

GYANMANJARI INNOVATIVE UNIVERSITY

GYANMANJARI INSTITUTE OF TECHNOLOGY

B.Tech.-Mid Semester Examination (MSE)-2026

Enrollment No.: _____

Subject Code: BETCE15315

Subject Name: Computer Networks

Time: 10:30 AM to 12:30 PM

Date: 22-09-2026

Semester: 5

Total Marks: 60

Instructions:

1. Question No. 1 is compulsory.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		Marks
Q.1	(a) Define network topology .Explain any two types with diagrams.	05
	(b) What is connection oriented and connection less services? Explain each with suitable examples.	05
	(c) Draw the OSI reference model. Explain the functionality of each layer in brief	10
Q.2	(a) Explain various delay which are occur in data packet transmission.	05
	(b) Describe the working of sliding window protocol	05
	OR	
	(b) Explain HTTP in brief..	05
	(c) Explain the working of e-mail protocols SMTP ,IMAP and POP3 in brief with suitable diagrams.	10
	OR	
	(c) What do you mean by congestion and overflow? Explain the slow-start component of the TCP congestion-control algorithm.	10
Q.3	(a) Explain the working of Go-Back-NARQ protocol.	05
	(b) Explain IPv4 datagram format and importance of each field.	05
	(c) Discuss transport layer multiplexing and De-multiplexing concept.	10
	OR	
Q.3	(a) What are the issues of stop and wait protocol at transport layer? How selective repeat protocols resolve issues of stop and wait protocol?	05
	(b) Compare IPv4 and IPv6.	05
	(c) What are the five layers in the Internet protocol stack? What are the principal responsibilities of each of these layers.	10