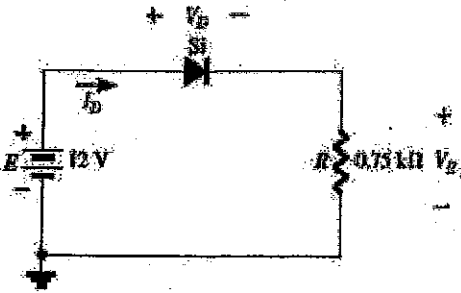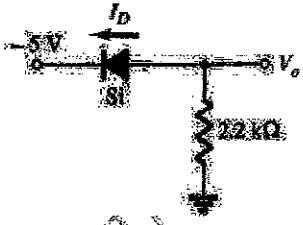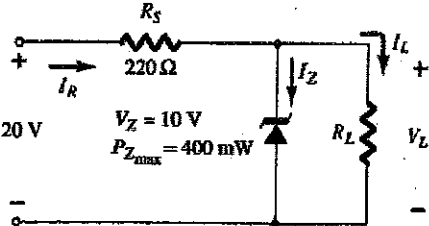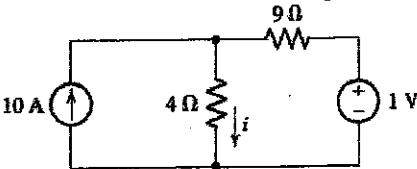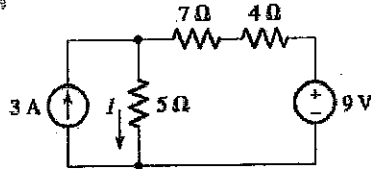| Q.No	Question	CO	Marks
Q.3	A. Using the load-line analysis, determine I_D, V_D and V_R for the circuit using a conventional Si diode characteristic. B. Determine the level of V_o for network using diode equivalent circuit in forward-bias condition.	CO-2	2+2
Q.4	What do you mean by rectification? Draw the circuit diagrams for full-wave rectifier and half-wave rectifier along with wave forms.	CO-3	4
Q.5	Determine V_L, I_L, I_Z, and I_R for the network.	CO-3	4
Q.6	Define/Explain the following terms in brief. 1. Open Circuit and Short circuit 2. Linear and Non-linear devices 3. Minority and Majority Carriers 4. Conductors and Semiconductors 5. Ideal Diode and Practical Diode	CO-3	5

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COURSE CODE(CREDITS): 25B11EC111(4)   MAX. MARKS: 25

COURSE NAME: Basic Electronics

COURSE INSTRUCTORS: RKU, SHR, HSL, SWT, SRU, NTJ, ALK, PRG   MAX. TIME: 1hr. 30min

Note: (a) All questions are compulsory.   (b) The candidate is allowed to make suitable numeric assumptions wherever required for solving problems. (c) Scientific Calculator is allowed.

Q.No	Question	CO	Marks
Q.1	A. Use Superposition principle to find i in the circuit.	CO-1	2+2
	B. Determine the current labeled I in the circuit by converting it into a simple circuit consisting of a voltage source and a resistor along with 5Ω using Source Transformation.		
Q.2	A. Given a diode current of 8 mA and n = 1, find I_s if the applied voltage is 0.5 V and the temperature is room temperature (25°C).	CO-2	2+2
	B. Give the expressions for different resistance levels along with diagrams for a pn junction diode characteristic in forward bias region.		