

Roll No. 

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Total No. of Pages : 02

Total No. of Questions : 09

**M.C.A. (Sem.-4)**  
**MICROPROCESSOR**  
Subject Code : MCA-404  
M.Code : 90001

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.
2. SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.

**SECTION-A**

1. Draw the block diagram of 8085 microprocessor showing all units and signals.
2. a) Explain the register organization of 8085 microprocessor.  
b) Discuss the instruction format of 8085 instructions.

**SECTION-B**

3. Explain the purpose of the following instructions :
  - a) EI
  - b) DI
  - c) STC
  - d) RRC
  - e) RAR
4. Compare RISC Vs CISC Processors.

**SECTION-C**

5. Draw the pin diagram of 8086 microprocessor and explain the function of each pin.
6. a) Explain the following 8085 instructions :  
SIM, RIM, RST 7, RAR, PCHL  
b) Write an assembly language program to swap two numbers.





**SECTION-D**

7. What is DMA operation? Explain the architecture of 8237 DMA controller.
8. How the Programmable Interrupt controller may be interfaced to a microprocessor.

**SECTION-E**

**9. Write briefly :**

- (a) What is auxiliary carry?
- (b) What is the purpose of DAD instruction?
- (c) What are vectored interrupts?
- (d) What is the difference between arithmetic and logical shift instructions?
- (e) What are pseudo instructions?
- (f) Name the 8085 instructions using stack?
- (g) What is the difference between instruction and machine cycle?
- (h) Who takes care of the control of the buses in DMA?
- (i) What is the purpose of XCHG instruction?
- (j) Explain the structure of delay loop.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**

