

Code No: 7CC57

Date: 17-August-2024 (T.N)

B.Tech II-Year II- Semester External Examination, August - 2024 (Supplementary)
DATA COMMUNICATIONS (CSE and IT)

Time: 3 Hours

Max.Marks:70

Note: a) No additional answer sheets will be provided.
b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.
c) Missing data can be assumed suitably.

Bloom's Cognitive Levels of Learning (BCLL)

Remember	L1	Apply	L3	Evaluate	L5
Understand	L2	Analyze	L4	Create	L6

Part - A
ANSWER ALL QUESTIONS

Max.Marks:20

	BCLL	CO(s)	Marks
1 List the various components in a Network.	L1	CO1	[2M]
2 Define data rate and signal rate.	L1	CO2	[2M]
3 Compare Guided and Unguided media in data transmission.	L4	CO3	[2M]
4 What are the services provided by data link layer?	L2	CO4	[2M]
5 Define bandwidth and how bandwidth is divided among the different nodes.	L1	CO5	[2M]
6 Draw the hierarchy of hub and list the advantages.	L1	CO6	[2M]
7 Discuss in brief transmission impairments.	L2	CO2	[2M]
8 What are the functions of Virtual – circuit networks?	L1	CO3	[2M]
9 What are the advantages of Frame Relay Networks?	L2	CO6	[2M]
10 What exactly error correction refers to and why it is needed?	L4	CO4	[2M]

Part – B
ANSWER ANY FIVE QUESTIONS. EACH QUESTION CARRIES 10 MARKS.

Max.Marks:50

	BCLL	CO(s)	Marks
11. a) Discuss different network topologies with neat diagrams.	L2	CO1	[5M]
b) Explain in detail about Layers in OSI model.	L3	CO1	[5M]
12. a) Explain (i) ASK (ii) FM	L1	CO2	[5M]
b) What is Spread spectrum? Explain.	L1	CO2	[5M]
13. a) Compare and contrast circuit-switched and packet-switched networks with necessary diagrams.	L4	CO3	[5M]
b) Write the characteristics of twisted-pair, coaxial, and fiber optic cables with neat diagrams.	L3	CO3	[5M]
14. a) Design stop and Wait protocol.	L4	CO4	[5M]
b) Compute codeword using CRC given Data word 1001 and divisor 1011 .	L6	CO4	[5M]
15. a) Write short notes on Wired LAN technologies.	L2	CO5	[5M]
b) With neat diagram, explain about satellite communication system.	L3	CO5	[5M]
16. a) Explain virtual LAN's in brief.	L2	CO6	[5M]
b) Discuss ATM LANS.	L6	CO6	[5M]

- | | | | | | |
|-----|----|--|----|-----|------|
| 17. | a) | Discuss any two applications of Computer Network. | L2 | CO1 | [4M] |
| | b) | Differentiate and discuss the Transmission modes. | L3 | CO2 | [3M] |
| | c) | Write short notes on structure of a switch. | L2 | CO3 | [3M] |
| 18. | a) | Demonstrate Checksum method with an example. | L4 | CO4 | [4M] |
| | b) | Differentiate between Random access and controlled access. | L6 | CO5 | [3M] |
| | c) | What are Backbone networks. | L2 | CO6 | [3M] |

-- 00 -- 00 --