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Mid-Term Examinations – November- December 2022

Programme	:	**B.Tech. [CSE]**	Semester	:	**Interim 2022-23**
Course Title/ Code	:	**Computer Networks/ CSE3006**	Slo	:	**C21+C22+C23+C24+C25**
Time	:	**1 ½ hours**	Max. Marks	:	**50**

Answer all the Questions

Q.No.	Sub. Sec.	Question Description	Marks
1		Illustrate the ISO/OSI layers protocol functionalities with detailed diagrams and Compare with TCP/IP reference model.	**10**
2		Determine and analyze the computer network performance thorugh different parameters with suitable exampels.	**10**
3	(a)	Examine the efficiency of data transmission in Virtual Circuit Switching technology with neat diagrams.	**6**
	(b)	Design a three-stage, 200x200 switch (N=200) with k=4 and n=20 and find the number of cross points, where 'k' is the number of crossbars and 'n' is the number of lines in a group.	**4**
4		Suppose if the sender transmitting the data **1101011011** with the encoding funciton $G(x) = x^4+x+1$, then apply the CRC methodology for transmitting bit stream and show that with example how the receiver find the transmitted data stream with error and without error.	**10**
5		Demonstrate the functionalities of different ALOHA multiple access protocols and compare the following parameters. (i) Vulnerable Time (ii) Maximum Throughput (iii) Successfull transmission of Data Frame	**10**

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