

**GIET UNIVERSITY, GUNUPUR – 765022**

B. Tech (Fifth Semester Regular) Examinations, December – 2023

21BCSPC35001 – Computer Networks

(CSE,CSE(DS))

Time: 3 hrs

Maximum: 70 Marks

Answer all questions**(The figures in the right hand margin indicate marks)****PART – A****(2 x 5 = 10 Marks)**Q.1. Answer **ALL** questionsCO # Blooms
Level

- a. What are the components of data communication? CO1 K1
- b. How many links are required to make mesh topology if number of nodes are 7 ? CO2 K3
- c. Find the parity of the data words “10101” and “0000”. CO2 K3
- d. What is the class of following IP addresses?
127.48.255.0 , 240.33.3.0 , 195.46.5.5 and 165.255.255.7 CO3 K2
- e. Write the functions of Transport layer. CO4 K2

PART – B**(15 x 4 = 60 Marks)**Answer **ALL** questionsMarks CO # Blooms
Level

2. a. By using Unipolar RZ, Polar-NRZ, Bipolar-RZ, NRZ-I and Manchester encoding techniques, encode the following binary data to digital signal
1110010. 7 CO2 K2
- b. What are different transmission modes used in computer network? Explain with example. 8 CO2 K1
- (OR)
- c. What are analog modulation techniques? Explain with example. 7 CO1 K1
- d. Write short notes on Guided media used for data communication. 8 CO2 K2
- 3.a. Define checksum and prove that the data
10011001111000100010010010000100 with 4 blocks and each block having
8 bits has no error at receivers end. 8 CO2 K3
- b. Differentiate between stop and wait ARQ and selective repeat ARQ. 7 CO2 K2

(OR)

c.	Apply CRC method to check whether the data 11100101 is having any error or not where the divisor polynomial is given as X^3+X+1 .	8	CO3	K3
d.	Using Hamming code techniques find out error and correct the error if data sent is 100100 and data received is 101100.	7	CO2	K3
4.a.	What is Ethernet? Describe the different fields of the Ethernet Packet.	7	CO3	K1
b.	How do the Frame relay use in virtual circuit switching ?	8	CO3	K2
(OR)				
c.	Draw the IPv4 Datagram format and define the role of each field.	8	CO3	K2
d.	Explain the role of ATM as physical layer carriers.	7	CO3	K1
5.a.	Draw the TCP datagram format. Explain functions of all the fields in detail.	7	CO4	K2
b.	Describe FTP role in application layer.	8	CO4	K1
(OR)				
c.	How congestion control is related to quality of service ?	7	CO4	K1
d.	Write short notes on Quality of service	8	CO4	K1

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