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Roll No. :

C022512(022)

B. Tech. (Fifth Semester) Examination,

Nov.-Dec. 2021

(Computer Science & Engineering Branch)

COMPUTER NETWORK

Time Allowed : Three hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt all questions. Part (a) is compulsory & solve any two from (b), (c) & (d) of each questions. Assume any missing data. Use diagrams wherever required.

Unit-I

1. (a) Write a short note on network topology. 4
- (b) What is Switching? Explain circuit switching, packet switching and message switching. 8

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- (c) Compare OSI and TCP/IP model. 8
- (d) Compare guided and unguided media. 8

Unit-II

- 2. (a) What is a Brouter? Write its use. 4
- (b) Explain sliding window protocol. 8
- (c) What is HDLC? Explain the features of HDLC. 8
- (d) What is ATM reference model? Explain all the layers of ATM. 8

Unit-III

- 3. (a) Write the functions of network layer. 4
- (b) What is IP? Relate IPv4 to IPv6. 8
- (c) Define Routing. Explain distance vector routing and link state routing with diagram. 8
- (d) Write short notes on : 8
 - (i) ICMP
 - (ii) OSPF

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Unit-IV

- 4. (a) Write the functions of transport layer. 4
- (b) Differentiate between TCP and UDP protocols. 8
- (c) Explain UDP header format in detail. 8
- (d) What is Congestion? How it is controlled in transport layer? Explain with example. 8

Unit-V

- 5. (a) What are Cookies? Explain briefly. 4
- (b) Write short notes on : 8
 - (i) Cryptography
 - (ii) Firewall
 - (iii) MIME
 - (iv) Proxy server
- (c) What is Email? Explain the architecture of email. 8
- (d) What is HTTP? Explain persistent and non-persistent connection with suitable example. Explain why HTTP is a stateless protocol. 8