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Examination: Odd Semester Examination 2022

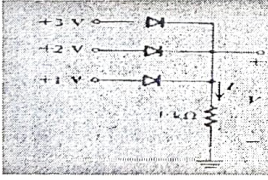
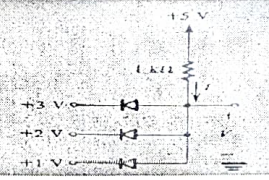
Paper Name: Analog Electronics
Time: 3 Hours

Paper Code: BTCSE-301/ BTCSEAI-301
Maximum Marks: 75

Section A

(7 x 5 = 35)

Note: Attempt all the questions

Q. No.	Question	Marks	CO	BL
1.	Explain Characteristics of Zener diode.	5	CO1	BL3
2.	Determine the emitter current- I_E , collector current- I_C for transistor with $\alpha = 0.97$ and collector to base leakage current 10 μA . Base current is 50 μA .	5	CO2	BL5
3.	Construct and evaluate the gain of an integrator using op-amp.	5	CO4	BL4
4.	Compare and contrast BJT and MOSFET.	5	CO3	BL4
5.	Discuss ideal characteristics of an op-amp.	5	CO4	BL3
6.	Draw and explain Schmitt Trigger circuit.	5	CO5	BL3
7.	Find the values of I and V in the circuit shown in Fig.   Fig.(a) Fig.(b)	5	CO1	BL5

Section B

Note: Attempt any four (4) Questions

(4x10=40)

Q. No.	Question	Marks	CO	BL
1.	Draw and find dc value of current, voltage, efficiency and ripple factor of a full wave rectifier.	10	CO1	BL5
2.	Draw and explain input and output characteristics of CE amplifier.	10	CO2	BL4

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3.	Explain construction and working of enhancement mode MOSFET.	10	CO3	BL3
4.	Explain all four modes of differential amplifier with the help of a neat diagram.	10	CO4	BL3
5.	Draw and deduce the gain of an instrumentation amplifier.	10	CO5	BL5
6.	Write a short note on any two of the followings: a. Clipper b. Clamper c. Light Emitting Diodes (LED) d. Depletion MOSFET	10	CO3, CO5, CO1, CO2	BL2

BL: Blooms Taxonomy Level; (1-remembering, 2-understanding, 3-apply, 4-analyse, 5- evaluate, 6-create)