QP CODE: D3BCA2403	**(Pages: 2)**	**Reg. No**	**: .....**
		Name	**: .....**

THIRD SEMESTER FYUGP EXAMINATION, NOVEMBER 2025

Discipline Specific Core (DSC) Courses - Major

BCA3CJ202 : COMPUTER NETWORKS

(Credits: 4)

Time: 2 Hours **Maximum Marks: 70**

Section A

Answer the following questions. Each carries 3 marks (Ceiling: 24 marks)

1.	Define network topology. Name any four common topologies.	BL1	CO1
2.	Define TDM. Differentiate between synchronous TDM and asynchronous TDM.	BL2	CO2
3.	What is CSMA/CA? In which type of networks is it commonly used?	BL2	CO3, CO4
4.	What is Longitudinal Redundancy Check? Give one advantage of LRC over VRC	BL2	CO4
5.	Explain the principle of Go-Back-N ARQ.	BL2	CO3, CO4
6.	What is address mapping in computer networks? Name any two protocols used for address mapping.	BL2	CO1, CO3, CO4
7.	List any three key functions of the Internet Protocol at the network layer.	BL1	CO1, CO3, CO4
8.	Mention two advantages of using FTP over simple file transfer methods.	BL2	CO6
9.	Describe MAA in Email	BL2	CO6
10.	What is the difference between open-loop and closed-loop congestion control?	BL2	CO4

Section B

Answer the following questions. Each carries 6 marks (Ceiling: 36 Marks)

11.	Describe ASK with a neat diagram.	BL2	CO1
12.	With a neat diagram, explain the format of an Ethernet frame.	BL2	CO3, CO4

(PTO)

13.	Compare distance vector and link state routing algorithms.	BL4	CO1, CO3, CO4
14.	Explain the five functional areas of network management as per the ISO/OSI model	BL2	CO6
15.	Describe the three main modes of propagation in wireless media with neat diagrams and examples of where each is used.	BL2	CO2
16.	Explain how the transport layer achieves process-to-process delivery using port numbers.	BL2	CO4
17.	What is Select? Explain with the help of neat diagram.	BL2	CO3, CO4
18.	With a neat diagram, describe how a bridge connects two LAN segments and filters traffic to reduce congestion.	BL2	CO1, CO3, CO4
	Section C		
	Answer any one question. Each carries 10 marks (1 x 10 = 10 Marks)		
19.	“The transition from IPv4 to IPv6 is a multi-step process.” Analyse this statement in detail, covering the need, challenges, and the main transition mechanisms. Illustrate your answer with diagrams wherever applicable.	BL4	CO1, CO3, CO4
20.	Describe the responsibilities of the data link, network and transport layers. How do these layers work together to deliver data?	BL2	CO1, CO4
	CO : Course Outcome		
	BL : Bloom’s Taxonomy Levels (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)		