(3 Hours) [Total Marks: 80]

N.B: 1. Q. No. 1 is compulsory

2. Attempt any three questions from the rest

3. make any suitable assumption wherever required

4. write one complete question answer in sequence at one place.

1. Answer any four (20)
   a. Write features of PIC 18 microcontroller.
   b. Explain status registers of PIC 18 microcontroller
   c. Differentiate serial and parallel communication
   d. Explain different method of interrupt applicable for PIC 18
   e. What is watch dog timer
2. a. Explain, with example, different addressing modes used in PIC 18 instructions. (10)
   b. Explain the bus architecture of PIC 18. (10)

3. a. Write an assembly level program to multiply hex number 30H and 02H stored in REG1 and REG2 and save the result in REG4 and REG5. (10)

   b. Write an assembly level program to flash an LED connected at PB1 at a frequency of 1 sec. (10)

4. a. write short note on assembler and assembler directives. (10)

   b. what is prescalar? (5)

   c. Explain synchronous and asynchronous communication. (5)

5. a. Explain timer zero control register of PIC 18 (TCON0) (10)

   b. Explain the interrupt architecture of PIC 18 Microcontroller. (10)

6. write short note on any two. (20)

   a. Programming model of PIC 10

   b. Method of programming timer in PIC 18

   c. Memory Architecture of PIC 18