4. (4 marks)

(d) Name ONE (1) connector commonly use with this cable. (2 marks)

(e) List THREE (3) protocols typically used for communication between networks. Out of the THREE (3) protocols listed, which protocol is near universally used? (8 marks)

Question 4

(a) List and explain THREE (3) types of multiplexing. (9 marks)

(b) Explain the terms below with appropriate example and method to overcome it.
   (i) Attenuation
   (ii) Latency
   (iii) Noise (6 marks)

(c) Explain FOUR (4) additional characteristic of virus that makes them harder to detect and eliminate. (4 marks)

(d) What is a repeater? In which Layer of ISO OSI model a repeater belongs to? (6 marks)
Question 5

(a) Referring to the diagram below:

(i) What is the name of this backbone? (2 marks)
(ii) Explain TWO (2) reasons why this backbone is used? (2 marks)
(iii) Name TWO (2) types of backbones besides the above. (2 marks)

(b) Write a brief notes on the following protocols. (8 marks)
   (i) UDP
   (ii) IPv6
   (iii) FTP
   (iv) ARP

(c) (i) Define the network topology. Name any FOUR (4) basic network topologies found in Local Area Network (LAN). (4 marks)
    (ii) For each type of network topology identified in (i), discuss the implication of a single cable fault. (4 marks)

(d) Explain TWO (2) important uses of subnet mask. Provide the value of subnet mask for the following network. (3 marks)

   IP Address: 172.20.0.1
   Subnet mark: ________________
Question 6

(a) Referring to the diagram below:

i) Name the Device X  
ii) What is the subnet mask for IP (A) and IP (B)?  
iii) In which classes of IP address does IP (A) and IP (B) belongs to? Justify your answer.

(b) Identify and briefly explain FOUR (4) methods of remote connectivity.

(c) Name and explain THREE (3) types of WAN Topologies.

(d) Briefly explain the following TCP/IP utilities.
   (i) ping  
   (ii) ipconfig  
   (iii) Tracert

-THE END-
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