

6. (a) What are Control Access Protocols ?
Name them. 3
- (b) What is IPv4 and IPv6 address ?
Differentiate between them. 2+4=6
- (c) Define Bluetooth. Explain its
architecture and layer briefly. 6
7. (a) What is data communication ? What
are the major components of data
communication ? 5
- (b) Define network security. What do you
mean by cryptography ? Explain briefly. 5
- (c) Explain briefly : $2\frac{1}{2} \times 2 = 5$
- (i) Fibre Optic cable
- (ii) Coaxia cable
8. Write short notes on : **(any three)** $5 \times 3 = 15$
- (a) Analog transmission
- (b) DNS
- (c) FTP, www and HTTP
- (d) Amplitude Modulation
- (e) TCP/IP Protocol suite

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2024

COMPUTER NETWORKS

Paper : BCA-HC-6026

Full Marks : 80

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

SECTION-A

(Compulsory)

1. (a) Fill in the blanks : $1 \times 5 = 5$
- (i) TCP/UDP Stands for _____.
- (ii) The OSI reference model has _____
layers.
- (iii) A combination of different types
of topology is called _____ topology.
- (iv) The Wi-Fi system means _____ data
transmission.

(v) The data link layer divides the stream of bits received from the network layer into a manageable units called _____.

(b) Define the following terms : $1 \times 5 = 5$

(i) Flow Control

(ii) Topology

(iii) Computer Networks

(iv) Transmission medium

(v) TCP/IP

2. Answer **any five** : $2 \times 5 = 10$

(a) What is piggybacking ?

(b) Define pure and Slotted Aloha.

(c) What are the major responsibilities of transport layer ?

(d) Define congestion and QoS.

(e) What is IP address and MAC address ?

(f) What is Bus topology ?

SECTION-B

(Answer **any four**)

3. (a) Define Routing. How link state routing works ? Explain. 6

(b) Define data communication. What is Shannon's law? 1+3=4

(c) What are internetworking devices? What are the major function of a Router? 5

4. (a) What is CSMA and CSMA/CD ? What are different types of CSMA ? Explain. 6

(b) Define framing. Why it is needed ? 2+3=5

(c) What do you mean by sliding window protocol ? 4

5. (a) What is error correction and detection ? Explain the working of Hamming code with an example. 10

(b) Define Token passing. 3

(c) What are the fields of Ethernet ? 2