

KSIRHNA KANTA HANDIQUI STATE OPEN UNIVERSTIY
M Sc IT/PGDCA 1st Sem. Examination, 2014

Fundamental of Networking & Internet

Time : 3 Hrs.

Full Marks : 80

1. Answer the following questions 1×3 = 3
 - (a) Define 'computer network'.
 - (b) What do you mean by 'topology'?
 - (c) What is the meaning of the term 'interface' in terms of computer networking?
 - (d) What is 'Service Access Points (SAP)'?
 - (e) What are the different types of cables used in LAN?
 - (f) Name the three ways for wireless data to be propagated?
 - (g) What is the function of the device 'repeater'?
 - (h) What is the IEEE standard of Token Ring?

2. Answer the following questions 2×8 = 16
 - (a) In case of data transmission in LAN how 'multicast' is different from 'broadcast'?
 - (b) What do you mean by network protocol? Give example of any two protocol.
 - (c) What is the main difference between connection-less and connection-oriented communication?
 - (d) Write two advantages and disadvantages of fiber optics cable.
 - (e) Mention the name of two 'Layer 2' device. What is MAC-address?
 - (f) What is the meaning of the cable specification '10 Base-T'?
 - (g) What is an IP-address? What is its need?
 - (h) Give the example of two application layer protocols and also mention its function.

3. Answer the following questions (any five) 4×5 = 20
 - (a) Explain how parallel transmission is different from serial transmission.
 - (b) What do you mean by protocol stack? What are the design issues of layered architecture of a computer network? 1+3=4
 - (c) Why twisting is done in a twisted-pair cable? Mention the advantages of using a twisted-pair cable over a coaxial cable. 1+3=4
 - (d) What are the various functions of a router? Explain.
 - (e) What is a network interface card (NIC)? What is its function? Name the four different generation of LAN? 1+2+1=4
 - (f) What is a domain name system (DNS)? Explain it briefly.
 - (g) What is an URL? Discuss the functioning of a web server and a web browser. 1+3=4

4. Answer the following questions (any two) 8×2 = 16
 - (a) What are the different modes of communication? Distinguish simplex, half-duplex and full-duplex mode of transmission.
 - (b) What do you mean by network security? Explain the working principle of a firewall.
 - (c) Write short note on any two of the following
 - (i) Radio Waves
 - (ii) Switch
 - (iii) Types of Ethernet
 - (iv) Client-server Architecture

5. Answer the following questions (any two)

10×2 = 20

- (a) What is an ISO-OSI model? Discuss the functions of each layers of ISO-OSI model.
- (b) How many fields are there in a IEEE 802.5 frame? Describe the frame format of IEEE 802.5.
- (c) Write short notes on any two of the following
 - (i) Intranct (ii) Extranet
 - (iii) Proxy server (iv) Network Topology

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