

Subject : COA (01CE0402)**Date : 16-Mar-2021****Total Marks : 30****Time : 1 Hours 15 Minutes****Instructions :**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Que.1 Answer the following questions.**[6]****(A)**

- (1) What is Program Counter
- (2) what is size of PC, DR, INPR
- (3) With example explain software interrupt.
- (4) If the value V(x) of the target operand is contained in the address field itself, the addressing mode is _
 - a) Immediate
 - b) Indirect Addressing
 - c) Direct
 - d) Implied
- (5) Differentiate arithmetic and logical shift with one example
- (6) A stack organized Computer uses instruction of _____
 - a) Zero Addressing
 - b) Indirect Addressing
 - c) Two Addressing
 - d) Index Addressing

Que.2

- (A) List conditional branch instructions and flag condition associated with each instruction for typical CPU organization. [6]
- (B) Explain CMA, CME, ION, IOFF, INC, HLT. [6]

OR

- (B) Explain Logical Shift and Circular Shift. [6]

Que.3

- (A) Write a program to evaluate the arithmetic statement: [8]

$$X = \frac{A - B + C * (D * E - F)}{G + H * K}$$

- a. Using a general register computer with three address instruction.
 - b. Using a general register computer with two address instruction.
 - c. Using an accumulator type computer with one address.
 - d. Using a stack organized computer with zero address operation instruction.
- (B) With example demonstrate selective set and selective clear [4]

OR

- (A) Create common bus system using tri state buffer for 4 Register with 4 bits in each Register.
(B) With suitable example show arithmetic shift and explain overflow in Arithmetic Shift Left.

[8]
[4]

---Best of Luck---

MARWADI UNIVERSITY
MU-FOT
CE-FOT1 (MU), IT-FOT1 (MU)
Semester 4 - Summer

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Difficulty Level	Weightage		No of Question	Total Marks	Question List
	Recommended	Actual			
High	20	16	3	8	1(A), 2(A)
Low	20	0	0	0	
Medium	60	83	10	40	1(A), 2(B), 3(A), 3(B)

Module Name	Weightage		No of Question	Total Marks	Question List
	Recommended	Actual			
Computer Data Representation & Register Transfer and Micro-operations:	30	47	5	23	1(A), 2(B), 3(A), 3(B)
Introduction to Computer Organization and Design:	35	16	3	8	1(A), 2(B)
Concepts of Central Processing Unit:	35	35	5	17	1(A), 2(A), 3(A)

Blooms Taxonomy	Weightage		No of Question	Total Marks	Question List
	Recommended	Actual			
Remember/Knowledge	20	4	2	2	1(A)
Understand	30	33	4	16	1(A), 2(B), 3(A)
Apply	25	58	5	28	2(A), 2(B), 3(A), 3(B)
Analyze	15	4	2	2	1(A)
Evaluate	10	0	0	0	
Higher order Thinking	0	0	0	0	

