

GUJARAT TECHNOLOGICAL UNIVERSITY

B.VOC- SEMESTER-I EXAMINATION – WINTER 2025

Subject Code:1110702

Date:29-11-2025

Subject Name: Fundamental of Analog Electronics

Time:10:30 AM TO 12:30 PM

Total Marks:50

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) Explain N-type semiconductor.	05
	(b) Explain Energy band diagram of conductor, insulator and semiconductor.	05
Q.2	(a) Explain Zener diode with characteristics.	05
	(b) Explain Full Wave rectifier with filter.	05
	OR	
	(b) Explain Half Wave rectifier without filter.	05
Q.3	(a) Derive relationship between α & β .	05
	(b) Explain transistor as a switch.	05
	OR	
Q.3	(a) Explain Common Emitter configuration.	05
	(b) Explain DC load line of transistor.	05
Q.4	(a) Compare CB, CE & CC configuration of transistor.	05
	(b) Compare BJT & FET.	05
	OR	
Q.4	(a) Explain need of biasing for transistor.	05
	(b) Explain N-Channel JFET with circuit diagram.	05
Q.5	(a) Define Pinch off voltage, Drain to Source saturation current.	05
	(b) Draw & Explain Block diagram of Regulated Power Supply.	05
	OR	
Q.5	(a) Explain N-Channel MOSFET with circuit diagram.	05
	(b) Explain Working of Voltage regulator IC 7905.	05
