

Roll No. 22EEAJT051

Total Page No. : 3

51N0403 /

51N0403 /

**B.TECH. V SEMESTER (NEW SCHEME)
MAIN/BACK EXAMINATION 2024-25
COMPUTER SCIENCE & ENGINEERING**

(5CS4-03) - Computer Networks

**[5AI4-03, 5AD4-03, 5AM4-03, 5CA4-03, 5CD4-03,
5DS4-03, 5IO4-03, 5IT4-03, 5MC4-03, 5CM4-03,
5CY4-03] Common to CS, AI, AI & DS, AI & ML, CA,
CSE (DS), DS, IO, IT, MC, CSE(AI & ML)CY**

Time : 2 Hours]

[Max. Marks : 70

[Min. Passing Marks :

Instructions to Candidates :

Part-A : Short Answer Type Questions (up to 25 words) $10 \times 2 = 20$ marks. All 10 questions are compulsory.

Part-B : Analytical/Problem Solving questions $5 \times 4 = 20$ marks. Candidates have to answer 5 questions out of 7.

Part-C : Descriptive/Analytical/Problem Solving questions 3×10 marks = 30 marks. Candidates have to answer 3 questions out of 5.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Use of the following supporting materials is permitted during examination.
(Mentioned in form no. 205).

1 _____

2 _____

B-367

(1)

P.T.O.

Part-A

1. What is virtual circuit switching ?
2. Define computer Network.
3. What is noiseless channel ?
4. Explain simplex protocol.
5. What is supernetting ?
6. What is default masks for A,B,C addressing ?
7. What is TCP Protocol ?
8. What is the significance of TCP protocol ?
9. Explain about HTTP ?
10. What is SMTP ?

Part-B

1. What do you mean by network topologies ?
2. Compare HDLC and PPP.
3. What is the difference between Fixed framing and variable length framing ?
4. What is the difference between Broadcasting and Multicasting ?
5. Explain the difference between TCP and UDP.
6. Write short notes on TELNET and FTP ?
7. Explain role and working of Software defined networks.

Part-C

1. Compare the LAN, MAN and WAN topologies ?
2. Compare the different sliding window protocols ?
3. What are the first address (network address), last address (broadcast address) and the host-ID for the following ?
 - (a) IP address - 115.15.11.16 & Mask - 255.128.0.0
 - (b) IP address - 145.10.55.10 & Mask - 255.255.248.0
 - (c) IP address - 141.155.16.16 & Mask - 255.255.240.0
 - (d) IP address - 172.10.50.50 & Mask - 255.255.252.0
 - (e) IP address - 192.168.10.65 & Mask - 255.255.255.224
4. How transport layer connection is established in TCP ? Explain with state diagrams.
5. Explain Internet of Things and Cyber-physical systems in detail.
