B.C.A. (Part–II) (Semester–IV) Examination

ADVANCE MICROPROCESSORS AND MICROCONTROLLER

Paper–4ST5

Time—Three Hours] [Maximum Marks—60

N.B. :— (1) All questions are compulsory.
(2) All questions carry equal marks..
(3) Draw neat sketches wherever necessary.

1. (A) Draw the internal block diagram of 80286 microprocessor and explain it. 8

   (B) What is addressing mode ? Explain any two addressing modes of 80286 µp. 4

OR

2. (A) Write down the features of 80286 µp. 6

   (B) Explain real mode operation of 80286 µp. 6

3. (A) Explain in detail register organisation of 80386 µp. 6

   (B) Explain following addressing mode of 80386 µp with example :—
   (i) Scaled indexed mode
   (ii) Base scaled indexed mode
   (iii) Base scaled indexed with displacement. 6

OR

4. (A) Explain different data types in 80386 μp. 6

(B) Explain the segment descriptor register of 80386. 6

5. (A) Explain block diagram of 8051 Microcontroller and explain each block. 8

(B) Differentiate between Microprocessor and Microcontroller. 4

OR

6. (A) Explain internal RAM memory of 8051 microcontroller. 6

(B) Explain SP, PC, and data pointer register in 8051 microcontroller. 6

7. (A) Write program for addition of two 8-bit number. Draw the flow chart for same. 6

(B) What is meant by addressing mode ? Explain Register and Register indirect addressing mode with suitable example. 6

OR

8. (A) Explain data transfer instruction of 8051 microcontroller with example. 4

(B) Explain LJMP and SJMP instructions of 8051 microcontroller. 4

(C) Explain multiplication and division instructions of 8051 microcontroller. 4

9. (A) Explain power saving mode of 8051 microcontroller. 6

(B) Explain with suitable diagram, Interfacing of RS-232C with 8051 Microcontroller. 6

OR

10. (A) Explain interfacing of 8255 PPI with 8051. 6

(B) Explain simplex, half duplex and full duplex mode of communication with suitable diagram. 6