

MAHATMA GANDHI UNIVERSITY
MCA DEGREE EXAMINATION
MODEL QUESTION PAPER
(2011 Revised Syllabi)
Fourth semester
MCA 402 COMPUTER NETWORKS

Time : Three hours

Maximum : 75 Marks

Part A

Answer any ten questions.

Each question carries 3 marks.

1. Classify Computer Networks based on geographical distance.
2. Compare OSI and TCP/IP network reference models.
3. Distinguish between protocol and service.
4. Mention the precursors of CSMA/CD.
5. Briefly explain exponential back off algorithm.
6. Mention various network devices and their functions. Also mention the equivalent OSI layers up to which it functions.
7. Compare Infrared and spread spectrum LANs
8. What are virtual LANs?
9. What should be the required characteristics of routing function?
10. Compare between permanent and switched virtual circuits.
11. Describe various ATM adaptation layers and their need.
12. Compare frame relay and X.25 networks.

(10 x 3 = 30 marks)

Part B

All questions carry equal marks.

13. a) Explain in detail the functions of each layer of the OSI reference model.

OR

- b) With help of a frame format explain the HDLC protocol.

- 14.a) Explain the CSMA/CD method of medium access in Ethernet LANs.

OR

- b) Describe the IEEE802.3 frame format.

- 15 a) Explain the working of DSSS and FHSS wireless LANs.

OR

- b) Write a note on virtual LAN

- 16 a) Explain Adaptive routing.

OR

- b) Discuss the techniques for congestion control in network layer.

17 a) Describe the working of frame relay.

OR

b) Explain various layers in ATM.

(5 X 9 = 45 marks)