

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.

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(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.

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

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

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