



[Time: Three Hours]

[Marks: 80]

Please check whether you have got the right question paper

N.B.:

1. Question number **ONE** is compulsory
2. Attempt any **THREE** questions from question 2 to 6
3. Figures to the right indicate full marks.

- Q. 1. Answer any **FOUR** from the following 20
- a) What are the routing devices in computer network? Explain each of them in brief.
  - b) Compare lossy with lossless data compression technique.
  - c) List five nonproprietary Internet applications and the application-layer protocols that they use.
  - d) Examine the advantages of LAN, WAN and MAN.
  - e) Examine problems in Application Layer.
- Q. 2 a) Explain TCP network model for network communication. Hence, choose a layer which is responsible for routing of packets. 10
- Q. 2 b) Explain Client-Server communication architecture. 10
- Q. 3 a) Create a shortest path between node A and D 10
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- Q. 3 b) What is IP? Explain IPv6 Header. 10
- Q. 4 a) Justify that the Stop-and-Wait protocol is not good for network communications. 10
- Q. 4 b) Justify Hamming Code is error detection and correction code. 10
- Q. 5 a) What is MACA? Explain by giving suitable example. 10
- Q. 5 b) What is carrier sense? Explain any one carrier sense protocol. 10
- Q. 6. Answer any **FOUR** from the following 20
- a) Examine different types of ALOHA.
  - b) What is broader gateway protocol (BGP) Explain BGP in brief.
  - c) Why do HTTP, FTP, SMTP, and POP3 run on top of TCP rather than on UDP?
  - d) Compare various data flow control techniques.
  - e) What is classful addressing? Explain difference classes of IP address.

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