

Roll No. ....

Subject Code—2013

**M. C. A. (Third Year) EXAMINATION**

(Five Year Integrated Course)

MCA-301

**COMPUTER NETWORKS**

*Time : 3 Hours*

*Maximum Marks : 100*

**Note :** Attempt any *Five* questions. All questions carry equal marks.

1. (a) Explain ISO-OSI reference model and its layers. 10  
(b) Describe different network topologies with their advantages and disadvantages. 10
2. (a) What is media for transmission ? Explain various wireless medias. 10  
(b) Describe transmission theory for data communication with the help of suitable examples. 10

3. (a) Compare simple ALOHA and SLOTHED ALOHA. 10  
(b) Discuss the persistence ALOHA and its efficiency. 10
4. (a) Describe about token ring IEEE 802.5 standards and frame format. 10  
(b) Discuss about FDDI and its applications. 10
5. (a) Describe about CRC with the help of suitable examples. 10  
(b) Explain various elementary data link protocols. 10
6. (a) Explain Hierarchical routing algorithm with the help of suitable example. 10  
(b) Describe about Leaky-Bucket algorithm with the help of suitable example. 10
7. (a) Discuss the datagram and protocol (UDP). 10  
(b) Explain Handshaking protocol for connection establishment at transport layer. 10

8. Write short notes on the followings :  $5 \times 4 = 20$

- (a) ATM
- (b) DNS
- (c) SNMP
- (d) Network Security