FINAL
Examination Paper

(COVER PAGE)

Session : August 2014

Programme : Diploma In Information And Communication Technology (DICTN/DICTI)

Course : ICT1105 / CSC2102 : Fundamentals Of Networking

Date of Examination : December 9, 2014

Time : 11:00am – 1:00pm  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, Samuel Kan Wen Hung.

Moderator : Ms. Noor Hasrini

This paper consists of 3 printed pages, including the cover page.
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DIPLOMA IN INFORMATION AND COMMUNICATIONS TECHNOLOGY (DICTN)
ICT 1105: FUNDAMENTALS OF NETWORKING
FINAL EXAMINATION: AUGUST 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) Describe the following types of network:
   (i) LAN
   (ii) MAN
   (iii) WAN

(b) Briefly explain the functions of any FIVE (5) layers in the OSI Model.

(c) Define Network Interface Card (NIC). List FIVE (5) factors a user must consider before installing a Network Interface Card.

Question 2

(a) Identify and discuss the FOUR (4) fundamental properties of analog signal.

(b) Describe any THREE (3) basic network topologies. For each topologies explained, draw the relevant diagrams.

Question 3

(a) Differentiate TCP and UDP.

(b) Define the following internetworking devices:
   (i) Repeaters
   (ii) Bridges
   (iii) Routers

(c) Identify and briefly explain any THREE (3) types of backbone network, with the aid of relevant diagrams.
Question 4

(a) Explain THREE (3) types of wireless transmission. (9 marks)

(b) Briefly explain the following:
   (i) Fault tolerance and
   (ii) Load balancing
   (iii) Server mirroring (6 marks)

(c) List the NINE (9) steps for troubleshooting network problems.
   (Hints: Correct orders are very important). (10 marks)

Question 5

(a) Differentiate simplex, half-duplex and full-duplex data transmissions. (6 marks)

(b) Guided media impairments include noise, attenuation and delay distortion.
    Define noise and discuss the FOUR (4) categories of noise. (10 marks)

(c) Explain THREE (3) networking standard organizations. (9 marks)

Question 6

(a) Discuss THREE (3) different backup methods. (9 marks)

(b) Identify and explain FOUR (4) network troubleshooting tools. (16 marks)

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