MCA-511 **Roll No.** | | | | | | | | | | |

M.C.A.
(SEM V) ODD SEMESTER EXAMINATION 2015-16
COMPUTER NETWORK

[Time: 3 hrs.] **[Max. Marks: 100]**

Note- Attempt All Questions. All Questions carry equal marks:-

1. Attempt any four parts: **(5X4=20)**

(a) What do you mean by computer network? Discuss broadcast and point-to-point networks.
(b) Explain peer-peer processes. What are the interfaces and services in computer network?
(c) Differentiate between circuit switching, message switching and packet switching.
(d) Discuss various types of transmission media.
(e) What is ISDN? Describe in brief the ISDN working to provide various services.
(f) What is meant by terminal handling? Justify with the help of suitable diagram.

2. Attempt any four parts: **(5X4=20)**

(a) What is framing? Describe different methods for the framing in data link layer.
(b) What are the different types of error detection methods? Explain the CRC error detection technique using generator polynomial X4 + X3 + 1 and data 11100011.
(c) How to position redundancy bits for the data 1001101 using hamming code error detection technique also explain how to correct a single bit error using hamming code.
(d) What do you understand by ALOHA protocol? Discuss efficiency of ALOHA and the slotted ALOHA.
(e) Discuss Carrier Sense Multiple Access technique with persistence strategy.
(f) Describe traditional Ethernet with their frame format.

3. Attempt any four parts: **(5X4=20)**

(a) Draw the layered diagram of TCP/IP protocol suit and explain it briefly.
(b) Briefly describe the various classes of IP Address.
(c) What is internetworking and their issues?
(d) What is meant by congestion? List the general principles of congestion control.
(e) Illustrate why routing is very important in computer network. Discuss shortest path algorithm for routing.
(f) Enumerate on the various reasons that are present behind the transition of IPv4 to IPv6.

4. Attempt any two parts: **(10X2=20)**

(a) Discuss user datagram protocol in brief
(b) Discuss RPC design and implementation issues.
(c) Write short notes on-
  i) DES cryptography algorithm
  ii) Lossless compression algorithm

5. Attempt any two parts: **(10X2=20)**

(a) Discuss about the simple network management protocol.
(b) Write short notes on-
  i) FTP
  ii) SMTP
  iii) HTTP
(c) What is DNS? Discuss the three domains of Domain Name Space.