Sanjay Ghodawat University, Kolhapur   2018-19

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017 EXM/P/10/01

FY B.Tech.	School of Technology	Semester I
FYT 108(Old)	Elements of Electronics Engineering	Max Marks: 100
3ʳᵈ June 2019	End Semester Examination (ESE)	Time: 3 Hrs
Monday		10.30 am to 1.30 pm

Instructions for Students: 1) Use of calculator is not allowed
   2) All questions are compulsory

			Marks	COs
Q.1		**Solve any two**		
	a)	With the help of neat diagram and waveforms explain the working of Full Wave Rectifier with center tap configuration?	09	CO1
	b)	Compare Center tap & bridge configuration?	09	CO1
	c)	With the help of neat circuit diagram explain I-V characteristics of Zener diode? Explain, how it can be used as voltage regulator?	09	CO1
Q.2		**Attempt the following**		
	a)	With the help of neat circuit diagram and input-output characteristics, explain the working of BJT (NPN) CB configuration	08	CO2
	b)	With the help of neat circuit diagram and input-output characteristics, explain the working of BJT (NPN) common emitter configuration?	08	CO2
		OR		
	b)	With the help of neat circuit diagram, symbol & I-V characteristics, explain the working of Depletion type N-MOS	08	CO2
Q.3		**Attempt the following**		
	a)	With the help of symbol, logical equation & truth table, explain the working of AND, NAND, NOR & XOR gate.	08	CO3
	b)	Convert the following numbers		
		a) $(10111.1010)_2 \rightarrow (?)_8$ b) $(716.12)_8 \rightarrow (?)_2$	08	CO3
		c) $(625.25)_{10} \rightarrow (?)_2$ d) $(AC.F9)_{16} \rightarrow (?)_8$		
		OR		
	b)	With the help of symbol, logical equation & truth table, explain the working of NOT gate. Realize basic gates using NOR gates only.	08	CO3

ESE

Q.4		Solve any two	Marks	COs
	a)	With the help of neat circuit diagram, derivation and waveform, explain the working of op-amp as a differentiator?	09	CO4
	b)	With the help of neat circuit diagram, derivation and waveform, explain the working of op-amp as a integrator?	09	CO4
	c)	With the help of neat circuit diagram, derivation and waveform, explain the working of op-amp as a summing amplifier and unity gain amplifier?	09	CO4

Q.5		Attempt the following		
	a)	With the help of neat block diagram, explain the construction and the working of FM Transmitter.	06	CO5
	b)	Write short note on RADAR & Satellite communication.	10	CO5

<div align="center">OR</div>

	b)	With the help of neat block diagram, explain the construction and the working of AM Transmitter and AM Receiver?	10	CO5

Q.6		Attempt the following		
	a)	Compare Analog Multimeter with DMM (any 6 points)	06	CO6
	b)	With the help of neat block diagram, explain the working of CRO, Write any 2 applications of it.	10	CO6

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