

Roll No .....

**MCA-305**  
**M.C.A. III Semester**  
**Examination, December 2017**  
**Computer Networks**

*Time : Three Hours*

*Maximum Marks : 70*

**Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) What is OSI model? Draw diagram and explain physical, datalink and Network layer with its functions. Discuss advantages of layered approach. 7  
b) Differentiate between guided and unguided transmission media. Write briefly about twisted pair. 7
2. a) What do you mean by Framing? List various framing techniques and explain any two of them. 7  
b) What is Error Control? Explain CRC with an example. 7
3. a) What is ALOHA? Explain various of ALOHA Protocol. 7  
b) Explain CSMA and CSMA/CD protocols. Also discuss channel allocation. 7
4. a) Describe the working of sliding window protocol. Also explain the Piggybacking Phenomenon. 7

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- b) Explain the following : 7  
i) Token BUS  
ii) FDDI Protocol  
iii) DQDB Protocol
5. a) Differentiate between : 7  
i) Amplitude modulation Vs Frequency modulation  
ii) PAM Vs PCM  
b) What are Hubs? Discuss different types of Hubs. 7
6. a) Explain Dijkstra's Algorithm with an example. 7  
b) Explain transmission control protocol with TCP header fields. 7
7. a) What is Congestion? What are the reasons behind congestion? Explain choke packet mechanism for congestion control. 7  
b) What is DNS? How resource records are maintained in DNS? 7
8. Write short note : 14  
a) SNMP  
b) Virtual Terminal Protocol  
c) Email  
d) UDP

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