

Code No: **R20A6902****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, June 2024****Embedded Systems****(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.

		<u>SECTION-I</u>	BCLL	CO(s)	Marks
1	Draw the internal architecture of 8086 microprocessor and explain its operation		L2	CO-I	[14M]
OR					
2	A Define addressing mode and explain different addressing modes used in 8086 Microprocessor with examples		L4	CO-I	[7M]
	B Draw the internal architecture of 8051 Microcontroller and explain its operation		L3	CO-I	[7M]
<u>SECTION-II</u>					
3	A Explain the classification of embedded systems based on different criteria in detail and give an example for each.		L4	CO-II	[7M]
	B Discuss on the quality attribute “Portability” in the embedded system design context		L4	CO-II	[7M]
OR					
4	A What is the difference between Embedded Systems and General computing systems		L3	CO-II	[7M]
	B Explain the various purposes of embedded systems with illustrative examples		L3	CO-II	[7M]
<u>SECTION-III</u>					
5	A Explain the different factors that needs to be considered in the selection of memory for embedded systems		L4	CO-III	[7M]
	B Explain the different communication on-board communication interfaces in brief		L3	CO-III	[7M]
OR					
6	A Define Wi-Fi and Zig-Bee		L4	CO-III	[7M]
	B Discuss on Onboard communication interfaces USART, parallel interface			CO-III	[7M]
<u>SECTION-IV</u>					
7	A Explain the embedded firmware design		L3	CO-IV	[7M]
	B Explain the advantages of High Level language based embedded firmware development		L4	CO-IV	[7M]
OR					
8	A Explain the advantages of assembly language based development		L3	CO-IV	[7M]
	B Discuss on various methods available for developing the		L4	CO-IV	[7M]

embedded firmware.

SECTION-V

- | | | | | | |
|----|---|---|-----------|-------------|-------------|
| 9 | A | Explain the various details held by a List file generated during the process of cross-compiling an embedded C project | L3 | CO-V | [7M] |
| | B | Brief on the terms Variables, constants, and data types, Operators and expressions used in Programming Embedded Systems | L2 | CO-V | [7M] |
| OR | | | | | |
| 10 | A | What is pointer in embedded C programming? What is its role in embedded application development | L4 | CO-V | [7M] |
| | B | Discuss on various Control flow statements applicable to Embedded Systems programming | L3 | CO-V | [7M] |
