

Course Code/Name : BE3252 Basic Electrical and Electronics Engineering
Regulation : 2021
Branch : CIVIL

UPC – Student Planner

Slot	Unit .No.	Name of the Unit	Questions	CO Mapping	Grade	
					A	B
1	I	Electrical Circuits	1. Problems based on Kirchhoff's Current law 2. Problems based on Kirchhoff's Voltage law 3. Problems based on mesh analysis 4. Problems based on nodal analysis 5. Problems based on RL, RC and RLC 6. Explain three phase power measurements	C111.1	1 2 3 4 6	5
2	II	Magnetic Circuits And Electrical Installations	1. Explain the magnetic flux, flux density and field strength 2. Explain the relation between B and H 3. Explain self and mutual induction in a magnetic circuits 4. Explain different types of wiring and cables 5. Explain different types of protective devices used in the electric circuits. 6. Explain different types of earthing used in the electric circuits.	C111.2	1 2 3 4 6	5
3	III	Electrical Machines	1. Construction, Working, Types and EMF equation of DC generator 2. Construction, Working, Types and Torque equation of DC Motor 3. Construction, Working, Types and EMF equation of Single phase Transformer 4. Construction, Working, Torque equation of Three phase alternator 5. Construction, Working, Torque equation of Three phase Synchronous motor 6. Construction, Working, Torque equation of Three phase Induction motor		1 2 3 4 5 6	
4	IV	Analog Electronics	1. PN junction Diode, Zener diode: Construction, Working, VI Characteristics and applications 2. CB and CE configurations of transistor 3. JFET: Construction, Working, VI Characteristics and applications 4. DEMOSFET: Construction, Working, VI Characteristics and applications 5. E-MOSFET: Construction, Working, VI Characteristics and applications 6. IGBT: Construction, Working, VI Characteristics and applications 7. Rectifier: Construction, working and output waveforms 8. Inverter: Construction, working and output waveforms	C111.3	1 2 4 5 7	3 6 8
5	V	Sensors And Transducers	1. Explain in detail about proximity sensors 2. Explain different type of valves and its applications 3. Explain piezoelectric, hall effect transducers 4. Explain photo sensors, Strain gauge 5. Explain LVDT, differential pressure transducer 6. Explain optical and digital transducers 7. Explain Smart sensors, Thermal Imagers.	C111.5	1 2 3 4 7	5 6
Part-A Questions						