

MCA-655	MCA-15
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M.C.A. DEGREE EXAMINATION – JUNE 2008.

Second Year/Third Semester

COMPUTER NETWORKS

Time : 3 hours

Maximum marks : 75

Answer for 5 marks questions should not exceed
2 pages.

Answer for 10/15 marks questions should not exceed
5 pages.

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Define signal to noise ratio. Then discuss the maximum data rate of a noisy channel as stated by Shannon.
2. Distinguish between the terms unicasting, broadcasting, and multicasting.
3. With relevant examples discuss connection oriented and connectionless services.

4. Distinguish between adaptive and non adaptive routing algorithms. Give relevant examples.
5. Distinguish between circuit switching and packet switching.
6. Explain the principle of working of stop and wait protocol.
7. What is a router? Which layer device is a router? Discuss.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Diagrammatically illustrate and discuss the ISO OSI model.
9. With relevant diagrams explain the working of an Optical Transmission System. Also discuss the different types of optical fibres.
10. Explain the working of a Token Bus. Give diagrammatic illustration.
11. Explain the working of ALOHA, SLOTTED ALOHA, and CSMA protocols.
12. With an example discuss shortest path routing algorithm.

13. Tabulate the states in the TCP connection management FSM and discuss the same.
 14. Diagrammatically illustrate and discuss the ATM architecture.
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