Code No.: R22CS302PC | R22 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–I–Semester End Examinations (Supply) - June- 2025
COMPUTER ORGANIZATION AND ARCHITECTURE
(Common for CSE, IT, CSC, CSD, CSM)

[Time: 3 Hours] **[Max. Marks: 60]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 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 **(10 Marks)**

1.	a)	What are the Arithmetic operations?	[1M]
	b)	Define interrupt.	[1M]
	c)	Write any two micro program examples.	[1M]
	d)	What is register?	[1M]
	e)	Write any two computer arithmetic operations.	[1M]
	f)	Find addition of 1101 and 0110.	[1M]
	g)	Define Asynchronous data transfer.	[1M]
	h)	What is cache memory?	[1M]
	i)	Expand RISC.	[1M]
	j)	Define vector processing.	[1M]

PART-B **(50 Marks)**

2.		Explain about various types of interrupts in details.	[10M]
		OR	
3.		Discuss logic micro operations and shift micro operations with examples.	[10M]
4.		Illustrate the basic organization of a micro programmed control unit and the generation of control signals using micro program.	[10M]
		OR	
5.		Explain various type of addressing modes with example.	[10M]
6.		Perform the arithmetic operation (+42)+(-13) and (-42)-(-13) in binary using signed 2's complement representation for negative numbers.	[10M]
		OR	
7.		Write and explain Multiplication algorithm with an example.	[10M]
8.	a)	Discuss Direct Memory Access (DMA).	[5 M]
	b)	Explain Asynchronous data transfer.	[5 M]
		OR	
9.		Discuss the following. i) Auxiliary memory. ii) Cache memory.	[10M]
10.		What are the multiprocessors? Mention the categories of multiprocessors? List the major MIMD Styles.	[10M]
		OR	
11.		Explain Characteristics of RISC.	[10M]

****