



**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.

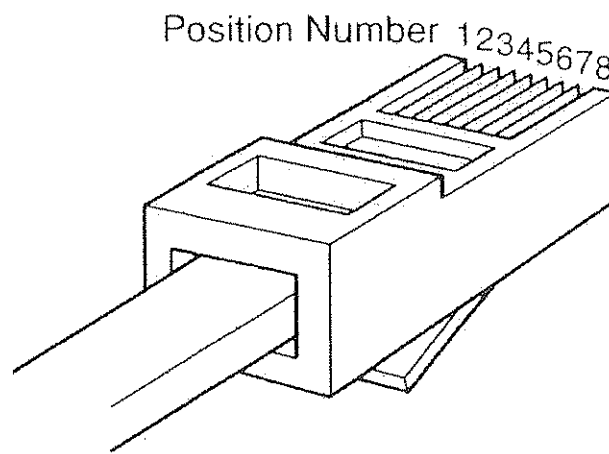
## INTI INTERNATIONAL COLLEGE SUBANG

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)



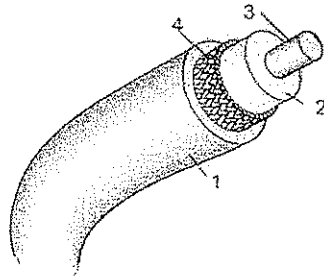
- (b) Name the cable connected to the connector. (2 marks)
- (c) List the wiring colour codes from position 1 to position 8 based on TIA/EIA-568-A or T-568B Wiring Standard. (8 marks)
- (d) Explain the function of a Router and how the router is connected? (4 marks)
- (e) List **SIX (6)** functions of 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)



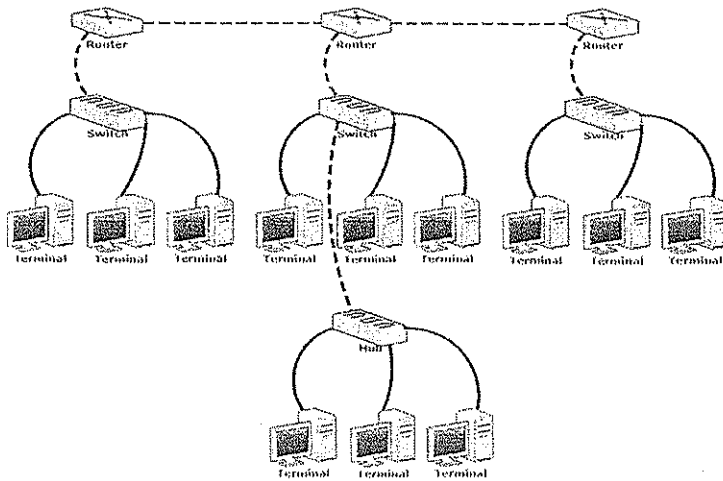
- (e) List **THREE (3)** protocols typically used for communication between networks. Out of the **THREE (3)** protocols listed, which protocol is near universally used? (8 marks)

**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. (6 marks)
- (i) Attenuation
  - (ii) Latency
  - (iii) Noise
- (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 (1 mark)
- ii) What is the subnet mask for IP (A) and IP (B)? (2 marks)
- iii) In which classes of IP address does IP (A) and IP (B) belongs to? Justify your answer. (5 marks)
- (b) Identify and briefly explain **FOUR (4)** methods of remote connectivity. (8 marks)
- (c) Name and explain **THREE (3)** types of WAN Topologies. (6 marks)
- (d) Briefly explain the following TCP/IP utilities. (3 marks)
- (i) ping
  - (ii) ipconfig
  - (iii) Tracert

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