

DAY - 14

SEAT NUMBER

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2014 III 14

1100

V - 268

(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) Use of any type of calculator is **not** allowed.
 - (4) Draw neat diagrams wherever necessary.

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

(a) _____ pin of 8085 MPU is multiplexed.

1

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

(ii) HOLD

(iii) SID

(iv) ALE

(b) LXI rp, Data₁₆ is _____ byte Instruction.

1

(i) TWO

(ii) ONE

(iii) THREE

(iv) FOUR

(c) Internal Data Memory of 8051 Microcontroller is _____

1

(i) 128 bytes ✓

(ii) 128 k bytes

(iii) 256 bytes

(iv) 4 k bytes

- (d) _____ Cable has maximum EMI Resistance. 1
- (i) Thicknet
 - (ii) Thinnet
 - (iii) UTP
 - (iv) Fiber Optic
- (B) Solve **any two** of the following :
- (a) Explain following Flags of 8085 MPU : 3
 - (i) Parity Flag
 - (ii) Carry Flag
 - (iii) Auxiliary Carry Flag
 - (b) What is Microcontroller ? State any two advantages over MPU Based System. 3
 - (c) Explain Ring Topology with diagram. State its two advantages. 3
2. (A) Solve **any two** of the following :
- (a) Give functions of the following 8085 Registers : 3
 - (i) PC
 - (ii) SP
 - (iii) IR
 - (b) Explain Immediate and Implied Addressing Modes of 8085 MPU. 3
 - (c) Explain any three characteristics of Transmission Media. 3
- (B) Solve **any one** of the following :
- (a) Draw and explain complete Memory Map of 8051 Microcontroller. 4 ✓
 - (b) What is Protocol ? Explain TCP/IP Protocol used in Network. 4
3. (A) Solve **any two** of the following :
- (a) What are Interrupts ? Explain Maskable and Non-maskable Interrupts of 8085 giving example of each. 3
 - (b) What is MODEM ? Explain working of MODEM and specify types of MODEMS. 3
 - (c) Explain UTP Cable with its any four characteristics. 3

(B) Solve **any one** of the following :

(a) Explain function of the following Pins of 8085 MPU :

4

(i) HOLD

(ii) SID

(iii) READY

(iv) \overline{WR}

(b) Draw Programming Models of X-86 16 bit and X-86 32 bit Microprocessor.

4

4. (A) Solve **any two** of the following :

(a) Explain functions of Register A of 8085 MPU.

3

(b) Give atleast two advantages and one disadvantage of Wireless Media over Cable Media.

3

(c) List various Network Access Methods and explain any one of them.

3

(B) Solve **any one** of the following :

(a) Accumulator contents are $B8_H$ and Register B contents are $C9_H$. What are the contents of Accumulator and Flag Register after execution of instructions ANA B, SUB B independently.

4

(b) Explain all the Generations of Microprocessors and give example of each.

4

5. Solve **any two** of the following :

(a) Write ALP to store 00_H in Register B only if the contents memory location $201F_H$ are odd. Otherwise store EE_H in Register B.

5

(b) Write ALP to find largest element in a memory block from $D000_H$ to $D00F_H$. Store largest number at memory location $CS00_H$.

5

(c) Write ALP to add all the BCD Numbers in a block from 2001_H To 2009_H . Store SUM at memory location $2000A_H$. [Assume SUM is 8 bit]

5

OR

5. Solve **any two** of the following :

(a) Write ALP to find SUM of a number and its reverse which is stored at memory location 2080_H . Store SUM at 2081_H .

5

(b) Write ALP to count total number of occurrences of data $9C_H$ in a memory block of length 16 byte, starting from 1000_H . Store count in Register E.

5

(c) Write ALP to copy 10 consecutive bytes from memory 2025_H to memory locations $BCBC_H$ onwords.

5