

**ANURAG Engineering College**

(An Autonomous Institution)

III B.Tech I Semester Supplementary Examinations, Dec-2023/Jan-2024

**COMPUTER NETWORKS**

(COMPUTER SCIENCE AND ENGINEERING)

**Time: 3 Hours****Max.Marks:75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Outline the different ways of communication in networks.	CO1	L2	2M
2. What is the difference between a port address, a logical address, and a physical address?	CO1	L1	3M
3. Infer the differences between fixed size framing and variable size framing.	CO2	L2	2M
4. Compare and contrast byte-stuffing and bit-stuffing.	CO2	L2	3M
5. Show how the address <b>47:20:1B:2E:08:EE</b> is sent out online.	CO3	L2	2M
6. Interpret the differences between hub, switch and router.	CO3	L2	3M
7. Find the error, if any, in the following IPv4 addresses. i) 111.56.045.78    ii) 221.34.7.8.20    iii) 75.45.301.14 iv) 11100010.23.14.67	CO4	L1	2M
8. Find the class of each address. i) 00000001 00001011 00001011 11101111 ii) 11000001 10000011 00011011 11111111 iii) 14.23.120.8 iv) 252.5.15.111	CO4	L1	3M
9. Draw the architecture of WWW.	CO5	L1	2M
10. List and explain the purpose of well-known port numbers used by FTP in TCP	CO5	L2	3M

**Section B (Essay Questions)****Answer all questions, each question carries equal marks.****(5 x 10M = 50M)**

11. A) Compare OSI reference model with Internet protocol suite. Interpret your observations. Also discuss which layers in each model offer same kind of service.	CO1	L2	10M
<b>OR</b>			
B) i) Distinguish between the guided transmission media and wireless transmission media. Explain briefly. Also describe the advantage of twisting in twisted pair. ii) Name the Topologies used in networks and explain any two.	CO1	L2	6M
12. A) i) Find CRC encoder and decoder considering data word 101001111 and the divisor 10111. Generate the transmitted message at the sender and verify the correctness of the received message. ii) Explain HDLC basic frame structure.	CO2	L2	5M
<b>OR</b>			
B) i) Explain the concepts of pure ALOHA and slotted ALOHA with neat diagrams. ii) Identify the mechanism of simplex stop & wait with neat sketches.	CO2	L2	5M
	CO2	L3	5M

13. A) Summarize the uses of Ethernet and also explain any two types of Ethernet. CO3 L3 10M
- OR**
- B) Explain the architecture and layers of Bluetooth. CO3 L2 10M
14. A) Explain in brief Distance vector Routing algorithm with suitable example. CO4 L2 10M
- OR**
- B) Draw the structure of TCP segment format and explain briefly. CO4 L2 10M
15. A) Infer the use of DNS and Illustrate briefly about Domain Name Space. CO5 L2 10M
- OR**
- B) Explain HTTP. And also, briefly describe how HTTP is similar to SMTP and FTP. CO5 L2 10M