

**PGDCA 1<sup>ST</sup> SEMESTER EXAMINATION, 2013**

**Subject : Networking**

**Paper - IV : Fundamentals of Networking and Internet**

Time : 3 Hrs

Full Marks : 80

1. Answer any five questions from the following 2×5 = 10
- (a) What do you mean by DTE and DCE? Explain in brief.
  - (b) Write one point to differentiate between circuit and message switching. In message switching, at what situation the channel is blocked for period of time?
  - (c) Define unicast, once Multicast.
  - (d) What do you mean by topology in computer networking?
  - (e) What are the factors that helps us to decide which topology should be used in a network?
  - (f) Write two advantages of Ring Topology.
  - (g) What do you mean by network protocol? Give one example.

2. Answer the following (any three)

4×3 = 12

- (a) How many layers are there in ISO-OSI model? How do the layers of the TCP/IP model correlate to the layers of the OSI model? Explain in brief.
- (b) What are the design issues of layered architecture of a computer network? Which of the OSI layers handles in determining path of packet?
- (c) What is connection oriented and connectionless service? Explain briefly about two protocols used in the Application layer.
- (d) Write two advantages of Proxy server. Is it possible to install a webserver and host a website in a LAN? Is that website is visible to the internet, if not how can you make it? Give one example of webserver.
- (e) How guided transmission media is different from un-guided media? Give two examples of each. Is fiber optic cable is in unguided transmission media category; briefly explain about fiber optic cable.

3. Answer the following (any three)

6×3 = 18

- (a) Write the function of data link layer. What are the connecting devices used in data link layer? How a layer 2 switch is different from layer 3 switch? Write the short notes on repeater once Hub in brief.
- (b) What do you mean by physical and logical address in computer networking? Explain the different classes of IP addresses in brief.

(c) Write the short notes on

- (i) Client Server Architecture.
- (ii) Dial up connection.

(d) What are different generations of Ethernet? Describe the standard ethernet with its various features.

(e) What is the purpose of preamble field in IEEE 802.3 frame? Why CRC field is used in IEEE 802.3 frame, explain briefly.

4. Answer the following (any four)

10×4 = 40

(a) What is www? How does it function? How does it different from internet? Explain Domain Name System briefly.

(b) What is internet and extranet? What is the advantage of extranet over internet, explain briefly. Describe two application use of internet in brief.

(c) Write the short notes on

- (i) Telnet
- (ii) FTP
- (iii) web browser
- (iv) Search Engine
- (v) Firewall.

(d) Briefly explain TCP/IP Reference Model.

(e) Explain the different modes of communication? How peer to peer LAN is different from client server LAN?

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