	DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE **Regular & Supplementary Winter Examination-2023** **Course: B. Tech. Branch: Electronics Engineering Semester: VII** **Subject Code & Name: Embedded System Design (BTEXC701)** **Max Marks: 60 Date:02-01-2024 Duration: 3 Hr.**		
	Instructions to the Students: *1. All the questions are compulsory.* *2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.* *3. Use of non-programmable scientific calculators is allowed.* *4. Assume suitable data wherever necessary and mention it clearly.*		
		(Level/CO)	Marks
Q. 1	**Solve Any Two of the following.**		**12**
A)	Define an Embedded System. Explain Its architecture.	**Remember/CO1**	**6**
B)	Explain various design metrics used in embedded systems.	**Understand/CO1**	**6**
C)	Explain system on chip	**Understand/CO1**	**6**
Q.2	**Solve Any Two of the following.**		**12**
A)	Explain CPSR in ARM processor	**Understand/CO1**	**6**
B)	Explain load store instructions in ARM processor	**Understand/CO1**	**6**
C)	Explain 3 stage pipeline	**Understand/CO1**	**6**
Q. 3	**Solve Any Two of the following.**		**12**
A)	Explain linux kernel architecture	**Understand/CO3**	**6**
B)	Compare BIOS and Bootloader	**Understand/CO3**	**6**
C)	Explain device drivers	**Understand/CO3**	**6**
Q.4	**Solve Any Two of the following.**		**12**
A)	Explain I2C in detail	**Understand/CO1**	**6**
B)	Explain UART in detail	**Understand/CO1**	**6**
C)	Explain 1 wire protocol	**Understand/CO1**	**6**
Q. 5	**Solve Any Two of the following.**		**12**
A)	Explain features of RTOS	**Understand/CO4**	**6**
B)	Define Task scheduler and task states with respect to OS.	**Understand/CO4**	**6**
C)	Explain message queue in detail	**Understand/CO4**	**6**
	***** End *****		

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