H.T.No: | | | | | | | | | | | CourseCode:**241EE001**

ADITYA UNIVERSITY

B.Tech – I Semester End Examinations Regular (B.Tech2024)

BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

(Common to CE, ME, ECE, CSE & Min.E)

Time: 3 hours **Max. Marks: 50**

Answer ONE question from each unit
All Questions Carry Equal Marks
All parts of the questions must be answered at one place only

UNIT-I					
1	a	State and Explain Ohm's Law and its limitations	L1	CO1	[4M]
	b	Define RMS value and derive the expression for the same of a sinsuidal alternating quantity	L2	CO1	[6M]
		(OR)			
2	a	State and Explain Kirchhoff's laws with examples	L2	CO1	[5M]
	b	Define Average value and derive the expression for the same of a sinsuidal alternating quantity	L2	CO1	[5M]
UNIT-II					
3	a	With a neat sketch explain working principle of DC motor.	L2	CO2	[5M]
	b	Explain the working principle of Megger with neat diagram	L2	CO2	[5M]
		(OR)			
4	a	With a neat sketch explain working principle of Induction motor	L2	CO2	[5M]
	b	Explain the Wheatstone Bridge with neat diagram	L2	CO2	[5M]
UNIT-III					
5	a	Draw and explain the schematic diagram of a Hydroelectric Power Plant	L2	CO3	[6M]
	b	Explain the working principle of Fuse with neat diagram	L2	CO3	[4M]
		(OR)			
6	a	Draw the neat schematic diagram of a Thermal Power Plant	L2	CO3	[5M]
	b	Explain the working principle of MCB with neat diagram	L2	CO3	[5M]
UNIT-IV					
7	a	What is PN Diode and explain its Characteristics with neat diagram.	L2	CO4	[5M]
	b	Explain CE configuration of BJT	L2	CO4	[5M]
		(OR)			
8	a	Explain the working of NPN transistor with neat diagram.	L2	CO4	[5M]
	b	Explain CC configuration of BJT	L2	CO4	[5M]

UNIT-V

9	a	Explain Full wave Rectifier with neat diagram	L2	CO5	[6M]
	b	Convert i) (3F4)16 = ( )10 ii) (22)10 = ( )2 iii) (56)8 = ( )10 iv)(1101)2 = ( )10	L3	CO5	[4M]
		(OR)			
10	a	Explain DC regulated supply block diagram with neat sketch	L2	CO5	[5M]
	b	Explain Full adder circuit with the help of truth tables	L2	CO5	[5M]