Roll No. 240.20.3120.40

311203

May-2025
BCA-II SEMESTER
Computer Networks (BCG-112-V/BCA-23-104)

[Max. Marks : 75

Time : 3 Hours]

Instructions :

1. It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.
2. Answer any four questions from Part-B in detail.
3. Different sub-parts of a question are to be attempted adjacent to each other.

PART-A

1. (a) What is asynchronous communication? (1.5)

   (b) What are the transmission media used in a network? (1.5)

   (c) Distinguish between ARP and RARP protocols. (1.5)

   (d) Why Piggybacking is used in computer network? (1.5)

   (e) BOOTP and DHPC protocol are on which layer of TCP/IP? (1.5)

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(f) Why ALOHA Protocol is used? (1.5)

(g) What are the frequency division and time division multiplexing? (1.5)

(h) Differentiate between Telnet and FTP. (1.5)

(i) What is DNS? (1.5)

(j) How does the STCP protocol work? (1.5)

PART–B

2. (a) Draw the OSI reference model and explain the function of each layer in brief. (10)

(b) Explain the various connection topologies used in computer network. (5)

3. (a) Explain the wave division multiplexing. (5)

(b) Draw the IP packet format and explain in details. (10)

4. What are the congestion control methods? Explain the forwarding and unicast routing protocols. (15)

5. (a) What is an ICMP protocol? Explain its error reporting messages. (5)

(b) Explain the CSMA/CD and CSMA/AD protocol with example. (10)

6. (a) Explain the Stop and Wait, Go back-N ARQ and Selective Repeat ARQ. (10)

(b) Differentiate between IPv4 and IPv6 addressing protocol. (5)

7. (a) How multiplexing and demultiplexing occurs in UPD protocol? Explain. (7)

(b) Write short notes on SNMP and Bluetooth. (8)

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