Universidade Federal do Ceará - UFC Departamento de Engenharia Elétrica

Disciplina : Microprocessadores - Turma 02

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Pré-Laboratório 06

Questão 1:

Resposta: $_CONFIG = 0x3F10$

Questão 2:

Resposta : _CONFIG _CP_OFF & DATA_CP_OFF & _LVP_OFF & _BOREN_ON & _MCLRE_ON & _PWRTE_ON & _WDT_ON & _INTOSC_OSC_NOCLKOUT

Questão 3:

Questão 4:

```
1
   #INCLUDE <P16F628A.INC>
2
3
   DCounter1
                  EQU
                        0x21
   DCounter2
4
                  EQU
                        0x22
   DCounter3
                  EQU
                        0x23
5
6
7
   ORG
             0x00
8
        GOTO
                  INI
9
10
   ORG
             0x04
        RETFIE
11
12
13
   INI:
14
        BANKSEL CMCON
15
        MOVLW
                  0 \times 07
16
        {\tt MOVWF}
                  CMCON
17
18
        BANKSEL TRISA
19
        BCF
                  TRISA,0
20
21
   MAIN:
        BANKSEL PORTA
22
23
        BCF
                  PORTA,0
24
                  DELAY_01S
        CALL
25
        BSF
                  PORTA,0
26
        CALL
                  DELAY_39S
27
        GOTO
                  MAIN
28
29
   DELAY_01S:
30
        MOVLW
                 8Ax0
```

```
31
       MOVWF
               DCounter1
32
       MOVLW
              0x45
33
               DCounter2
       MOVWF
34
       MOVLW
              0 \times 02
35
       MOVWF DCounter3
36
       L00P01
37
       DECFSZ DCounter1, 1
38
               L00P01
        GOTO
39
       DECFSZ DCounter2, 1
40
               L00P01
       GOTO
41
       DECFSZ DCounter3, 1
42
        GOTO LOOPO1
43
       NOP
44
       RETURN
45
46
   DELAY_39S:
47
       MOVLW
               0x35
48
       MOVWF
               DCounter1
49
       MOVLW
              0xF3
50
       MOVWF
               DCounter2
51
       MOVLW 0x05
52
       MOVWF DCounter3
53
       L00P39
       {\tt DECFSZ\ DCounter1,\ 1}
54
               L00P39
55
       GOTO
56
       DECFSZ DCounter2, 1
               L00P39
57
       GOTO
58
       DECFSZ DCounter3, 1
59
        GOTO
               L00P39
60
   RETURN
61
62
   END
```