Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: 2020-2021	**School of Technology**	**Department: F.Y. B. Tech**
Course Code: FYT-1353	**Course Title: Elements of Electronics Engineering**	**Semester : I**
Day and Date:	**End Semester Examination Winter-2020**	**Time : 2 Hrs.** **Max Marks : 50**

Instructions: 1) All Questions are compulsory.

Q.1		**Answer/Solve the following (any Two)**	**Marks**	**Bloom's Level**	**CO**
	a)	With the help of neat circuit diagram explain I-V characteristics of PN Junction diode.	8	L_2	CO-
	b)	Define Transistor also with neat circuit diagram and input-output characteristics, explain the working of BJT (NPN) Common Base Configuration.	8	L_1	CO-
	c)	With the help of neat block diagram, explain the working of CRO, state its applications.	8	L_2	CO-
Q.2		**Answer/Solve the following (any two)**			
	a)	Find the Closed loop Voltage Gain of a Non-inverting Amplifier with the help of neat circuit diagram of Op-amp.	8	L_1	CO-
	b)	With the help of neat circuit diagram and derivation, explain the working of Op-amp as a Scaling Amplifier.	8	L_2	CO-
	c)	With the help of neat circuit diagram, derivation and waveform, explain the working of op-amp as a Differentiator.	8	L_2	CO-
Q.3		**Answer/Solve the following (any two)**			
	a)	Explain Need for Modulation, also types of Analog Communication AM, FM, and PM with Definition, Waveform and Applications.	9	L_2	CO-
	b)	Solve the following i) $(101.11)_2 \rightarrow (?)_{10}$ ii) $(10.4)_{10} \rightarrow (?)_8$ iii) $(254.655)_{10} \rightarrow (?)_{16}$	9	L_3	CO-
	c)	Construct basic gates using both NAND & NOR gate.	9	L_3	CO-

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