44 (6) BCA-HC-6026

#### 2024

### COMPUTER NETWORKS

Paper: BCA-HC-6026

Full Marks: 80

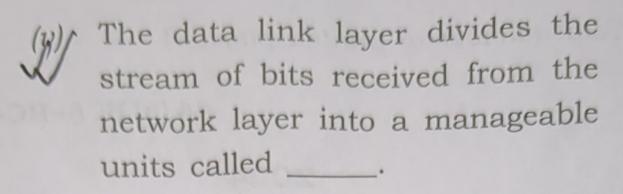
Time: Three hours

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

#### SECTION-A

(Compulsory)

1/ (g)	Fill	in the blanks:	1×5=5
	驻	TCP/UDP Stands for	10)
	(4)	The OSI reference model hallayers.	as
	( <u>iji</u> )	A combination of different of topology is called to	types pology.
	(20)	The Wi-Fi system means transmission.	_ data



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



Flow Control



(ii) Topology



(fii) Computer Networks



Transmission medium



(v) TCP/IP

Answer any five : 2.

 $2 \times 5 = 10$ 

- What is piggybacking?
- (b) Define pure and Slotted Aloha.
- What are the major responsibilities of transport layer?
  - Define congestion and QoS. (d)

What is IP address and MAC address?

What is Bus topology?

# SECTION-B

## (Answer any four)

		Jour j
3.	(a)	Define Routing. How link state routing works? Explain.
	(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.
	(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.
	(b)	Define Token passing. 3
	(0)	What are the fields of Ethernet? 2

6.	(a)	What are Control Access Protocols? Name them.
	20)	What is IPv4 and IPv6 address? Differentiate between them. 2+4=6
	(c)	Define Bluetooth. Explain its architecture and layer briefly.
7.	(a)	What is data communication? What are the major components of data communication?
	(b)	Define network security. What do you mean by cryptography? Explain briefly.
	(V)	Explain briefly: 2½×2=5  (ii) Fibre Optic cable  (iii) Coaxial cable
8.	Writ	te short notes on : (any three) 5×3=15
	fat	Analog transmission  DNS  FTP, www and HTTP  Analog transmission
	(b)	DNS
	(c)	FTP, www and HTTP
	(d)	Amplitude Modulation
	Let	TCP/IP Protocol suite

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