

M 27622

Reg. No. : .....

Name : .....

II Semester M.C.A. Degree (Reg./Sup./Imp.)

Examination, July 2015

(2013 and Earlier Admn.)

MCAC 2.4 : DATA COMMUNICATION AND NETWORKS

Max. Marks : 80

Time : 3 Hours

**Instructions :** 1) Answer any five full questions.

2) All questions carry equal marks.

1. a) What are the significant features of software and hardware concepts in computer network ? 8
- b) Explain the various communication tasks. 8
2. a) With neat diagram explain the importance of data communication system. 8
- b) Generate an asynchronous data transmission signal for a string "LAYER". 8
3. a) Explain the various impairments of the complete data communication system. 8
- b) Describe the properties of Nyquist theorem and Shannon's theorem. 8
4. a) Explain the properties and merits of circuit switching and packet switching. 8
- b) Compare and contrast OSI/ISO reference model and TCP/IP reference model. 8
5. a) Explain the design issues of the data link layer. 8
- b) Discuss the importance of channel allocation problems. 8
6. a) Explain the classification of IP addresses with suitable examples. 8
- b) What are the properties of routing algorithm ? 8

P.T.O.



7. a) Describe the design issues of the transport layer. 8  
b) Explain the importance of Network Security and Cryptography. 8
8. Write short notes on (any four) : (4x4=16)
- a) E-mail
  - b) ICMP
  - c) Congestion control
  - d) Error detection and correction
  - e) Wireless LAN.

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