GIET UNIVERSITY, GUNUPUR – 765022

B. Tech – 1st Semester (2023-2024): CYCLE TEST - II

BESBS1032– Basic Electrical and Electronics Engineering

(Common to all branches)

Time: 1.30 hrs | Maximum: 30 Marks

PART – A (2 x 5 = 10 Marks)

Q.1. Answer ALL questions		CO#	Blooms Level
a.	Provide concise definitions for knee voltage and static resistance	4	2
b.	Differentiate between P-type and N-type Semiconductors. Also name the doping materials used for their formation?	4	2,3
c.	What is a biased clipper?	4	2
d.	What are the Universal gates. Explain one Universal gate, providing its truth table as an example.	5	1, 2
e.	Provide examples of two practical applications for a function generator.	5	3

PART – B (10 x 2 = 20 Marks)

Answer ALL Questions		Marks	CO#	Blooms Level
2.a.	With a neat circuit diagram and waveforms explain the working of full wave bridge rectifier.	5	4	3,2
b.	What is a clamper? Explain working of a positive clamper with suitable diagram.	5	4	3,2
	(OR)			
c.	Explain VI Characteristic of a Semiconductor Diode with suitable graph.	5	4	3,2
d.	Explain the working of positive clamping circuit.	5	4	2
3.a.	Convert the following: (i) $(3A6.C58D)_{16} = (?)_8$, (ii) $(0.6875)_{10} = (?)_2$ (iii) Compute the 2's complement of $(101010)_2$.	5	5	3,4
b.	Explain working of a digital oscilloscope with suitable block diagram.	5	5	2,3
	(OR)			
c.	Convert the following: (i) $(1AD.E0)_{16} = (?)_{10} = (?)_8$, (ii) $(356.15)_8 = (?)_2 = (?)_{10}$ (iii) Compute the 2's complement of $(111001)_2$.	5	5	3,4
d.	Explain different parts of a CRO with suitable block diagram.	5	5	2

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