MCA 102: Sytems Programming
Minor – Sep'2017

Duration: 1 Hour

Maximum Marks: 15

1. Give the content of PSW register after subtracting 4AE0 from 5D90. (1)
2. How does the assembler distinguish between the types of unconditional branch instructions? (1)
3. Discuss the instruction pointer of 8086. (2)
4. Explain memory segmentation and the use of segment registers in 8086. (3)
5. Given that

   (IP) = 2BC0   (CS) = 0200   Displacement = 5119
   (BX) = 1200   (DS) = 212A   (224A0) = 0600
   (275B9) = 098A

   Find the branch address for a branch instruction that uses:
   (a) Intrasegment direct addressing
   (b) Intrasegment indirect addressing which uses the BX register and register addressing.
   (c) Intrasegment indirect addressing which uses the BX register and register relative addressing.

6. Write a complete assembly language program that will convert 16-digit packed BCD number beginning at PACKED to an unpacked BCD number and store the result beginning at UNPACKED. Also, show the allotted space and initialized data for your program. (5)

16 digit
2 bytes

0000 6

01 02 03 04