Code No.: EC601PC | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Regular) - May- 2023
EMBEDDED SYSTEM DESIGN
(ECE)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(20 Marks)**

1.	a)	Differentiate between general purpose computing system and an embedded system?	[2M]
	b)	Give few examples of embedded systems?	[2M]
	c)	What is sensor and explain its role in embedded system?	[2M]
	d)	Discuss the different types of RAM used for embedded system design	[2M]
	e)	List the advantages of high-level language based embedded firmware development.	[2M]
	f)	What is the use of reset circuit in an embedded system?	[2M]
	g)	Define Thread and its context in operating system?	[2M]
	h)	Define Task Scheduling?	[2M]
	i)	What is device driver?	[2M]
	j)	What is task synchronization?	[2M]

PART-B **(50 Marks)**

2.		Explain the classification of embedded systems based on different criteria in detail.	[10M]
		OR	
3.		Discuss the purpose of Embedded systems and their importance.	[10M]
4.		Explain the different on-board communication interfaces in brief?	[10M]
		OR	
5.		With a neat diagram explain the core of embedded system.	[10M]
6.		Explain the function of watchdog timer and real time clock (RTC) in an embedded system?	[10M]
		OR	
7.		What is the need of embedded firm ware? Briefly explain the embedded firm ware development languages.	[10M]
8.		What is Process? With neat representation explain the process states and state transition.	[10M]
		OR	
9.		Explain the different types of Operating Systems?	[10M]
10.		Explain Remote Procedure Call and Sockets?	[10M]
		OR	
11.		Define Pipe and explain about message passing technique for inter process communication?	[10M]

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