Unit 11 - Week 9

Assignment 9

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-11-18, 23:59 IST.

1) From the following snippet from Hello SSD Example code, what will be the output on Seven Segment Display, if P1OUT is not ANDed with DMASK in the last command of main loop? ***1 point***

```
/*@brief entry point for the code*/
void main(void) {
    WDTCTL = WDTPW | WDTHOLD;           //! Stop Watch dog

    // Initialize 7-segment pins as Output
    P1DIR |= (SEG_A + SEG_B + SEG_C + SEG_D + SEG_E+ SEG_F + SEG_G + SEG_DP);

    P2DIR &= ~SW;                       // Set SW pin -> Input

    while(1)
    {
        if(!(P2IN & SW))            // If SW is Pressed
        {
            __delay_cycles(20000);      //Delay to avoid Switch Bounce
            while(!(P2IN & SW));        // Wait till SW Released
            __delay_cycles(20000);      //Delay to avoid Switch Bounce
            i++;                        //Increment count
            if(i>15)
            {
                i=0;
            }
        }
        P1OUT = (P1OUT & DMASK) + digits[i];    // Display current digit
    }
}
```

- No number will be displayed on SSD. (i.e. SSD will remain OFF)
- Wrong number will be displayed as previous digit is not cleared
- Compile time error.
- No change in execution of program

No, the answer is incorrect.
Score: 0
Accepted Answers:
Wrong number will be displayed as previous digit is not cleared

2) If BCD input 1001 is provided as input to a BCD to Seven Segment Decoder, which segments of Common Cathode SSD would be active to display that number? ***1 point***

- Pins connected to a, b, c, d, f and g segments will be given high logic to display number 9.
- Pins connected to a, b, c, d, f and g segments will be given low logic to display number.
- No number will be displayed on SSD.
- All pins connected to a, b, c, d, e, f and g segments will be set at high logic to display 8.

No, the answer is incorrect.
Score: 0
Accepted Answers:
Pins connected to a, b, c, d, f and g segments will be given high logic to display number 9.

3) Which of the following command(s) can be used for enabling Low Power Mode 'LPM3' in MSP430 microcontroller. ***1 point***

Command 1 – __bis_SR_register(0xF8 + GIE);
Command 2 – __bic_SR_register(LPM3_bits + GIE);
Command 3 – __low_power_mode_3();
Command 4 – __enable_interrupt();
__bis_SR_register(SCG1 + SCG0 + CPUOFF);

- Commands 1, 3 and 4
- Commands 3 and 4
- Commands 2 only
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Commands 3 and 4

4) In which of the following low power modes, DCO's DC generator is disabled? ***1 point***

- LPM4 only
- Both LPM3 and LPM4
- LPM3 only
- All LPM modes

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both LPM3 and LPM4

5) Choose the correct matching sequence of LCD commands hex code with their respective functions. ***1 point***

Column A	Column B
I) 0x38	i) Clear screen
II) 0x01	ii) Auto Increment cursor
III) 0x0C	iii) Display ON, Cursor OFF
IV) 0x06	iv) 2 line 5x7 matrix

- (I) → (iv), (II) → (i), (III) → (iii), (IV) → (ii)
- (I) → (i), (II) → (iv), (III) → (ii), (IV) → (iii)
- (I) → (iv), (II) → (iii), (III) → (ii), (IV) → (i)
- (I) → (iii), (II) → (i), (III) → (iv), (IV) → (ii)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(I) → (iv), (II) → (i), (III) → (iii), (IV) → (ii)

6) Liquid Crystal displays are of the following types? ***1 point***

- Reflective
- Transflective
- Transmissive
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

7) On character LCD displays, any character to be displayed on LCD is sent as _____ character. ***1 point***

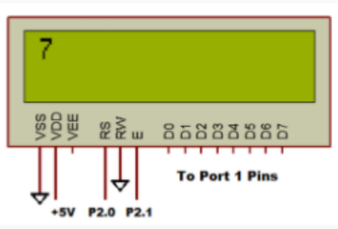
- BCD
- Hexadecimal
- ASCII
- Depends on what character is sent

No, the answer is incorrect.
Score: 0
Accepted Answers:
ASCII

8) If LCD is configured in 8 bit mode, having all D0-D7 pins connected to PORT1 pins of MSP430 microcontroller. What character should be sent to these data pins through 'x' for displaying number 7 on LCD, if the code given below is used to send data? ***0 points***

Code –

```
void lcd_data(char x)
{       P1OUT &= 0x00;          // 8 data pins
        P2OUT |= RS;
        P1OUT = x;
        pulse_en();
}
```



- 7
- 55
- 47
- '7'

No, the answer is incorrect.
Score: 0
Accepted Answers:
55

9) How many minimum number of pins of microcontroller are utilised for interfacing a LCD? ***1 point***

- 4 pins
- 5 pins
- 6 pins
- 8 pins

No, the answer is incorrect.
Score: 0
Accepted Answers:
6 pins

10) If the system is running at 16Mhz clock rate, then what is the maximum delay that you can get from one timer? ***1 point***

- 4ms
- 0.5ms
- 1048.5ms
- 32.7ms

No, the answer is incorrect.
Score: 0
Accepted Answers:
32.7ms