

Code No: R20A0453

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester Regular/Supplementary Examinations, June 2024**Robotics & Automation****(CSE, IT, CSE-CS, CSE-AI&ML, CSE-DS & CSE-IOT, B.Tech-AIDS & B.Tech-AIML)**

Roll No									

Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each SECTION and each Question carries 14 marks.

			BCLL	CO(s)	Marks
<u>SECTION-I</u>					
1	A	Explain about Hardware Architecture of Embedded System	L4	CO-I	[7M]
	B	Write about the Categories of Embedded Systems	L1	CO-I	[7M]
OR					
2	A	Explain the architecture of Embedded Controller	L4	CO-I	[7M]
	B	Discuss about the need for Robots	L2	CO-I	[7M]
<u>SECTION-II</u>					
3	A	Explain different types of Joints	L1	CO-II	[7M]
	B	Write about the classification of the Robots	L1	CO-II	[7M]
OR					
4	A	What are the basic methods of robot Programming	L2	CO-II	[7M]
	B	Sketch and explain the operation of Stepper motor	L1	CO-II	[7M]
<u>SECTION-III</u>					
5	A	Explain about AVR family architecture	L4	CO-III	[7M]
	B	Write about AVR I/O Ports in detail.	L2	CO-III	[7M]
OR					
6	A	Write about RISC AVR Microcontroller architecture	L4	CO-III	[7M]
	B	Explain about the PIN diagram of AVR	L1	CO-III	[7M]
<u>SECTION-IV</u>					
7	A	Write about the Fundamentals of ARM Processor	L2	CO-IV	[7M]
	B	Explain about the Pipeline Concept and register set of ARM processor.	L4	CO-IV	[7M]
OR					
8	A	Write short notes on a) Interrupts and b) vector Table	L2	CO-IV	[7M]
	B	Explain ARM core data flow model with neat diagram.	L4	CO-IV	[7M]
<u>SECTION-V</u>					
9	A	Write about the Localisation in detail along with its importance	L2	CO-V	[7M]
	B	Explain about the perception of Robots	L4	CO-V	[7M]
OR					
10	A	Write about Mapping Configuring Space in detail	L2	CO-V	[7M]
	B	Explain about the Ethics and Risks associated with Artificial Intelligence	L4	CO-V	[7M]
