

SEMESTER Jan –June

2023

## SAGAR INSTITUTE OF SCIENCE & **TECHNOLOGY**

## DEPARTMENT OF COMPUTER SCIENCE $\mathbf{A}$

ND	ENG	INEEF	RING	

FORM NO	
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NAME OF THE FACULTY: PROF. VISHAL CHOURASIA SUBJECT/CODE: COMPUTER NETWORKS / (CS-602)

## UNIT -3

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S. No	Questions	Bloom's Taxonomy Level	COs			
1	Explain CSMA protocol with collision detection and avoidance.	2 (Understand)	CO2			
2	Consider a slotted ALOHA having five stations. If the offered load $G_1 = 0.1$ , $G_2 = 0.15$ , $G_3 = 0.2$ , $G_4 = 0.25$ , and $G_5 = 0.3$ packets, find the individual throughput of each station and channel throughput.	3 (Apply)	CO2			
3	Make a comparison between pure ALOHA, Slotted ALOHA and CSMA/CD.	2 (Understand)	CO2			
4	Differentiate between 802.3, 802.4 and 802.5 IEEE standard.	2 (Understand)	CO2			
5	Explain the Frame format of IEEE 802.4 (token bus) protocol.	2 (Understand)	CO2			
6	A 2km long broadcast LAN has 10 <sup>7</sup> b/s BW & use CSMA/CD. The signal travel along the wire at 2*10 <sup>8</sup> m/s. What's the min packet size that can be used on this network?	3 (Apply)	CO2			
7	How does adaptive tree walk protocol works?	1(Remember)	CO2			
8	Derive an expression to prove that throughput of "slotted ALOHA" is approximately twice than throughput of "PURE ALOHA".	3 (Apply)	CO2			
9	What do you mean by Medium Access Control sub layer? Why do we need it? Explain MAC addressing.	2 (Understand)	CO2			
10	Write short note on following:  • Basic Bit Map  • Binary Count Down	2 (Understand)	CO2			