MTU
(I) Shift 20/5/12

Printed Pages : 2

MBAIT-03

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

PAPER ID : 7156

Roll No.

M.B.A.

(SEMESTER-IV) THEORY EXAMINATION, 2011-12

DATA COMMUNICATION & NETWORK

Time : 3 Hours]

[Total Marks : 100

Note : Attempt questions from **all** Sections as directed.

Section – A

1. Answer all **ten** questions. **All** questions carry equal marks. $10 \times 2 = 20$

   (a) Define the term Signals.

   (b) Write the advantages and disadvantages of a digital communication system.

   (c) Mention the various multiple access schemes used in wireless communication.

   (d) Name the factors that affect the performance of a network.

   (e) Name the five basic network topologies.

   (f) What are the responsibilities of the data link layer ?

   (g) Give two examples of digital information.

   (h) What is the difference between digital data and analog data ?

   (i) What is the difference between encoding and modulation ?

   (j) What is the purpose of Domain Name System ?

Section – B

2. Answer any **three** of the following questions : $3 \times 10 = 30$

   (a) What is topology ? Explain various topologies of computer network.

   (b) Explain CDMA signal. How is it different from SDMA ?

   (c) Differentiate between TCP & UDP in detail.

   (d) Explain the following term with respect to TCP/IP :
   (1) Stream data transfer
   (2) Reliable Service
   (3) Window Size
   (4) Urgent Pointer
   (5) Check Sum

(e) Differentiate between the following with examples :

(1) Discrete and continuous signals

(2) Logical address and IP address

Section – C

5 × 10 = 50

Answer the following questions :

3. What is channel noise ? Discuss its classification.

OR

Discuss hierarchical structure of cellular network with diagram in detail.

4. What is application of cryptography in data communication ? Explain RSA.

OR

Discuss the problems of cellular network with respect to mobile phones.

5. The analog phone lines and telephones in your house are not connected to any electrical power source. How does the phone ring and light up ?

OR

How does ISDN support both voice and data ?

6. You have two offices and want to put a PBX in each and connect the two so that your employees in one office can call the employees in another office without being charged for each call by the telephone company. How can you do this ?

OR

What is Network Operating System ? How Linux is advantageous over windows ?

7. What happens when a computer in a ring becomes unplugged and breaks the ring ?

OR

What is TCP/IP protocol ? Explain frame format of IPV4 datagram with an appropriate diagram.

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