

DAY - 14

SEAT NUMBER

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2015

III

14

1100

V - 668

(E)

COMPUTER SCIENCE  
PAPER - II (D-9)

Time : 3 Hours

3 Pages

Max. Marks : 50

- Instructions :**
- (1) All questions are compulsory.
  - (2) Figures to the right indicate full marks.
  - (3) Draw neat diagrams wherever necessary.
  - (4) Use of any type of calculator is not allowed.
  - (5) Comments are must in ALP.

1. (A) Select correct options and rewrite the following :

(a) \_\_\_\_\_ Instruction would not affect Zero Flag. 1

- (i) XRA A
- (ii) SUB A
- (iii) CMP A
- (iv) MVI A, 00H

(b) Data bus of 80286 MPU is of size \_\_\_\_\_. 1

- (i) 8 bit
- (ii) 16 bit ✓
- (iii) 32 bit
- (iv) 64 bit

(c) \_\_\_\_\_ is used to store 8 bit opcode in 8085. 1

- (i) IR
- (ii) PC
- (iii) SP
- (iv) Accumulator

- (d) The device used to extend cable length of a network is \_\_\_\_\_. 1
- (i) MODEM
  - (ii) REPEATER
  - (iii) HUB
  - (iv) ROUTER
- (B) Solve any two of the following :
- (a) Draw block diagram of Generic Microprocessor. 3
  - (b) State any six features of 8051 Microcontroller. 3
  - (c) What is HUB ? Explain all the types of HUB. 3
2. (A) Solve any two of the following :
- (a) Explain Multiplexed Address and Data Bus of 8085 MPU. 3
  - (b) Explain Star and Bus Network Topology. 3
  - (c) State any six Arithmetical and Logical Instructions of 8085 MPU. 3
- (B) Solve any one of the following :
- (a) What are the Hardware Interrupts ? Explain Vectored and Non-vectored Interrupts of 8085 MPU. 4
  - (b) Explain the following instructions of 8085 MPU : 4
    - (i) MOV B, M
    - (ii) ADC C
    - (iii) SPHL
    - (iv) XCHG
3. (A) Solve any two of the following :
- (a) What is a Single Chip Computer ? State its advantages. 3
  - (b) State any three features of Pentium Processor. 3
  - (c) Explain Ethernet Protocol used in Network. 3
- (B) Solve any one of the following :
- (a) Explain PUSH and POP Instructions of 8085. 4
  - (b) Explain any four flags of 8085, giving example. 4

4. (A) Solve any two of the following :  
(a) Explain function of the following pins of 8085 : 3

(i)  $\overline{INTA}$

(ii)  $IO/\overline{M}$

(iii)  $\overline{RD}$

(b) State any six applications of Microcontrollers. 3

(c) Compare Twisted Pair Cable and Coaxial Cable. 3

(B) Solve any one of the following :

(a) Explain the following : 4

(i) T-States

(ii) Machine Cycle

(iii) Instruction Cycle

(iv) FETCH Cycle

(b) Give advantages of Fiber Optic Cable over an Electrical Cable. 4

5. Answer any two of the following :

(a) Write ALP to multiply number stored at 8085H by 09H and store result at 8086H and 8087H, with lower byte at 8086H. 5

(b) Write ALP to find 2's complement of a 16 bit number stored in DE Pair. Store result in HL Pair. 5

(c) Locate smallest number in a block from 2050H to 2060H and store it in memory location 2061H. 5

OR

5. Solve any two of the following :

(a) Write ALP to store data BCH in 20 contiguous memory locations starting from 8081H. 5

(b) Write ALP to divide number at 6068H by a non-zero number at 6067H. Store quotient at 6069H and remainder at 606AH. 5

(c) Write ALP to clear Register B, if number at memory location 20F9H is Palindrome; otherwise store FFH in Register B. 5

[Palindrome No. Ex. FF, 22, AA]