JSB-4037

BCA (IVth Semester) Examination, June-2025

COMPUTER NETWORKS

Paper – BCA 5 DCCT-44

Time : 3 Hours]   श्री जैन (पी. जी.) कॉलेज, बीकानेर   [*Maximum Marks : **120***

Section–A   (Marks : 2 × 10 = 20)

Note :– Answer all *ten* questions. Questions (i) to (v) are multiple-choice questions, while questions (vi) to (x) are fill in the blank questions. Each question carries **2** marks.

Section–B   (Marks : 8 × 5 = 40)

Note :– Answer all *five* questions. Each question has internal choice (Answer limit **150** words). Each question carries **8** marks.

Section–C   (Marks : 20 × 3 = 60)

Note :– Answer any *three* questions out of five (Answer limit **400** words). Each question carries **20** marks.

Section–A

1. (i) How many layers are there in the OSI model ?

    (a) 4

    (b) 5

    (c) 6

    (d) 7

(ii) A local telephone network is an example of which switching ?

    (a) Packet switching

    (b) Circuit switching

    (c) Bit switching

    (d) Line switching

(iii) Which service is not provided by datalink layer ?

    (a) Error detection and correction

    (b) Flow control

    (c) Network addressing

    (d) Framing

(iv) Which of the following protocols is responsible for converting higher layer protocol addresses to physical network addresses ?

    (a) ARP

    (b) TCP

    (c) IP

    (d) FTP

(v) Which of the following are transport layer protocol ?

    (a) TCP and FTP

    (b) UDP and HTTP

    (c) TCP and UDP

    (d) FTP and HTTP

(vi) All the nodes are connected to a single line in .... topology.

(vii) In .... switching, resources are allocated on demand.

(viii) .... control is used to regulate the rate of data transmission in Data Link Layer.

(ix) .... and IPV6 are types of network addressing.

(x) .... protocol is mainly used for email transfer.

Section–B

Unit–I

2. Explain types of networks.

Or

Explain network topologies.

Unit–II

3. Explain analog to digital transmission.

Or

Describe wireless transmission.

Unit–III

4. Explain datalink control techniques Enq/Ack.

Or

Describe flow control technique stop and wait.

Unit–IV

5. Explain packet Fragmentation.

Or

Explain IPV4.

Unit–V

6. Differentiate TCP and UDP.

Or

Describe client-server model.

Section–C

7. Explain OSI model.

8. Explain different switching techniques.

9. Explain different error control techniques of Data Link Layer.

10. What is Network addressing ? Explain Routing process in detail.

11. Explain different application layer protocols.