Total No. of Questions :10]

SEAT No. :

P3606

[Total No. of Pages :2

[5560]-561
T. E. (Electrical)
ADVANCED MICROCONTROLLER AND ITS APPLICATIONS
(2015 Course) (Semester - I) (End Sem.) (303141)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Attempt Q.No1or Q.No2, Q.No.3 or Q.No.4, Q.No.5 or Q.No.6, Q.No.7 or Q.No.8, Q.No.9 or Q.No.10.***
2) ***Neat diagram must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Compare CISC and RISC Architecture. **[6]**

b) Explain the following instruction with suitable example **[4]**

i) BN n

ii) BCF f,b,a

OR

Q2) a) Write C program to generate delay of 50m sec using Timer 0. Assume crystal frequency of 10 MHz. **[6]**

b) Mention alternate function of Port B. **[4]**

Q3) a) Explain the following in detail : **[6]**

i) Immediate addressing mode

ii) Direct addressing mode

b) Write a assembly language program to blink LED connected to RBI. **[4]**

OR

Q4) a) Explain RAM memory organisation in detail. **[6]**

b) Write assemble language program to add the contents of five consecutive memory location starting from 20H and store result into WREG. **[4]**

P.T.O.

Q5) a) Explain CCP1CON register in detail and also give its count, if we want to toggle CCP1 pin upon match. **[8]**

b) Mention the steps of programming Capture mode. **[8]**

OR

Q6) a) Write a C program to generate 2.5 Khz PWM frequency at 75% duty cycle on CCP1 pin. **[8]**

b) Explain speed control of DC motor using Compare mode. **[8]**

Q7) a) Write programming steps to receive data serially, also find the value in SPBRG register to have baud rate to 9600 at Fosc = 10 MHz. **[8]**

b) Draw and explain LCD interfacing with pic18f458. **[9]**

OR

Q8) a) Explain the steps of Timer interrupt programming. **[8]**

b) Write C program to transmit character "A" continuously at a baud rate of 9600 and crystal frequency of 10 MHz. **[9]**

Q9) a) Explain ADCON0 and ADCON1 register in details. **[8]**

b) Draw the interfacing diagram of voltage measurement and also explain its interfacing procedure. **[9]**

OR

Q10)a) Explain interfacing of LM35 for Temperature measurement. **[8]**

b) Show interfacing and write C program to generate Square wave using DAC. **[9]**