Code: CS5T2

III B.Tech - I Semester – Regular Examinations – December 2016

MICROPROCESSOR AND INTERFACING
(COMPUTER SCIENCE AND ENGINEERING)

Duration: 3 hours   Max. Marks: 70

PART – A

Answer *all* the questions.   All questions carry equal marks
                                                       11x 2 = 22 M

1.
   a) List the features of 16-bit microprocessors.
   b) Draw the block diagram of microcomputer.
   c) State the purpose of memory segmentation in 8086.
   d) Mention the difference in executing an instruction and pseudo instruction.
   e) Distinguish TEST and AND instructions.
   f) Discuss why interrupt priorities are required?
   g) State the significance of strobe signal in interfacing.
   h) Write in short about paging.
   i) What is the function of NA pin in 80386?
   j) Mention the advancements of 80486 over 80386.
   k) What are the flags in Pentium Processor?

PART – B

Answer any **THREE** questions.   All questions carry equal
marks.   3 x 16 = 48 M

2. a) Explain with examples any six addressing modes of 8086
      microprocessor.   8 M

   b) Explain the register organization in 8086 microprocessor.
                                                                   8 M

3. a) Explain the following 8086 instructions with suitable
      Examples.   10 M
      i) MOV [3845H], BX   ii) ADD AX, [SI]
      iii) IMUL   iv) NEG   v) LODS

   b) Write an assembly language program to perform
      subtraction of 2 multi-byte numbers and store the result in
      an array.   6 M

4. a) Draw the interrupt vector table structure of 8086
      microprocessor.   8 M

   b) Explain the transistor buffer circuit used to drive 7-segment
      LEDs.   8 M

5. a) Draw and explain the functional diagram of 80286
      microprocessor.   10 M

b) Differentiate between real mode and protected virtual addressing modes.   6 M

6. a) Compare the features of 80286, 80386, 80486 and Pentium processors.   10 M

b) Briefly discuss the register organization of Pentium Processor.   6 M