

**Ist Semester Examination 2017 – 18**

**Computer science – II**

**Std: XII**

**Marks: 50**

**Date:**

**Time:**

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

**4**

1) \_\_\_\_\_ is a non maskable interrupt.

- a) Trap      b) INTR      c) RST 7.5      d) RST 6.5

2) \_\_\_\_\_ flag bit is reset, when flag register content is D4H.

- a) S      b) Z      c) CY      d) AC

3) LXI H, addr is a \_\_\_\_\_ byte instruction.

- a) 1      b) 2      c) 3      d) 4

4) Accumulator contents remain unchanged on execution of instruction \_\_\_\_\_.

- a) LDAX rp      b) MOV A, M      c) CMP B      d) CMA

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

**6**

1) Write the function of the following units in 8085 microprocessor.

- a) ALU      b) Instruction decoder      c) Flags

2) Explain one byte, two byte and three byte instruction.

3) Explain return procedure in RET instruction.

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

**6**

1) Differentiate between memory mapped I/O and I/O mapped I/O.

2) Describe the following instructions of 8085 microprocessor:

- a) RLC      b) XTHL      c) ADD

3) Give characteristics of 80486.

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

**4**

1) Explain SIM and RIM instructions with diagrams.

2) The accumulator contains A5H. What will be its contents after execution of following instructions independently?

- a) XRL 08H    b) CMA    c) SUB A

**Q.3.A) Answer any two of the following: 6**

- 1) Explain any three features of Pentium processor.
- 2) Explain flags of 8086 .
- 3) Explain the functions of the following pins of Intel 8085 microprocessor.
  - a) SOD
  - b) HLDA
  - c) READY

**B) Answer any one of the following: 4**

- 1) Explain block diagram of 8085 microprocessor.
- 2) Explain PUSH and POP instructions with proper diagrams.

**Q.4.A) Answer any two of the following: 6**

- 1) Explain:
  - a) Instruction cycle
  - b) Machine cycle
  - c) T state
- 2) Explain evolution of microprocessor with proper examples.
- 3) Give salient features of 8085 microprocessor.

**B) Answer any one of the following: 4**

- 1) Explain SIM and RIM instructions of 8085 microprocessor with proper diagrams.
- 2) What do you understand by register indirect and implicit addressing modes? Explain with suitable examples . List the names of any two instructions which make accumulator content loaded.

**Q.5.A) Answer any two of the following: 10**

- 1) Write an assembly language program to perform the multiplication of two 8 bit numbers where multiplicand is stored at memory location C050H and C051H. Multiplier is stored at C052H. The result is to be stored at memory location C053H C054H.
- 2) Write an assembly language program to subtract two 8 bit numbers stored at memory locations D010H and D011H. Store the result at memory location D012H.
- 3) Write an assembly language program which will read 05H bytes from port 29H one after and will output the sum of these bytes on port 8FH.

**OR**

- 1) Write an assembly language program to find how many memory locations from 4500H to 4510H contains 02H. The number should be stored at memory location 4511H.
- 2) Write an assembly language program to find greatest and smallest among three 8 bit numbers.
- 3) Write an assembly language program to divide a hexadecimal number stored in memory location 8050H by another hexadecimal number stored in memory location 8051H. Store the quotient at 8052H and remainder at 8053H.