M. B. A.

(SEM. IV) EXAMINATION, 2006-07

DATA COMMUNICATION & NETWORK

I.T. - 3

Time : 3 Hours]  
[Total Marks : 100

Note : Attempt all questions.

1  Attempt any two parts of the following : 2x10
   (a) Explain any one of the following Data Compression techniques :
       (i) Encoding a Finite Set of Equally Likely Symbols.
       (ii) Frequency Dependent Coding,
       (iii) Context Dependent Encoding.
   (b) Explain CDMA signal. How is it different from SDMA?
   (c) Compare FM and AM Signals with applications.

2  Attempt any two parts of the following : 2x10
   (a) What are the components of a typical LAN? What are the functions of each component?
   (b) What are the differences between a "thick Ethernet" and a "thin Ethernet"? With the help of a diagram show the usual configuration for Ethernet.
   (c) What is ISDN? Why it is becoming important in today's competitive business environment?
3 Attempt any four parts of the following:

(a) What are the principles that were applied to arrive at the seven layers of an OSI model?
(b) What is the significance of a protocol in a computer network?
(c) Define and describe Virtual Private Network (VPN).
(d) What is the main difference between a Point-to-Point channel and a Broadcast channel? Describe any one of them.
(e) What are the advantages of using asynchronous transfer mode (ATM)?
(f) Explain the relation between Services and Protocols.

4 Attempt any four parts of the following:

(a) Describe the directory structure of the UNIX file system. What are pipes and filters? What is a pipeline?
(b) Why is Linux known as an open-source software? What are its main features?
(c) Why is mobile communication becoming important? Give at least one example of mobile communication.
(d) What is the difference between mobile communication and wireless communication? Explain with the help of an example.
(e) What do you understand by Wireless Application Protocol (WAP)? How is it helping the business world?
(f) What are XML and XML Script? Compare their capabilities? Why are they becoming important?