School of Engineering

Second Sessional Examination, Odd Semester (AS: 2023-24)

B. Tech: CSE, CCML, AI **Year: III**	**Semester: V**
Course Title: Computer Networks	**Max Marks: 60**
Course Code: BCS-3503	**Time: 3*hrs***

Instructions if any: Read the question Carefully.

	SECTION 'A' **Q.N.1. Attempt all parts of the following:**	**Course Objective**	**Marks**
a)	What are the different Transmission Media?	CO1	1
b)	Define Full Duplex Transmission Mode.	CO1	1
c)	What do you mean by Cyclic Redundancy Check?	CO1	1
d)	Define FDMA.	CO6	1
e)	What are the responsibilities of Transport Layer?	CO3	1
f)	Define Remote Procedure Call.	CO5	1
g)	Define HTTP.	CO6	1
h)	Write the features of FTP.	CO6	1
	SECTION 'B' **Q.N.2. Attempt any two parts of the following:**	**Course Objective**	**Marks**
a)	Compare the OSI Model and TCP/IP Model and also discuss the advantages and disadvantages of each.	CO3	6
b)	Compare and Contrast Pure ALOHA and Slotted ALOHA with proper flow diagram.	CO6	6
c)	Describe Carrier Sense Multiple Access with Collision Detection with Flow Diagram.	CO2	6
d)	Sketch the IPv4 header neatly and explain the function of each field. List major differences between IP V_4 and IPV_6.	CO4	6
	SECTION 'C' **Q.N.3. Attempt any two parts of the following:**	**Course Objective**	**Marks**
a)	Compare Packet Switching, Message Switching and Circuit Switching with proper diagram.	CO1	5
b)	What are the functions and design issues of Application Layer?	CO3	5
c)	What do you understand by Congestion Control Mechanism? Explain each of them.	CO5	5
a)	Find the CRC for the data 1010101010 with the divisor x^3+x+1	CO1	5
b)	Explain Leaky Bucket Algorithm. What are the limitations of the Leaky Bucket Algorithm?	CO5	5
c)	Illustrate the scenarios for establishing a connection using Three Way Handshake.	CO5	5
	Q.N.5. Attempt any two parts of the following:		
a)	Explain TCP Header Format.	CO4	5
b)	Compare Go-Back-N-ARQ and Selective Repeat Protocol.	CO2	5
c)	Explain File Transfer Protocol with its Advantages and Disadvantages.	CO2	5
	Q.N.6. Attempt any two parts of the following:		
a)	Describe UDP Header Format.	CO4	5
b)	Describe Carrier Sense Multiple Access with Collision Avoidance with Flow Diagram.	CO2	5
c)	If an organization has an IP address 200.200.200.200. Answer the following: (i) Class of the IP (ii) Calculate Network ID. (iii) Subnet Mask (iv) Number of Usable Host (v) Broadcast ID	CO6	5

Table 1: Mapping between COs and questions
(Number of COs may vary from course to course)

COs	Questions Numbers	Total Marks
CO1	Q1a), b), c), Q3a), Q4a)	13
CO2	Q2c), Q5b), c), Q6b)	21
CO3	Q1e), Q2a), Q3b)	12
CO4	Q2d), Q5a), Q6a)	16
CO5	Q1f), Q3c), Q4b), c)	16
CO6	Q1d), g), h), Q2b), Q6c)	14

OK
PKSinha
22/11/2023