

Time : 3 Hrs.

Marks : 80

- N. B :
- 1) Question No 01 is compulsory.
 - 2) Attempt any Three questions from the remaining questions.
 - 3) Each question carries 20 marks.
 - 4) Figure to the right indicates full marks.

Q. 1. Attempt **any 04** sub-questions out of 05 sub-questions.

- I] Draw and explain the status register of Pic 18 microcontroller **(05 marks)**
- II] Compare the microprocessor with microcontroller **(05 marks)**
- III] Write a short note on Capture Mode of CCP module in Pic18 microcontroller. **(05 marks)**
- IV] Describe File Select Register (FSRx) and Stack Pointer (STKPTR) registers. **(05 marks)**
- V] Explain the SPBRG register used in USART module of Pic18. **(05 marks)**

Q. 2. A] What is mean by Assembler Directives? Explain any 05 assembler directives used in Pic18 microcontroller. **(10 marks)**

B] Explain the memory organization of Data Memory along with the concept of Access Bank of Pic18 Microcontroller. **(10 marks)**

Q. 3. A] What is mean by Addressing mode? Explain the addressing modes used in Pic18 microcontroller **(10 marks)**

B] Write a C program to generate 400 Hz frequency at RB3 pin of Pic18 microcontroller using Timer0 operated in 16-bit mode. The crystal oscillator frequency is 10MHz and Timer prescaler of 128. **(10 marks)**

Q. 4. A] Draw and Explain the GIE and PEIE bits with reference to simplified vectored interrupt. **(10 marks)**

B] Explain the TxSTA and RcSTA registers used in USART module of Pic18 microcontroller. **(10 marks)**

Q. 5. A] Explain the Table Write operation along with the instructions associated with it. **(10 marks)**

B] Explain the ADCON0 and ADCON1 control registers of ADC module in Pic18 microcontroller. **(10 marks)**

Q. 6 Write **any 02** short notes.

i] LCD interfacing with Pic 18 microcontroller. **(10 marks)**

ii] DC Motor Interfacing with Pic 18 microcontroller. **(10 marks)**

iii] Stepper motor interfacing with Pic 18 microcontroller **(10 marks)**