

DAY - 14

SEAT NUMBER

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2016 III 14

1100

V - 68

(E)

**COMPUTER SCIENCE  
PAPER - II (D-9)**

**Time : 3 Hours**

**4 Pages**

**Max. Marks : 50**

- Instructions :** (1) All questions are compulsory.  
(2) Figures to right indicate full marks.  
(3) Draw neat diagrams wherever necessary.  
(4) Calculators not allowed.

1. (A) Select the correct alternative and rewrite :

(a) \_\_\_\_\_ is a Micro-controller. 1

(i) 8086

(ii) 8051

(iii) 8088

(iv) 80286

(b) \_\_\_\_\_ instruction does not affect the Flag. 1

(i) RAR

(ii) CMP C

(iii) XRA

(iv) MOV A,B

(c) If length of cable is very long then \_\_\_\_\_ is used in between to bring the weakend signal to its original level. 1

(i) MODEM

(ii) HUB

(iii) REPEATER

(iv) ROUTER

- (d) \_\_\_\_\_ instruction is used for 16-bit addition. 1
- (i) ADD
  - (ii) ADI
  - (iii) ADC
  - (iv) DAD
- (B) Answer **any two** of the following :
- (a) Differentiate between Micro-controller and a Micro-processor. 3
  - (b) Explain the following : 3
    - (i) Accumulator
    - (ii) Program Counter
    - (iii) Stack Pointer
  - (c) Write a short note on MODEM. 3
2. (A) Answer **any two** :
- (a) Explain the function of following pins of 8085 : 3
    - (i) HLDA
    - (ii) SID
    - (iii) READY
  - (b) Discuss in brief the members of X-86 Family beginning from 80386 and upwards. 3
  - (c) Draw the memory register map, of Micro-controller 8051. 3
- (B) Answer **any one** :
- (a) Draw the labelled internal block diagram of 8085 Micro-processor. 4
  - (b) Explain in brief programming model of X-86 Family. 4
3. (A) Answer **any two** :
- (a) Explain any three Addressing Modes of 8085 with examples. 3
  - (b) Explain in short : 3
    - (i) Star Topology
    - (ii) Bus Topology
    - (iii) Ring Topology
  - (c) Distinguish between LAN and WAN. 3

(B) Answer **any one** :

- (a) What is an Vectored Interrupt ? State the different hardware interrupts with their priorities and branching addresses. 4
- (b) Explain the advantages of following features of Pentium Processor : 4
  - (i) Dual - Pipelining
  - (ii) Prefetching
  - (iii) Branch Prediction
  - (iv) Internal Data Bus

4. (A) Answer **any two** :

- (a) What is a Protocol ? Explain the concept of TCP/IP Protocol. 3
- (b) Explain the structure of Fiber Optic Cable. 3
- (c) Draw the labelled diagram of X-86 family Flag Register. 3

(B) Answer **any one** :

- (a) Discuss the Micro-controllers in 8051 family. 4
- (b) Write a note on Ethernet. 4

5. Answer **any two** :

- (a) Write an Assembly Language Program to multiply a number stored at location 1050 with a number at location 1051. Result is 2-byte. Store result at locations 1052 and 1053. 5
- (b) Write an Assembly Language program to transfer a block of memory starting from 1050H to 1059H to a new location starting from 1070H to 1079H. 5
- (c) A two byte number is stored at location C000 H and C001 H. Write on Assembly Language Program to rotate this number to left side by 3 places and store the rotated number in BC register pair. 5

**OR**

5. (a) Write an Assembly Language Program to add 2 decimal numbers stored at 1050 H and 1051 H. Store result at 1052 H and 1053 H. 5
- (b) Accumulator contents of 8085 are B7H and register B contents are A5 H. What will be the effect of following instructions on the contents of Accumulator, when executed independently ? 5
- (i) ADI 05
  - (ii) CMP B
  - (iii) CMA
  - (iv) XRA B
  - (v) ORA B
- (c) Write an Assembly Language Program to increment the contents of alternate memory locations each by two from 1051 H to 1060 H. 5
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