Code No.: AD305PC | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–I–Semester End Examinations (Supply) – August - 2023
COMPUTER ORGANIZATION AND MICROPROCESSOR
(AI&DS)

[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)	List out the components in block diagram of digital computer.	[2M]
b)	Define computer registers?	[2M]
c)	What is a Microprocessor? What is need of it?	[2M]
d)	List the hardware and software interrupts of 8086 microprocessor.	[2M]
e)	What is an Interrupt service routine? Give an example.	[2M]
f)	State the disadvantages of machine level programming.	[2M]
g)	What are the various types of Complements?	[2M]
h)	List out the various types of peripheral devices.	[2M]
i)	Define Cache Memory?	[2M]
j)	What do you mean by Instruction pipelining?	[2M]

PART-B **(50 Marks)**

2.a)	Explain about instruction cycle.	[5M]
b)	What is meant by address sequencing?	[5M]
	OR	
3.a)	Explain about various types of computer instructions.	[5M]
b)	Explain briefly about control memory in micro programmed control.	[5M]
4.	Explain minimum mode and maximum mode of operations with timing diagram.	[10M]
	OR	
5.	Explain various addressing modes of 8086 with examples.	[10M]
6.	Write an assembly language program to add two 16-bit numbers.	[10M]
	OR	
7.	Explain the passing parameters to procedures in 8086 microprocessors.	[10M]
8.	Draw and explain the division of floating-point numbers.	[10M]
	OR	
9.	Explain Input-Output processor (IOP) mode of data transfer.	[10M]
10.	What is associative memory? Why is it faster than the main memory? Explain its hardware organization in detail.	[10M]
	OR	
11.	Discuss the working and the characteristics of RISC Pipeline.	[10M]

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