Enroll. No._____

MARWADI UNIVERSITY
MU-FOT
ICT-FOT1 (MU)
Semester 3 - Winter

Subject : COA (01CT0301) **Date : 23-Aug-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) Define the term machine cycle.

(2) What is the importance of Control Address Register(CAR) in microprogrammed control unit?

(3) The content of accumulator is F0H.What will be the value of accumulator after execution of CMA instruction?

(4) Which instruction is useful to save the content on stack ?

(5) What is the width of data bus in 8085 microprocessor?

(6) Is it possible to design 4x1 MUX with three 2x1 MUX?Justify your answer.

Que.2

(A) Explain the working of 2x4 decoder circuit with necessary figure.How many selection lines are needed?For different possibilities of selection inputs,discuss the possible output.Give name of one application of decoder in computer design. [6]

(B) Briefly explain the working of control unit of a basic computer with necessary block diagram. [6]

OR

(B) With necessary block diagram explain the data flow from memory to microproessor unit while fetching an instruction byte(opcode) from memory. [6]

Que.3

(A) With necessary block diagram explain the selection of address for control memory. [8]

(B) List the basic computer instruction types and their instruction format. Briefly explain the instruction format. [4]

OR

(A) Write an assembly language program to count continuously in hexadecimal from FFH to 00H.Use register C to put appropriate delay between count.Display the count at output port address 02H.Draw the necessary flow chart and show various steps.Assume delay of your choice. [8]

(B) Consider the 8085 microprocessor.How does it differentiate between opcode and data?During opcode fetch cycle how many T-states are required?What is the importance of fourth T-state? [4]

---Best of Luck---

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Difficulty Level	Weightage		No of Question	Total Marks	Question List
	Recommended	Actual			
High	20	2.08	1	1	1(A)
Low	20	12.50	3	6	1(A), 3(B)
Medium	60	85.42	9	41	1(A), 2(A), 2(B), 3(A), 3(B)

Module Name	Weightage		No of Question	Total Marks	Question List
	Recommended	Actual			
Introduction to Computer Architecture	20	18.75	4	9	1(A), 2(A)
Fundamentals of Micro programmed Control	20	18.75	2	9	1(A), 3(A)
Concepts of Central Processing Unit	20	18.75	2	9	1(A), 3(A)
Introduction to Computer Organization	40	43.75	5	21	1(A), 2(B), 3(B)

Blooms Taxonomy	Weightage		No of Question	Total Marks	Question List
	Recommended	Actual			
Remember / Knowledge	20	12.50	3	6	1(A), 3(B)
Understand	30	41.67	5	20	1(A), 2(B), 3(A), 3(B)
Apply	25	29.17	2	14	2(A), 3(A)
Analyze	15	14.58	2	7	1(A), 2(B)
Evaluate	10	2.08	1	1	1(A)
Higher order Thinking	0	0.00	0	0