Unit 7 - Week 5

Assignment 5

The due date for submitting this assignment has passed. Due on 2019-03-06, 23:59 IST.

As per our records you have not submitted this assignment.

1) What is the purpose of the CoolTerm software?
   a. To help in online compilation and downloading the object code on the microcontroller board.
   b. To allow the microcontroller board to be mounted as a terminal.
   c. To facilitate a serial communication link between the desktop/laptop and microcontroller board.
   d. None of these.

   □ (a)
   □ (b)
   □ (c)
   □ (d)

No, the answer is incorrect.
Score: 0

Accepted Answers: (c)

2) Consider the following code segment:

   #include "mbed.h"
   AnalogIn sensor(A1);

   ...

   float p;
   p = sensor.read();

   What will be the range of value of the variable p?
   a. -1 to +1
   b. 0 to 1
   c. -1 to 1
   d. -1 to 10

   □ (a)
   □ (b)
   □ (c)
   □ (d)
3) What is the purpose of the potentiometer connected to the V_{EE} pin of the LCD display unit?

a. To provide power to the auxiliary circuits.
b. To adjust the contrast of the LCD display.
c. To adjust the brightness of the LCD display.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(b)

4) What will the following code segment do to a LCD display unit interfaced with the STM32 board?

```c
char buf[] = "Hello";
lcd.setLine (1, buf);
```

a. Display the string “Hello” on the first line of the display.
b. Display the string “Hello” on the second line of the display.
c. Initialized the number of lines in the string “buf”.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(b)

5) What will the following code segment do to the PWM output port D3 of the STM32 board?

```c
PwmOut device (D3);
device = 0.35;
```

a. Generate a waveform with duty cycle of 35%.
b. Generate a waveform with time period of 0.35 second.
c. Generate a waveform with pulsewidth of 0.35 second.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(b)
6) What will the following code segment do to the PWM output port D9 of the STM32 board?

```cpp
PwmOut device (D9);
device.period (0.01);
device.write (0.3);
```

a. Generate a 100 Hz rectangular waveform with 0.3 sec pulse width.
b. Generate a 100 Hz rectangular waveform with 30% duty cycle.
c. Generate a 100 KHz rectangular waveform with 30% duty cycle.
d. None of these.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(a)

7) Consider the following interfacing of a LDR:

![LDR Interfacing Diagram]

For R1 = 20 Kohms, when the resistance of the LDR changes from 100 Kohms to 2 Kohms, change in the output voltage will be \_\_\_\_\_\_\_ volts.

No, the answer is incorrect.
Score: 0
8) For the following code segment, the duty cycle of the waveform generated on the PWM port line D3 will be ............... %.

```c
PwmOut waveform (D3);
...
waveform.period_us (5000);
waveform.pulsewidth_ms (2);
```

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Range) 3.70,3.72

9) Which of the following statements is true?

a. A speaker can work as a microphone by reversing the connection.

b. A microphone converts sound energy to electrical energy.

c. Inside a microphone, there is a fixed permanent magnet, and a movable coil connected to the diaphragm.

d. None of these.

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 40

10) For the following code segment, the frequency of the waveform generated on digital port D1 will be ........ Hz.

```c
DigitalOut portline (D1);
...
while (1) {
    portline = 0;
    wait (1);
    portline = 1;
    wait (3);
}
```

No, the answer is incorrect.
Score: 0