INTI
International College Subang
LAUREATE INTERNATIONAL UNIVERSITIES'

**FINAL**
Examination Paper

(COVER PAGE)

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| Session | : | **April 2013** |
| Programme | : | Diploma In Information And Communication Technology (DICTN/DICTI) |
| Course | : | **ICT2103 / CSC2103: Network Design, Testing And Implementation** |
| Date of Examination | : | July 30, 2013 |
| Time | : | 8:00pm – 10:00pm Reading Time: Nil |
| Duration | : | 2 Hours |
| Special Instructions | : | |

Answer any **FOUR (4)** questions.

Materials permitted : Standard Calculator

Materials provided : Nil

Examiner (s) : **Mr. Victor Raj Kolintiar,** Mugunthan.

Moderator : Associate Professor Dr. Abdullah Gani

This paper consists of 4 printed pages, including the cover page.

INTI INTERNATIONAL COLLEGE SUBANG

DIPLOMA IN INFORMATION AND COMMUNICATIONS TECHNOLOGY
(DICTN/DICTI)
ICT2103/CSC2103 : NETWORK DESIGN, TESTING AND IMPLEMENTATION
FINAL EXAMINATION : APRIL 2013 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) With an aid of a diagram, discuss the CISCO PDIOO network lifecycle.

(14 marks)

(b) Define the term "availability". A company should not fail more than every 5000 hours or 208.333 days, the failure should be fixed within 1 hour. State the formula by identifying relevant information before calculating the availability of a given network.

(6 marks)

(c) A packet switch has 4 users, each offering packets at a rate of 13 packets per second. The average length of packets is 1024-bits. The packet needs to transmit data over a 64-Kbps WAN circuit. Calculate the queue length (average number of packets in the queue).

(5 marks)

**Question 2**

(a) Describe **FOUR (4)** issues to be considered for a new wireless installation.

(8 marks)

(b) Differentiate centralized cabling scheme from distributed cabling scheme with aid of diagrams.

(10 marks)

(c) Name any **SEVEN (7)** network assets.

(7 marks)

Question 3

(a) Explain **FIVE (5)** service categories defined by Asynchronous Transfer Mode (ATM) Forum.

(10 marks)

(b) Explain the **FOUR (4)** components of a security policy.

(10 marks)

(c) List **FIVE (5)** guidelines for assigning network layer addresses.

(5 marks)

**Question 4**

(a) Explain Flat and Hierarchical network topology.

(10 marks)

(b) List any **TEN (10)** required contents for writing a network design documentation.

(10 marks)

(c) List **FIVE (5)** contents that are usually categorized in the Logical design.

(5 marks)

**Question 5**

(a) Design a network for a company that has 30 workstations and 2 servers with a leased line Internet connection. The design should include the network map, topology, transmission medium and connecting devices.

(10 marks)

(b) Compare bridges, switches and routers. State layer of OSI model they operate. State **ONE (1)** advantage of using a router.

(10 marks)

(c) Define the following IEEE 802.3 Ethernet technologies :

(i) 10Base5

(ii) 10BaseF

(iii) 100BaseT4

(iv) 1000BaseSX

(v) 10GBaseE

(5 marks)

**Question 6**

(a) Identify and explain **FIVE (5)** popular types of traffic flow.

(15 marks)

(b) Compare copper and fiber optic cabling, and state **FOUR (4)** advantages of using fiber optics cabling.

(10 marks)

**-THE END-**

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