

Maharashtra Institute of Technology, Aurangabad

(An Autonomous Institute)

END SEMESTER EXAMINATION

Second Year B.Tech (ECE) -Feb/Mar 2023

Course Code :ECE201

Course Name : Electronic Design Technology

Duration : 2 Hrs

Max. Marks : 50

Instructions :

Date : 03 FEB 2023

- i) All questions are compulsory
 ii) Assume suitable data wherever necessary and clearly state it
 iii) Figures to right indicate full marks

Q. 1	Answer any five(Marks:10)	Marks	CO	BL	PI
a)	What are the features of ULN2003?	2	4	2	1.3.1
b)	Compare Electromechanical Relay and Solid State Relay?	2	4	2	1.3.1
c)	List out the features of LM317 IC	2	3	2	1.3.1
d)	What are the applications of LM1117 IC	2	3	2	1.3.1
e)	Give the difference between positive and negative voltage regulator?	2	3	2	1.3.1
f)	What is biasing? What are the types of transistor biasing?	2	1	2	1.3.1
g)	List out the applications of touch sensor?	2	5	2	1.3.1
h)	Mention the PCB etching material?	2	5	2	1.3.1
Q.2	Explain I/P and O/P characteristics of Common Base Configuration. OR(optional) Explain the design steps of common emitter amplifier in detail.	8	1	2	3.2.1
Q.3	Design a power amplifier using TBA810 for output power of 4W at 8 ohm load, it provides gain of 100, input resistance greater than 100Kohm with bandwidth 20Hz to 20KHz. OR(optional)	8	2	2,3	3.2.1

	Explain the working of OP-AMP IC725 as audio power amplifier.				
Q.4	Using the 7805C voltage regulator design current source that will deliver 150mA current to the 8 ohm load. OR(optional) Write a note on Adjustable Negative Voltage Regulator LM337.	8	3	2,3	3.2.1
Q.5	Describe the construction and working of stepper motor OR(optional) Write a short note on a) Solid state relay b) BLDC Motor	8	4	2,3	3.2.1
Q.6	What are the types of noise and explain various noise sources in detail? OR(optional) Explain the manufacturing process of PCB in detail?	8	5	2,3	1.3.2