



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

**PAPER ID : 7072**

Roll No.

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## M.B.A.

### (SEM. IV) EXAMINATION, 2008-09 DATA COMMUNICATION & NETWORK

*Time : 3 Hours]*

*[Total Marks : 100*

- Note :* (1) Attempt all questions.  
(2) All questions carry equal marks.

1 Attempt any **two** parts.

- (a) Differentiate between the following.
- (i) Frequency modulation and phase modulation
  - (ii) Asynchronous transmission and synchronous transmission
- (b) (i) What functions does a modem perform?  
(ii) State sampling theorem and explain pulse code modulation.
- (c) Describe hamming code. How it is used for error detection and error correction? Illustrate with the help of suitable example.

2 Attempt any **two** parts.

- (a) What do you understand by network topology? List four common LAN topologies and briefly describe them.
- (b) Explain following terms clearly.

Bridge, Hub, Router, Layer-2 switch, Gateway



- (c) Compare following guided media used for data transmission.

Twisted pair, Coaxial cable and Optical fibre

**3** Attempt any **two** parts.

- (a) Briefly describe OSI reference model.
- (b) What is a virtual private network (VPN)? Discuss briefly.
- (c) (i) List some practical application of multicasting.
- (ii) What do you understand by source routing? Explain.
- (iii) Explain the purpose of following fields in ipv4 header.
- Time To Live, Header Checksum, Type of service

**4** Attempt any **two** parts.

- (a) (i) What is a multiprogramming operating system? Explain.
- (ii) When do page faults occur? Describe the action taken by the operating system when a page fault occurs.
- (b) Describe UNIX file system in brief.
- (c) Write short notes on WINDOWS operating system.

**5** Attempt any **two** parts.

- (a) Describe the WAP protocol stack in brief.
- (b) Discuss the features of XML.
- (c) (i) List and briefly define key requirements for wireless LAN.
- (ii) What is an adhoc network ? Explain.

