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

ADVANCE MICROPROCESSORS AND MICROCONTROLLER

Paper-4ST5

Time : Three Hours] [Maximum Marks : 60

Note :— (1) All questions are compulsory.

(2) All questions carry equal marks.

(3) Due credit will be given to neatness.

1. (A) What is addressing mode? Explain :
   (1) Register addressing mode
   (2) Immediate addressing mode
   (3) Direct addressing mode
   (4) Register indirect addressing mode. 6

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

OR

2. (P) Explain internal architecture of 80286 μp with diagram in detail. 8

   (Q) State salient features of 80286 μp. 4

3. (A) Explain register organisation of 80386 μp with neat diagram. 6

   (B) Explain the concept of segmentation of 80386. State salient features of 80386. 6

OR

4. (P) Explain flag register of 80486 μp in detail. 6

   (Q) Explain addressing modes of 80386 μp. 6

5. (A) What is PSW register? Explain and draw PSW register of 8051 μc. 6

   (B) How many ports are there in 8051 μc? Explain in detail. 6

OR

6. (P) Explain TMOD & TCON SFR of 8051 microcontroller. 6

   (Q) What is register bank? Explain in detail with diagram. 6

7. (A) Explain the functions of following instructions of 8051 μc :
   (1) DIV AB
   (2) ANL A,# 08H
   (3) MUL AB
   (4) ADD A, 25H
   (5) INC A
   (6) CLR C. 6

   (B) What is ALP programming? Write ALP program for multiplication of two 8-bit numbers using 8051 μc with flowchart. 6

OR

8. (P) State addressing modes that are available in 8051 μc. Explain any four addressing modes with example. 6

   (Q) What is Branching Group and its types? Explain LJMP & SJMP instructions of 8051 μc. 6

9. (A) Explain SCON and PCON SFR of 8051 μc in detail. 6

   (B) What do you mean by interfacing? Explain interfacing of DAC 0808 with 8051 μc. 6

OR

10. (P) What are power saving options available in 8051 μc? Explain in detail. 6

    (Q) What is the need of RS-232C? Explain interfacing of RS-232C with 8051 μc. 6