

SYMBIOSIS INTERNATIONAL UNIVERSITY

(Established under Section 3 of UGC 'ACT, 1956 vide notification No. F.9-12/2001 - U.3 of the Government of India)
Accredited by NAAC with 'A' Grade



Institute: (0701) SYMBIOSIS INSTITUTE OF TECHNOLOGY, PUNE

Programme: (070121) B.TECH

Batch: 2012-16

Semester: IV

Course: Microprocessor Techniques

Course Code: 0701210406CS & IT

Date: 15/05/2014

Day: Thursday

Maximum Marks: 45

Time: 01:30 pm - 03:00 pm

Instructions:

1. All Questions from PART- A are compulsory.
2. Solve any one from Q.5.

PART-A

- Q.1
- a. Draw timing diagram for Write machine cycle of 8086 microprocessor for minimum mode. 2
 - b. Write a short note on 8237 DMA controller. 2
 - c. Mention any four functions of 8251. 2
 - d. Assume contents of BX register are ACFBH and CY=1 then what will be the result if following instructions are executed. 2
MOV CL,06H
RCL BX,CL
 - e. Define the terms 2
 1. Instruction Cycle
 2. Control Bus
- Q.2
- a. Write Syntax and Example for following instruction 3
 1. To move data from 16-bit register to segment register.
 2. Shift the contents of register to logical right by 3 bits.
 3. To negate byte or word.

- b. Assume contents of BX register are 0024H and accumulator has contents 0005H then find out the result if we multiply BX and accumulator. Specify where would be the result store finally?

2

PART B

Q.3 Draw neat labeled Pin Diagram of 8086 microprocessor and Explain the following group of pins in detail

12

1. Address and Data Pins
2. Mode Multiplexed Pins
3. Other Pins

Q.4 a. Write an assembly language program for the following

5

- Load 02H in CL register
- Load 04H in BH register
- Decrement the contents of CL register by one
- Subtract the contents of BH register from CL register
- Multiply the contents of CL register with the contents of BH register
- Send result to the 16-bit port address [4006H].
- What will be the output send to the port address [4006H]?

b. .Write a short note on BUI.

5

Q.5 Solve any one of the following

8

- a. What is Microprocessor? Explain Programmer's model of 8086 microprocessor.
- b. Draw and explain functional block diagram of Programmable peripheral Interface i.e. 8255
- c. Write features of 8086 microprocessor in detail.