

Roll No

EE - 601**B.E. VI Semester**

Examination, December 2014

Micro Processor and Microcontrollers**Time : Three Hours****Maximum Marks : 70**

- Note:** i) Attempt one question from each unit.
ii) All questions carry equal marks.

Unit - I

1. a) Explain the architecture of 8086 microprocessor with functional block diagram. 8
- b) Discuss the interrupts of 8086 microprocessor with their priority. 6

OR

2. a) Give the comparison of 80286 and 80386 microprocessor with 8086 microprocessor with salient features. 8
- b) Explain the maximum mode operation of 8086 microprocessor with timing diagram. 6

Unit - II

3. a) Describe the addressing modes of 8086 microprocessor with atleast one example of each mode. 8
- b) Explain the stack structure of 8086 in detail with the help of an example. 6

OR

4. a) Explain the instruction set of 8086 microprocessor complete in all respect with an example of each kind of instruction class. 8
- b) Write an assembly language program to find out the number of even and add numbers from a given series of 16-bit hexadecimal numbers. 6

Unit - III

5. a) Draw the architecture of programmable input/output port 8255 and explain its BSR mode. 7
- b) Explain the architecture of programmable interval timer 8254. Draw its pin configuration also. 7

OR

6. a) Draw the pin configuration of 8251 and explain how you will interface 8251 with 8086. 7
- b) Describe the internal architecture of direct memory access 8257. 7

Unit - IV

7. a) Explain the architecture of Intel 8-bit microcontroller in detail. 8
- b) Explain the interrupts of 8051 microcontroller. Also draw format of IE and IP register. 6

OR

8. a) Explain the memory organisation of 8051 microcontroller. What is memory accessing? 8
- b) Describe the operation of TMOD and FLAS register of 8051 microcontroller. 6

Unit - V

9. a) How will you interface stepper motor with 8051 microcontroller? Explain. 7
- b) How will you make 8051 based thyristor firing circuit? Explain its operation. 7

OR

10. a) Explain the interfacing of ADC with 8051 microcontroller. 7
- b) Explain the connection of RS - 232 with 8051 microcontroller. Write its applicability also. 7
