CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–I–Semester End Examinations (Supply) – December 2024
MICROPROCESSORS & MICROCONTROLLERS
(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.

PART-A   (20 Marks)

1. a)	Distinguish the registers in 8086 microprocessor.	[2M]
b)	Explain register indirect addressing mode of 8086 with an example instruction.	[2M]
c)	List out the timers of 8051 microcontroller.	[2M]
d)	Describe the advantages of interrupts in microcontroller.	[2M]
e)	Briefly explain about LCD interfacing with 8051 microcontroller.	[2M]
f)	Compare ADC and DAC.	[2M]
g)	Interpret the term "pipe line" in ARM.	[2M]
h)	Exercise the program status register in ARM processor.	[2M]
i)	Write any two features of CORTEX processor.	[2M]
j)	Describe the applications of CORTEX processor architecture.	[2M]

PART-B   (50 Marks)

2.	Dramatize the 8086 processor architecture and explain each block briefly.	[10M]
	OR	
3.	Write an Assembly language program to find the sum of first ten natural numbers.	[10M]
4.	Draw the pin diagram of 8051 microcontroller and explain the pin description in detail.	[10M]
	OR	
5.	List out the differences between microcontroller and microprocessor and write salient features of 8051 microcontroller.	[10M]
6.	Describe the 8051 controller interfacing diagram with keyboard.	[10M]
	OR	
7.	Demonstrate the architecture of UART using suitable block diagram.	[10M]
8.	Discuss the data flow model of ARM processor architecture.	[10M]
	OR	
9.	Describe the different Interrupt instructions in ARM.	[10M]
10.	Sketch the CORTEX processor architecture and explain each function briefly.	[10M]
	OR	
11.	Exercise the salient features of OMAP processor architecture.	[10M]

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