

MCA
(SEM IV) THEORY EXAMINATION 2018-19
COMPUTER NETWORKS

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 7 = 14**

- a) What are the applications of computer network?
- b) What is Shannon capacity for Noisy Channel?
- c) Different between Baseband Transmission and Broadband Transmission.
- d) Distinguish between TCP and UDP.
- e) What is Gateway?
- f) Define Fragmentation.
- g) Write about digital signature?

SECTION B**2. Attempt any three of the following: 7 x 3 = 21**

- a) What is Network? Explain different types of Networks.
- b) What is cyclic code and explain Cyclic Redundancy Check (CRC) code?
- c) What is IP addressing? How would you design Class A, Class B and Class C of IP addresses?
- d) Explain the TCP/IP reference model with neat diagram.
- e) Describe in detail about the three way handshake protocol for connection establishment in TCP.

SECTION C**3. Attempt any one part of the following: 7 x 1 = 7**

- (a) What is transmission medium? What are the different types of transmission medium?
- (b) What is multiplexing? Define all Categories of multiplexing.

4. Attempt any one part of the following: 7 x 1 = 7

- (a) Write short notes on i) SONET ii) ATM iii) BLUETOOTH
- (b) Discuss different standards of Ethernet

5. Attempt any one part of the following: 7 x 1 = 7

- (a) Describe internetworking connecting devices in reference to layers.
- (b) Define controlled access and list three protocols in this category.

6. Attempt any one part of the following: 7 x 1 = 7

- (a) How is congestion controlled? Explain in details the TCP congestion control.
- (b) CB84000D001C001C is the content of a UDP header
 - i-What is the source port number?
 - ii-What is the destination port number ?
 - iii-What is the length of the data ?
 - iv- What is the total length of the user datagram ?

7. Attempt any one part of the following: 7 x 1 = 7

- (a) What is security goals ? .Explain different types of Network Attacks
- (b) Describe in detail about the following in Electronic mail.
 - i. Message format.
 - ii. Message transfer.
 - iii. Mail reader.