

Q. P. Code: 38761

[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

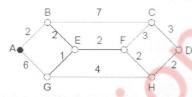
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- a) What are the routing devices in computer network? Explain each of them in brief.
- b) Compare lossy with lossless data compression technique.
- c) List five nonproprietary Internet applications and the application-layer protocols that they use.
- 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.
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Q. 2 b) Explain Client-Server communication architecture.

Q. 3 a) Create a shortest path between node A and D

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Q. 3 b) What is IP? Explain IPv6 Header.

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Q. 4 a) Justify that the Stop-and-Wait protocol is not good for network communications.

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Q. 4 b) Justify Hamming Code is error detection and correction code.

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Q. 5 a) What is MACA? Explain by giving suitable example.

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Q. 5 b) What is carrier sense? Explain any one carrier sense protocol.

Q. 6. Answer any FOUR from the following

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a) Examine different types of ALOHA.

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- 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.
