

00201

**B. Tech. ELECTRONICS AND
COMMUNICATION ENGINEERING (BTECVI)**

Term-End Examination

December, 2013

**BIEL-015: MICROPROCESSOR AND ITS
APPLICATIONS**

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any seven questions including question
No - 1 which is compulsory.*

1. (a) Draw a schematic to generate four control signals related to read and write operation.
(b) Calculate the time required to execute the following instruction, if the system clock is 2MHz. $JMP\ 2050_H$.
(c) Which instruction of 8085 μp uses AC Flag and how ?
(d) How can the content of SP be loaded in to HL ?
(e) If the accumulator content is $(56)_H$, then what will be the content of flag register after execution of $ADI\ (3F)_H$? 2x5=10

2. Give the Interrupt structure of 8085 microprocessor. Discuss about each of the interrupt. 10

3. Draw the timing diagram of DCR M and explain each machine cycle. 10

4. With neat format, explain the use of RIM & SIM instruction. 10
 5. Explain the function of following instructions with example:- 10
 - (a) LHLD
 - (b) RLC
 - (c) XTHL
 - (d) POP
 - (e) NOP
 6. Write a assembly language program to arrange 10 numbers of data stored at memory location 3000_H onwards in descending order. Give the flowchart. 10
 7. Explain the function of Bus interface unit of 8086 microprocessor. 10
 8. Draw and explain the block diagram of 8259. Explain the bit structure of ICW1. 10
 9. State the salient features of 8253. Give its block diagram and explain Mode-3 of 8253 with waveforms. 10
 10. Write notes on **any two** of the following : 5x2=10
 - (a) 80386 Microprocessor.
 - (b) Mode-2 operation of 8255.
 - (c) Parallel data transfer using 8155.
-