

SOUTH EASTERN UNIVERSITY OF SRI LANKA

FINAL EXAMINATION IN BACHELOR OF BUSINESS ADMINISTRATION /

COMMERCE 2010/2011

SEMESTER-1, JULY / AUGUST-2012

MIS 4110 INFORMATION AND COMMUNICATION NETWORK

Answer all questions

Time: 3 Hours

Question 1.

- i. Explain how communication network contributes to the global interactions with example. (05Marks)
- ii. Discuss the various guided and unguided transmission media for a communication network. (05 Marks)
- iii. Explain the reasons for signal corruption during the transmission and illustrate the signal corruption with the help of a diagram. (05 Marks)
- iv. Explain the layers in TCP/IP layered architecture model and give the names of relevant protocols at each layer. (05 Marks)

(Total Marks 20)

Questions 2

- i. Explain what you mean by client server computing architecture and list the functions of server in this architecture. (04 Marks)
- ii. "Routers are more intelligent than switches". Do you agree with this statement? Support your answers with suitable viewpoints. (06 Marks)

- iii. Differentiate Frequency Division Multiplexing (FDM) from Wavelength Division Multiplexing (WDM).

(05 Marks)

- iv. Explain what transmission impairment is and different type of transmission impairment during Data transmission.

(05 Marks)

(Total Marks 20)

Question 3

Answer the following questions using the following IP address: **180.80.80.08/20**

- i. Write the above IP address and Mask in a binary format.

(02 Marks)

- ii. Find network address and host address bits of this mask.

(02 Marks)

- iii. Find the Network Address of the given IP address and the broadcast address of this sub network.

(04 Marks)

- iv. Calculate maximum number of hosts IP addresses per sub network and possible sub networks for this mask.

(03 Marks)

- v. Find the start and ending host IP addresses of this sub network.

(03 Marks)

- vi. Write the IP table including sub network address, valid host range and broadcast address for first 8 sub networks.

(06 Marks)

(Total Marks 20)

Question 4

- i. Explain what Virtual Private Network (VPN) is and list the major tunneling protocols used in this VPN.
(05 Marks)
- ii. Explain the functions of proxy server for a safer network environment.
(05 Marks)
- iii. Explain what you mean by Social Engineering and the mostly used techniques in it.
(05 Marks)
- iv. Assume that you are a Network Administrator. Explain what security measures that you would take to prevent unauthorized network accesses from outside.
(05 Marks)

(Total Marks 20)

Question 5

Explain the following terms.

- i. Bandwidth, Throughput
(04 Marks)
- ii. Routing Information Protocol (**RIP**), Open Shortest Path First(**OSPF**)
(04 Marks)
- iii. Packet Switching, Circuit Switching
(04 Marks)
- iv. Data encryption, data fragmentation
(04 Marks)
- v. Apple talk, Token Passing
(04 Marks)

(Total Marks 20)