MID TERM EXAMINATION

B.TECH PROGRAMMES (UNDER THE AEGIS OF USICT)

V Semester, November, 2023

Paper Code: CIC-313   Subject: Computer Networks

Time: 1½ Hrs.   Max. Marks: 30

Note: Attempt Q. No. 1 which is compulsory and any two more questions from remaining.

Q. No.	Question	Max. Marks	CO(s)
1.(a)	Mention four basic network topologies.	2	CO1
(b)	Mention any two different modes of wireless communication.	2	CO2
(c)	Five channels, each with a 100-kHz bandwidth, are to be multiplexed together. What is the minimum bandwidth of the link if there is a need for a guard band of 10 kHz between the channels to prevent interference?	2	CO1
(d)	Mention two types of multiplexing techniques used in communication.	2	CO1
(e)	Mention any two addressing schemes used in an internet employing the TCP/IP protocols.	2	CO2
2.(a)	What is OSI model? Discuss layers associated with it.	5	CO1
(b)	Explain the principal of optical fibre communication and briefly describe its different modes.	5	CO1
3.(a)	Explain TCP/IP model in brief and mention layers associated with it.	5	CO2
(b)	Four 1-kbps connections are multiplexed together. A unit is 1 bit. Find (a) the duration of 1 bit before multiplexing, (b) the transmission rate of the link, (c) the duration of a time slot, and (d) the duration of a frame.	5	CO1
4.(a)	What is the concept of redundancy in error detection? Explain two methods of error checking.	5	CO2
(b)	Explain the functions and requirements of DLL protocols.	5	CO2