Student Name: University Roll No.:	Printed Pages:1

School of Engineering
First Theory Sessional Examination
Odd Semester (AS: 2024-25)

B. Tech: CSE **[Year: 3]** **[Semester : V]**

Course Title: Computer Network Course Code: BCS3503	Max Marks: 30 Time: 1*hrs*

Instructions: *1-Mention any assumptions made.*
2-Notations have usual meaning.

SECTION 'A' **Q.N.1. Attempt all parts of the following:**		**Course Objective**	**Marks**
a)	List various method used in framing.	**CO3**	**1**
b)	A host communicates with another host using TCP/IP protocol suite. What is the unit of data sent by received at each of the following layer? a. N/W Layer b. Data Link Layer	**CO4**	**1**
c)	Differentiate between IP address and MAC address?	**CO1**	**1**
d)	Consider an extremely noisy channel in which the value of single to noise ratio is zero and bandwidth of the channel is 3000Hz. Find the capacity of this noisy channel.	**CO2**	**1**
e)	Define Block coding and its purpose.	**CO3**	**1**
SECTION 'B' **Q.N.2. Attempt any two parts of the following:**		**Course Objective**	**Marks**
a)	Explain OSI reference model with the help of diagram. Discuss function of each layer. List the merits and demerits of OSI model?	**CO4**	**7.5**
b)	Explain design issues of data link layer and also explain different framing methods?	**CO2**	**7.5**
c)	Show the comparative analysis of different switching techniques?	**CO6**	**7.5**
d)	Explain OSI reference model with the help of diagram. Discuss function of each layer. List the merits and demerits of OSI model?	**CO4**	**7.5**

SECTION 'C' Q.N.3. Attempt any one parts of the following:		Course Objective	Marks
a)	Find the hamming distance between two pairs of words: a. 000 and 011 b. 10101 and 11110 The code word is received as 1100100101011. Check whether there are errors in the received code word, if the division is 10101.	CO3	10
b)	Write short notes on: a. TCP/IP and OSI Model b. LAN Protocols and ISDN	CO4	10
c)	What is multiplexing and explain its types briefly?	CO1	10

Table 1: Mapping between COs and questions

(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	2	11
CO2	2	8.5
CO3	3	12
CO4	3	18.5
CO6	1	7.5