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SEAT No. :

PA-4980

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S.E. (Information Technology) (Insem)

PROCESSOR ARCHITECTURE

(2019 Pattern) (Semester - II) (214451)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4.***
2) ***Neat diagrams must be drawn whenever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Assume suitable data if necessary.***

Q1) a) Explain program memory organization of PIC18 micro controller with suitable diagram. **[6]**

b) Draw and explain status register of PIC18 microcontroller. **[5]**

c) Explain watchdog timer used in PIC18 microcontroller. **[4]**

OR

Q2) a) With a neat diagram discuss in detail about the architecture of PIC18 micro controller. **[6]**

b) Write short note on Brownout Reset. **[5]**

c) Differentiate between RISC and CISC. **[4]**

Q3) a) Name the SFRs associated with each I/O port of PIC18F. What is the role of PORTx SFR? **[4]**

b) Calculate total delay generated by Timer 0 if (FFF1) H is loaded into it.

Assume Crystal frequency =10 MHz **[4]**

c) Explain working of PIC18F Timerl with the help of suitable diagram. **[7]**

OR

P.T.O.

Q4) a) Find the value to be loaded in TRISD and TRISC resister for the following : **[4]**

RD0,RD1,RD2,RD3 as input port

RD4,RD5,RD6,RD7, as output port

RC0,RC2,RC4,RC6,RC7 as output port

RC1,RC3,RC5 as input port

b) Explain in detail Prescaling and Postscaleing of PIC18Timers. **[4]**

c) Explain Timer0 Control Register T0CON in detail. **[7]**

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SEAT No. : [ ]

PB35

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S.E. (Information Technology) (Insem)

PROCESSOR ARCHITECTURE

(2019 Pattern) (Semester-IV) (214451)

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Explain data memory organization of PIC18 micro controller with suitable diagram. **[5]**

b) Explain any 3 addressing modes of PIC micro controller with one example. **[6]**

c) State features of PIC18 microcontroller. **[4]**

OR

Q2) a) With a neat diagram discuss in detail about the architecture of PIC 18 micro controller. **[6]**

b) Write short note on power down modes of PIC 18 micro controller. **[5]**

c) Differentiate between microprocessor and microcontroller. **[4]**

Q3) a) Draw the format of T0CON register and explain the functionality of each bit. **[7]**

P.T.O.

b) Name the SFRs associated with each I/O port of PIC18F. **[8]**

What is the role of TRISx SFR?

Find the value of be loaded in TRISD and TRISC register for the following:

RD0,RD1, RD2, RD3 as input port

RD4, RD5, RD6, RD7 as output port

RC0, RC2, RC4, RC6, RC7 as output port

RC1, RC3, RC5 as input port

OR

Q4) a) Explain working of PIC18F Timer 0 in 16bit mode with the help of suitable diagram. **[8]**

b) Calculate the amount of time delay generated by Timer0 if **[7]**

TMR0H=FFh TMR0L=F2h

XTAL Frequency=10MHz Prescalar=1:64