

Satyug Darshan Institute of Technology, Faridabad

Programme: BCA	Year:/Semester: 3rd/6th
Subject Name : High Speed Network	Subject Code: BCG-108-V
Department: CSE	AY:2025-2026
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Unit -1

Short Questions

S. No.	Questions	Bloom Taxonomy(KL)
Q.No	Question	BT
1	Define High Speed Network.	L1
2	What is Frame Relay?	L1
3	Define Asynchronous Transfer Mode (ATM).	L1
4	What is an ATM Cell?	L1
5	What is ATM Logical Connection?	L1
6	List ATM Service Categories.	L1
7	What is AAL in ATM?	L1
8	Define Fast Ethernet.	L1
9	What is Gigabit Ethernet?	L1
10	What is Fiber Channel?	L1
11	List any two applications of Wireless LANs.	L1
12	What are the requirements of Wireless LANs?	L1
13	What is IEEE 802.11?	L1
14	What is the need for High Speed LANs?	L2

Long Questions

1	Explain Frame Relay Network architecture with diagram.	L2
2	Explain ATM protocol architecture in detail.	L2
3	Describe ATM logical connections and virtual paths.	L2
4	Explain ATM cell format with neat diagram.	L2
5	Discuss ATM service categories with applications.	L2
6	Explain different types of AAL and their functions.	L2
7	Compare Fast Ethernet and Gigabit Ethernet.	L4
8	Explain architecture of IEEE 802.11 Wireless LAN.	L2

Unit -2

Short Questions

S. No.	Questions	Bloom Taxonomy
1	Define Congestion.	L1

2	What is Traffic Management?	L1
3	What is Queuing Analysis?	L1
4	Define Queuing Model.	L1
5	What is Single Server Queue?	L1
6	List effects of congestion.	L1
7	What is Congestion Control?	L1
8	What is Packet Switching Congestion?	L1
9	What is Frame Relay Congestion Control?	L1
10	Why congestion is harmful in networks?	L2

Long Questions

1	Explain queuing analysis and its importance.	L2
2	Explain different queuing models used in networks.	L2
3	Describe single server queue model with example.	L3
4	Discuss effects of congestion on network performance.	L4
5	Explain congestion control techniques in packet switching networks.	L2
6	Explain Frame Relay congestion control mechanism.	L2

Unit -3

Short Questions

S. No.	Questions	Bloom Taxonomy
1	What is TCP Flow Control?	L1
2	Define TCP Congestion Control.	L1
3	What is Retransmission in TCP?	L1
4	What is RTO?	L1
5	What is Exponential RTO Backoff?	L1
6	What is Karn's Algorithm?	L1
7	Define Window Management.	L1
8	What is ABR Traffic?	L1
9	What is RM Cell?	L1
10	Expand GFR.	L1

Long Questions

1	Explain TCP flow control using sliding window.	L2
2	Describe TCP congestion control algorithms.	L2
3	Explain retransmission and timer management in TCP.	L2
4	Explain Karn's Algorithm with example.	L3
5	Analyze performance of TCP over ATM.	L4
6	Explain ABR traffic management and rate control.	L2

Unit -4

Short Questions

S. No.	Questions	Bloom Taxonomy
1	What is Integrated Services Architecture?	L1
2	Define Quality of Service (QoS).	L1

3	What is Fair Queuing (FQ)?	L1
4	What is Processor Sharing (PS)?	L1
5	Define GPS.	L1
6	What is Weighted Fair Queuing (WFQ)?	L1
7	What is Random Early Detection (RED)?	L1
8	What is Differentiated Services?	L1
Long Questions		
1	Explain Integrated Services Architecture and its components.	L2
2	Explain various queuing disciplines used in IntServ.	L2
3	Explain FQ, PS, BRFQ, GPS and WFQ.	L2
4	Explain Random Early Detection (RED) mechanism.	L2
5	Compare Integrated Services and Differentiated Services.	L4
6	Design a QoS framework using Differentiated Services.	L6