Q.P. Code: **16EE207** **R16**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech II Year I Semester Supplementary Examinations Nov/Dec 2019
BASIC ELECTRICAL & ELECTRONICS ENGINEERING
(CSE, CSIT & AGE)

Time: **3 hours** Max. Marks: **60**

(Answer all Six Units **6 X 10 = 60** Marks)

PART-A

UNIT-I

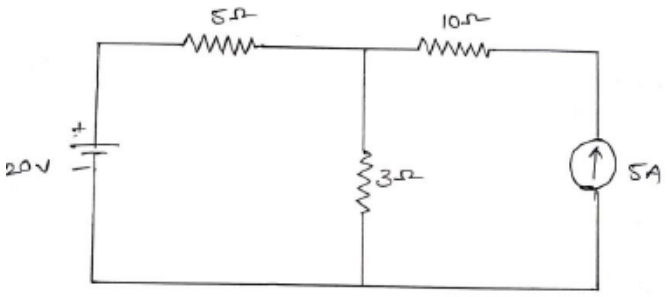
1	a	Define and Expain about ohms law.	**5M**
	b	Derive the expression for delta to star transformation for a resistive network.	**5M**

OR

2	a	Find the RMS value of a sine wave.	**5M**
	b	Find the average value of a sine wave.	**5M**

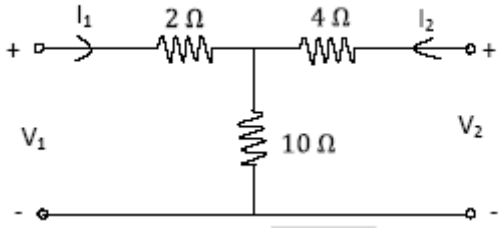
UNIT-II

3		Find the current passing through 3Ω Resistor for the circuit shown below in Fig by using Superposition Theorem?	**10M**



OR

4	a	Find the transmission parameters for the network shown below.	**5M**



	b	Define and explain about Impedance parameters.	**5M**

UNIT-III

5	a	Derive Torque equation of dc motor.	**5M**
	b	Calculate the value of Torque established by the armature of a 4-pole motor having 774conductors, 2 paths in parallel, 24mwb flux per pole when the total armature current is 50A.	**5M**

OR

6	a	Explain principle of operation of transformer.	**5M**
	b	Explain different losses in a transformer.	**5M**

PART-B

UNIT-IV

7	a	With a neat sketch explain the operation of Half-wave rectifier.	**5M**
	b	Derive an expression for ripple factor of a Half- wave rectifier.	**5M**
		OR	
8	a	Compare N-type and P-type semiconductor.	**5M**
	b	Define drift and diffusion currents.	**5M**

UNIT-V

9	a	Explain the working of the CB configuration of a BJT.	**5M**
	b	Derive the relationship between α and β of BJT configurations.	**5M**
		OR	
10	a	Describe the construction and explain the operation of depletion mode MOSFET.	**5M**
	b	Draw the static characteristics of MOSFET.	**5M**

UNIT-VI

11	a	List out the classification of oscillators circuits.	**5M**
	b	State the Barkhausen conditions for sinusoidal oscillation.	**5M**
		OR	
12	a	Explain the differential amplifier.	**5M**
	b	Explain the applications of OP-AMPS.	**5M**

***** END *****