Date: **Reg.No:**

FRANCIS XAVIER ENGINEERING COLLEGE
(An Autonomous Institution)
Tirunelveli-627003
Department of Computer Science and Engineering
CONTINUOUS ASSESSMENT TEST -II
Month & Year: November & 2022
Year/ Semester: Third Year/ Fifth Semester
Academic Year: 2022-2023/ODD
Course Code/Title: 19CS5602 COMPUTER NETWORKS
(Regulation 2019)

Time: Three hours **Maximum: 100 Marks**

Answer ALL Questions

PART – A (10 x 2 = 20 Marks)

Q.No	Question	Max. Marks	CO-K Level	PO-PI Code
1.	What is the purpose of including the IPv4 header and the first 8 bytes of datagram data in the error-reporting ICMPv4 messages?	2	CO3-K2	2.2.4
2.	What are the metrics used in determining the best path for a routing protocol?	2	CO3-K2	2.2.4
3.	UDP is a message-oriented protocol. TCP is a byte-oriented protocol. If an application needs to protect the boundaries of its message, which protocol should be used, UDP or TCP?	2	CO4-K4	2.2.4
4.	Compare the TCP header and the UDP header. List the fields in the TCP header that are missing from UDP header. Give the reason for their absence.	2	CO4-K2	1.3.1
5.	Differentiate Connectionless and Connection-Oriented Services of transport layer protocols.	2	CO4-K2	1.3.1
6.	What is the major difference between Integrated Services and Differentiated Services?	2	CO4-K2	1.3.1
7.	Classify the types of WWW documents.	2	CO5-K2	2.2.3
8.	What are the parts of a browser?	2	CO5-K2	2.2.3

9.	Write short notes on SSL.	2	CO5-K2	2.2.3
10.	How is HTTP related to WWW?	2	CO5-K2	2.2.3

PART – B (5 x 13 = 65 Marks)

Q.No.	Question	Max. Marks	CO-K Level	PO-PI Code
11 (a)	List three transition strategies to move from IPv4 to IPv6. Explain the difference between tunneling and dual stack strategies during the transition period. When is each strategy used?	13	CO3-K4	2.2.4
	(Or)			
(b)	Explain LSP routing algorithm with its protocol in detail.	13	CO3-K2	1.3.1
12 (a)	Analyze the various unicast routing algorithms and explain the routing that is not based on least-cost routing.	13	CO3-K4	2.2.4
	(Or)			
(b)	Describe in detail about ICMP.	13	CO3-K2	1.3.1
13(a)	Is TCP connection oriented or connection-less protocol? Justify your answer.	13	CO4-K4	2.2.4
	(Or)			
(b)	Identify and explain the various functionalities of SCTP.	13	CO4-K2	1.3.1
14a)	Discuss in detail the various congestion control mechanisms in TCP.	13	CO4-K2	1.3.1
	(Or)			
(b)	Infer how to improve QoS.	13	CO4-K2	1.3.1
15 (a)	Write brief notes on WWW architecture and also describe how HTTP is related to WWW.	13	CO4-K2	1.3.1
	(Or)			
(b)	Explain in detail about Domain Name System.	13	CO4-K2	1.3.1

PART – C (1 x 15 = 15 marks)

Q.No.	Question	Max. Marks	CO-K Level	PO-PI Code
16 (a)	Analyze the message format and the message transfer and the underlying protocol involved in the working of electronic mail.	15	CO5-K4	2.2.4
	(Or)			
(b)	What do you mean by firewall? How the firewall works in computer networks? And also explain how it protects the network from unauthorized access by the intruder.	15	CO5-K4	2.2.4

Bloom's Taxonomy Level wise Marks and Course Outcome wise Marks Distribution Analysis:

Competence level	Blooms' Taxonomy	Question No.	Marks	BTL Contribution in %	Course Outcome	Marks	CO Contribution in %
K1	Remember				CO1		
K2	Understand	**1,2,4,5,6,7,8,9,10,11b,12b,13b, 14a,b,15a,b**	**109**	**60.6**	CO2		
K3	Apply				CO3	56	31.1
K4	Analyse	**3,11a,12a,13a,16a,16b**	**71**	**39.4**	CO4	60	33.3
K5	Evaluate				CO5	64	35.6
K6	Create						
Total			**180**	**100**		**180**	**100**

Prepared By **Verified By** **Approved By**