Total No. of Printed Pages: 02

PRN No.		PAPER CODE	U213-232 (RE)

December 2023 (REEXAM)

SY B.TECH (SEMESTER - I)

COURSE NAME: COMPUTER ARCHITECTURE AND ORGANIZATION

BRANCH: COMPUTER AND ENGINEERING

COURSE CODE: CSUA21202

(PATTERN 2020)

Time: [2 Hrs]   [Max. Marks: 60]

Instructions to candidates:
1) Figures to the right indicate full marks.
2) Use of scientific calculator is allowed
3) Use suitable data wherever required
4) All questions are compulsory. Solve any two sub questions each from each Question 1 ,2, 3,4,5,and 6 respectively

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) Discuss features of 8086 processor.	[5]	1	Understand
	b)Compare 8086 and 80386DX processor	[5]		
	c) Describe the Flag register of 80386 with diagram.	[5]		
Q2	a) Describe segment translation mechanism with diagram.	[5]	2	Understand
	b) Draw and explain Segment Selector.	[5]		
	c) Discuss the use of Granularity bit from Segment Descriptor.	[5]		
Q3.	a) Differentiate between CPL,DPL and RPL.	[5]	3	Analyze
	b) Explain page level protection in 80386DX.	[5]		
	c) Explain segment level protection using limit level checking.	[5]		

Q.4	a) Explain memory hierarchy with diagram.	[5]	4	Apply
	b) Classify 2 types of cache addresses and explain it in detail with a diagram.	[5]		
	c) Demonstrate the placing of cache memory in accordance with main memory with diagram.	[5]		
Q.5	a)Solve division of the following numbers using restoring division algorithm: Dividend (A:Q) = 0000:0111 (7), Divisor (M)= 0011 (3)	[5]	5	Apply
	b) Draw and Explain flowchart Booth's algorithm with example.	[5]		
	c) Explain IEEE standard for floating point Single precision format with diagram.	[5]		
Q.6)	a) Illustrate the timing diagram for Instruction pipeline Operation.	[5]	6	Apply
	b) Sketch and explain the Internal structure of CPU.	[5]		
	c) Draw and explain Data Flow Fetch Cycle .	[5]		