

First Terminal Examination 2022 –2023

Subject-Computer science – II

CLASS-XII

Time: 2:30 Hr.

Marks: 50 M

**Q.1.A) Select the correct alternative and rewrite the following:**

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- 1) Stack Pointer hold .....
  - a) 16 bit address
  - b) 16 bit data
  - c) 8 bit address
  - d) 8 bit data
- 2) The invalid register pair for 8085 microprocessor is .....
  - a) BC
  - b) HL
  - c) SP
  - d) DE
- 3) The maximum physical memory can be addressed by 80286 microprocessor is .....
  - a) 460 kb
  - b) 1 MB
  - c) 4 kb
  - d) 16 MB
- 4) Data bus of 80286 MPU is of size .....
  - a) 8 bit
  - b) 16 bit
  - c) 32 bit
  - d) 64 bit

**B) Answer any TWO of the following:**

6

- 1) Write the function of the following Rotate:
  - a) RRC
  - b) RAL
  - c) RAR
- 2) What are the difference between Microcontroller and Microprocessors?
- 3) Explain Logical instruction: 1] ANI data , 2]XRA R , 3]XRA M .

**Q.2.A) Answer any TWO of the following:**

6

- 1) What is Advanced Microprocessor . Explain its features.
- 2) What is Addressing modes? Explain Direct Addressing Mode & Indirect Addressing Mode.
- 3) Explain SIM and RIM Instruction.

**B) Answer any ONE of the following:**

4

- 1) Compare any four attribute of 80286 and Pentium Microprocessor.
- 2) Explain the programming model for 32 bit version of X – 86 families with suitable diagram

**Q.3. A) Answer any Two of the following:**

6

1. Define Computer language :
  - a) Machine language
  - b) Assembly language
  - c) High – level language
2. Define arithmetic instruction :
  - a) ADD R
  - b) ADD M
  - c) ADC R
3. Draw a neat labeled diagram of flag register of X – 86 families.

**B) Answer any ONE of the following :**

4

- 1) Explain following data transfer Instruction:
  - a) LHLD Address
  - b) SHLD Address
  - c) STAX Rp
  - d) XCHG
- 2) Explain the programming model for 16 bit version of X- 86 families with suitable diagram.

**Q.4.A) Answer any TWO of the following :**

**6**

- 1) Discuss in brief members of X- 86 family beginning from 80386 upward.
  - a) The next major introduction was Pentium :
- 2) Explain in brief Microprocessor X – 86 families.
- 3) Explain DAA instruction with example.

**B) Answer any ONE of the Following :**

**4**

- 1) Explain advantages of Pentium processor with respect to following features .
  - a) dual Pipelining b) On – chip Catches c) Branch prediction d) 64- bit data bus
- 2) Explain following instruction format :
  - a) Label b) Mnemonics c) operands d) opcode

**Q. 5.A) Answer any TWO of the following.**

**10**

- 1) write a program in assembly language to find the smallest number from a serial of numbers ' whose length is stored in C000 H and the series itself begins from C001 H. Store the result in memory location C050 H.
2. write a program in assembly program to transfer first 10 bytes of memory block starting from 5000 H to a new block starting from 5020 H.-
- 3) A block of data is stored in memory location from ' 9101 H to 91FFH. Write an assembly language program to transfer the block in reverse order to memory location 9200H and onwards.

**OR**

- 1) Write an assembly language program to add two 8 bit BCD numbers stored at memory locations 5000H and 5001 H. Store the result at memory location 5002 H onwards starting with least significant bit.
- 2) Write an assembly language program to count numbers of odd data bytes in the block of memory starting from 1300 H to 13 FFH and output on port 11 H.
- 3) Write an program segment to find the largest number in a series . the length of the series is stored at 2500H and the numbers are stored from 2501H. store the result at 2405H.