Reg. No.:

Name :

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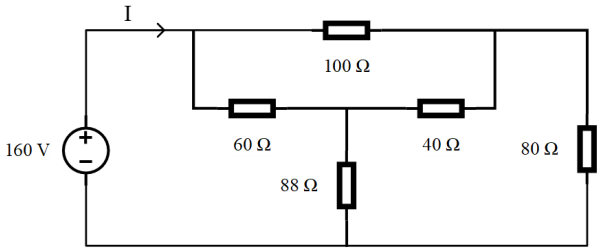
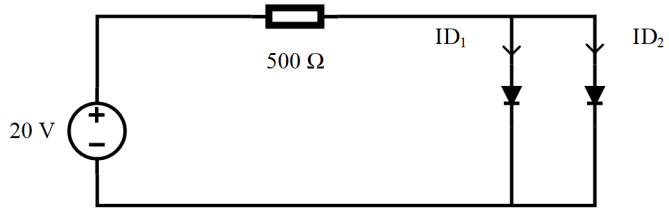
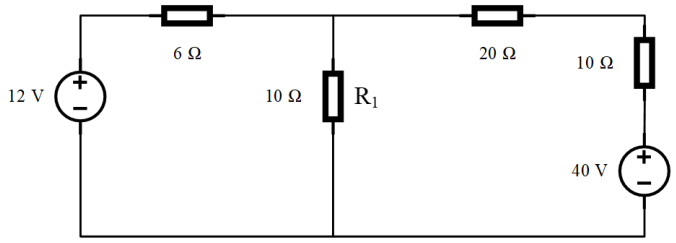
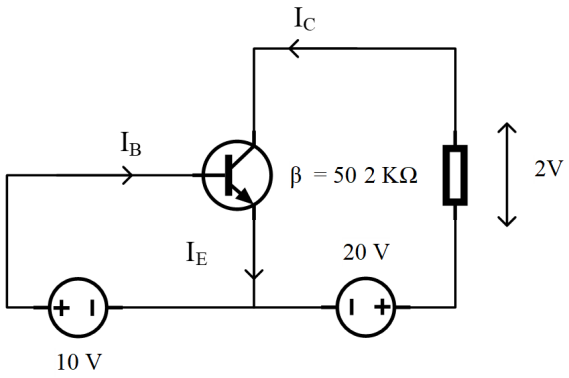
Mid-Term Examinations – October 2021

Programme	:	**B.Tech**	Semester	:	**Fall 2021-22**
Course	:	**Electric Circuits and Systems**	Code	:	**EEE1001**
Faculty	:	**Dr. Abhishek Joshi**	Slot/ Class No.	:	**D11+D12+D13/0602**
Time	:	**1 ½ hours**	Max. Marks	:	**50**

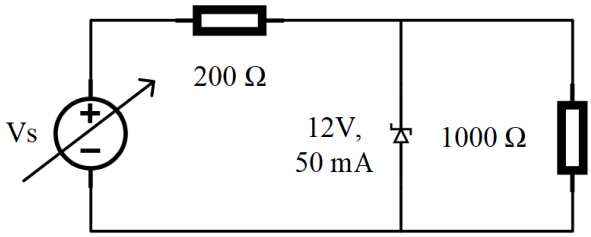
Answer all the Questions

Q.No.	Sub. Sec.	Question Description	Marks
1	(a)	Find the value of current I in the circuit. 	**5**
	(b)	Find the current through each diode in the circuit shown in Figure. Assume diodes are made of Silicon with no internal resistance. 	**5**
2	(a)	Find the voltage across resistance R_1 using mesh analysis. 	**5**
	(b)	Use De Morgan's law to simplify the following expression: ((A' + C) (B + D'))'	**5**
3	(a)	For the BJT circuit shown in the Figure, Find the values of I_C and I_E.	**5**

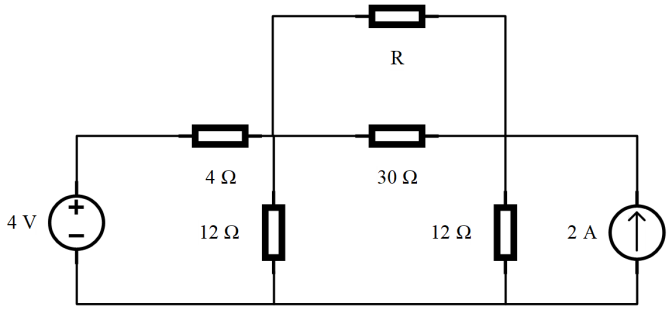


(b) Convert decimal fraction (0.865) into its Binary, Decimal and Octal equivalent. Mention conversion steps. **5**

4 Find the minimum and maximum values of source voltage can be applied to obtain regulated voltage output through Zener diode. **10**



5 For the circuit shown in Figure, find the Thevenin equivalent as viewed by the resistance R. Find the value of R for maximum power dissipation in it and the value of the power. **10**



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