

**Enroll No**

Course Code: ECMD201 Course: Electronics Devices &amp; Applications

Day & Date: Wednesday 13/08/2025Time : 3:45 To 4:45

Max Marks- 25

**Instructions:** 1. All questions are compulsory.

2. Figures in rounded ( ) brackets within the question, indicate the scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.

3. CO is the index number of the Course Outcome statement.

4. The Bloom's taxonomy level (BL) for 1, 2, 3, 4, 5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.

5. Assume suitable data if necessary.

6. Use of non-programmable calculator is allowed.

**Solve the Following**

			<b>Marks</b>	<b>COs</b>	<b>BL</b>
Q.1	A	Differentiate between Passive and Active Electronics components (3). Describe types of resistors. (4)	7M	CO1	L2
	B	Elaborate the P-N junction diode with its construction (2), biasing (3), and V-I characteristics (1M).	6M	CO2	L2
<b>OR</b>					
	B	Elaborate working of Half wave rectifier (2) with the help of circuit diagram (2). Also sketch input and output waveform. (2)	6M	CO2	L2
Q.2	A	Illustrate working of PNP and NPN transistor.	6M	CO1	L2
	B	Derive the current equation for Common Emitter and Common Collector configuration.	6M	CO2	L3
<b>OR</b>					
	B	Derive the relation between current gain $\alpha$ , $\beta$ and $\gamma$ for the transistor.	6M	CO2	L3

