(c) What is multiple access communication? Explain various multiple access techniques.

Q5. Attempt any ***two*** questions from the following : 10x2=20

(a) What is an interconnecting device in the internet? Explain various interconnecting device used in the internet with suitable example.

(b) Define IP addressing. Compare and contrast IPv4 with IPv6.

(c) Explain the steps of setting up a circuit for data communication and closing of it after data transmission in TCP with suitable example.

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214421

MCA414

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 214421

Roll No.

MCA
(SEM. IV) THEORY EXAM. 2014-15
COMPUTER NETWORKS

Time : 3 Hours] [Total Marks : 100

Note : Attempt the questions as indicated.

Q1. Attempt any ***four*** questions from the following : 5x4=20

(a) Write functions of data link layer of ISO-OSI reference model.

(b) Explain fragmentation of packet and its need in internet.

(c) What is virtual LAN? Explain its applications.

(d) Differentiate between adaptive and non-adaptive routing algorithms.

(e) Explain the functioning of email gateway.

Q2. Attempt any ***four*** questions from the following : 5x4=20

(a) Why TCP is preferred over UDP in some applications? Explain the reason and also mention those applications.

(b) Define DNS and it's requirement. Explain the specific features of it.

(c) What is public key encrypting method? Compare it with private key cryptography. Explain RSA algorithm with suitable example.

(d) Explain sliding window protocol.

(e) Define Packet Switching.

Q3. Attempt any ***two*** questions from the following : 10x2=20

(a) Describe hamming code. How it is used for error detection and correction? Illustrate with the help of a suitable example.

(b) List the layers in the TCP/IP model. Why packet switching is relevant to the internet?

(c) What are the salient features of ISDN? Discuss the functions of different layers in ISDN.

Q4. Attempt any ***two*** questions from the following : 10x2=20

(a) What are the error and flow control techniques in a network? Explain various ARQ techniques with suitable example. Discuss error and flow techniques implemented in Ethernet LAN.

(b) What is hamming code? Calculate the hamming code for following message string : 1100101 with each and every step explained clearly.