

2007

Subject Code—7213

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

(5 Years Integrated Course)

**COMPUTER NETWORK**

**MCA-301**

*Time : 3 Hours*

*Maximum Marks : 100*

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

1. Draw and explain all the layers of ISO's OSI reference model. Compare this model with TCP/IP reference model. 20
2. (a) Briefly explain history and development of Computer Networks. 10  
(b) Explain Nyquist and Shannon's method for finding out maximum data rate of any channel. 10

(2-01)

P.T.O.

3. Explain in detail different types of transmission media at physical layer of computer network. 20
4. Explain the following IEEE LAN standards :  
(a) 802.3  
(b) 802.4  
(c) 802.5  
(d) 802.6. 20
5. Explain the following sliding window protocol for flow control at data link layer : 20  
(a) Go Back N  
(b) Selective Repeat.
6. (a) Explain any *two* routing algorithms at network layer. 10  
(b) Explain leaky bucket and token bucket algorithm for congestion control. 10

7. Explain the following at application layer :  
(a) DNS  
(b) WWW  
(c) E-mail  
(d) Security. 20
8. Write short notes on the following :  
(a) ISDN  
(b) ATM. 20