

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

MCA-305**M.C.A. III Semester**

Examination, November 2018

Computer Networks**Time : Three Hours****Maximum Marks : 70****Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) What do you mean by computer networks? What are its advantages and goals? 7
- b) Explain the following terms in Network structure, 7
 - i) Communication subnet
 - ii) Interface Message processors
2. a) Explain layered network architecture. What are the design issues for the layers? 7
- b) Explain the various layers of ISO-OSI model. 7
3. a) Explain the following: 7
 - i) Frequency Division Multiplexing
 - ii) Time Division Multiplexing
 - iii) Circuit switching
 - iv) Hybrid switching
- b) What is the difference between pure ALOHA and slotted ALOHA? What is vulnerable time in pure ALOHA? 7

[2]

4. a) Explain various types of errors in signals. What type of errors are detected by parity check? 7
- b) Explain sliding window protocol. Compare stop and wait and Go-back-N protocol. 7
5. a) Explain the uses, advantages and disadvantages repeaters, hubs, wireless access points, bridges, switches and routers. 7
- b) Define Network Segmentation, Fast Ethernet and Gigabyte Ethernet. 7
6. a) What are routing table? How does routing table work? 7
- b) What are the elements of transport protocol? Differentiate between TCP and UDP. 7
7. a) What are the different types of routing protocols? 7
- b) Define the following: 7
 - i) Flooding
 - ii) Broadcast routing
 - iii) Selective flooding
 - iv) Multicasting
8. Write short notes on any three. 14
 - a) Network security
 - b) SNMP
 - c) CRC (Cyclic Redundancy Checks)
 - d) CSMA/CD
