

Register No : _____

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

BE/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fifth Semester

Information Technology

CS3591-Computer Networks
(Common to Computer science and engineering)
&
(Fourth Semester Artificial intelligence & Data Science)
Regulations - 2021

Duration : 3 Hrs

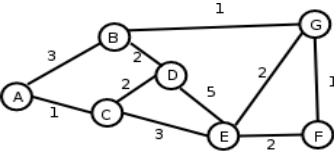
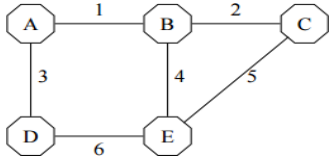
Maximum: 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Compare LAN and WAN.	UN	1	2
2.	List the two types of DNS message.	RE	1	2
3.	Name the techniques and policies that can prevent(avoid)congestion.	RE	2	2
4.	Differentiate congestion control and flow control.	UN	2	2
5.	What is subnetting?	RE	3	2
6.	What are the differences between IPV4 and IPV6?	UN	3	2
7.	Write the difference between distance vector routing and link state routing.	UN	4	2
8.	What is a path vector routing protocol?	RE	4	2
9.	List out the functions of data link layer.	RE	5	2
10.	What do you mean by CSMA protocol?	RE	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Discuss in detail about the layers in OSI model. Or	UN	1	13
	b i Discuss how the Simple Mail Transfer Protocol (SMTP) is useful in electronic mail.	UN	1	9
	ii Explain a b o u t H T T P . Give their uses, state strengths and Weaknesses.	RE	1	4
12.	a Discuss congestion avoidance algorithm like DEC bit method and Random early detection in transport layer with an example. Or	UN	2	13

- b Explain the significance of Clark's solution and Nagle's algorithm. UN 2 13
13. a i List the difference between Packet Switching and Circuit switching. RE 3 4
 ii Explain in detail about DHCP. UN 3 9
- Or
- b Explain in detail about: i) ARP ii) RARP. UN 3 13
14. a Explain Link state routing with Dijkstra's algorithm for the following graph. AP 4 13
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- Or
- b Explain Distance Vector Routing Algorithm for the graph given below AP 4 13
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15. a Describe the CSMA/CD protocol and comment on its performance for medium access. AN 5 13
- Or
- b The message $X^5 + X^4 + X$ 11001001 is to be transmitted, using CRC error detection algorithm. Assuming the CRC polynomial to be $X^3 + X^2 + 1$, determine the three-bit CRC code that should be appended to message. AP 5 13

*PART - C (Marks 1*15 = 15)*

Q.No	Questions	BLT	CO	Marks
16. a	Explain in detail the operation of OSPF protocol by considering a suitable network.	UN	3	15
Or				
b	What are the two broad categories of congestion control mechanisms?	AN	5	15