Question Paper Code : 3037

B.Sc. (Part-III) Examination, 2017

COMPUTER SCIENCE

(Old Syllabus)

[Second Paper]

(Microprocessor and Assembly Language Programming)

Time : Three Hours **Maximum Marks : 75**

Note : Answer **five** questions in all. Question **No.1** is **compulsory**. Besides this, attempt **One** question from each of the **four** units.

1. Attempt all questions : [31]

   (a) Explain the purpose of S_0 and S_1 pin in 8085 microprocessor.

   (b) Describe various types of flags in 8086.

   (c) Differentiate between hardware and software Interrupts.

(d) Differentiate between synchronous and asynchronous data transfer.

(e) Explain the term pipelining. Justify the statement that pipelining enhances the speed of execution of statement.

(f) What is interfacing ? Discuss its purpose and utility.

(g) Differentiate between 8085 microprocessor and 8086 microprocessor.

(h) By giving examples explain machine cycle, instruction cycle.

(i) Discuss the purpose of segmented memory in 8086 microprocessor.

(j) Explain the significance of HOLD and HLDA pins in microprocessor.

UNIT - I

2. (a) How many address lines are required to access 1M byte of memory ? [4]

(b) Define an instruction. What are the two parts of an instruction ? Give example. [7]

3. Draw the logic pinout diagram of 8085 microprocessor and classify the pins of 8085 microprocessor. [11]

UNIT - II

4. Draw and explain the timing diagram for execution of the instruction MOV C, A and MV1 B, A. [11]

5. Discuss the purpose and utility of addressing modes. Explain different types of addressing modes. [11]

UNIT - III

6. Explain the following instructions : [11]

(a) ADI B, 08

(b) XRA A

(c) MOV A, M

(d) LDA F050

(e) SHLD F030

(f) NOP

7. (a) With the help of a suitable diagram explain the vectored interrupts of 8085 microprocessor. [6]

(b) Write various branch instructions used in 8085 microprocessor. [5]

UNIT - IV

8. (a) Write a programme in assembly language to add two 8-bit numbers with carry. [6]

(b) Write a assembly language programme to find the largest number in a data array 98 H, 72 H and F3H. [5]

9. (a) Write a programme to find the 2's compliment of a 8-bit number. [6]

(b) Write a programme to multiply two 8-bit numbers stored in Location X and X +1 [5]

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