

Code: IT5T3

III B.Tech - I Semester – Regular Examinations - November 2015

**MICROPROCESSORS AND INTERFACING
(INFORMATION TECHNOLOGY)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) What are the different addressing modes supported by 8086 and explain each with example? 8 M
- b) Explain AAA, AAD, AAM, AAS, DAA and DAS instructions with examples. 6 M
2. a) Write assembly language program for counting 0's in 16 binary numbers. 4 M
- b) Write assembly language program for finding factorial of a given number. 5 M
- c) Write assembly language program for arranging numbers in ascending order. 5 M
3. a) Explain minimum and maximum mode of operation of 8086. 7 M

- b) Sketch and explain the interfacing of three 16K X 16 ROMs and two 8K X 16 using a decoder. 7 M
4. a) Sketch and explain the interface of PPI 8255 to the 8086 microprocessor in Minimum mode. Interface 8 LEDs to the port B of 8255. Interface 8 keys to the port A. Write an 8086-assembly program to read the key status and output on to the 8 LEDs. 7 M
- b) Interface an 8 bit DAC 08 to port A. Write an 8086-assembly program segment to output a ramp. 7 M
5. Explain architecture and registers of 8259. 14 M
6. a) Explain operation of USB. 6 M
- b) Explain with neat diagram interfacing of 8086 with 8251. 8 M
7. a) Explain registers of 80386, also explain real and protection mode in 80386. 7 M
- b) Explain architecture of 80486. 7 M
8. a) Compare architecture of Pentium with 80286, 80386. 7 M
- b) Explain memory organization of Pentium. 7 M