Assignment 1

The due date for submitting this assignment has passed. Due on 2019-02-13, 23:59 IST.

As per our records you have not submitted this assignment.

1) Which of the following are examples of embedded systems?
   a. Laptop  
   b. Airplane 
   c. Washing machine 
   d. Computational server

   (a)  
   (b)  
   (c)  
   (d)

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

2) Which of the following are typical features of embedded systems?
   a. They have tight constraints on cost and form factor. 
   b. Responds to inputs only from the users. 
   c. Responds to inputs from the system’s environment. 
   d. Has a general-purpose processor that is user programmable.

   (a)  
   (b)  
   (c)  
   (d)

   No, the answer is incorrect.
   Score: 0
Consider the typical triangle-shaped revenue model. Suppose that a product enters the market at time 0, maximum sales of $S$ units occur at time $W$, and the product life is $2W$. The total number of units sold during the product lifetime can be estimated as:

- a. $W \times S$
- b. $2W \times S$
- c. $W \times S / 2$
- d. None of these

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

4)
Consider the typical triangle-shaped revenue model. Suppose that a product enters the market at time 20, maximum sales of 500 units occur at time 100, and the product life is 200. The total number of units sold during the product lifetime can be estimated as $............$ units.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 45000

1 point

5)
For a product, the non-recurring cost is Rs. 60,000, and the unit cost of the product is Rs. 3.4. If 4000 units of the product are manufactured, the per-unit cost will be given by Rs. $.............$

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 3515

1 point

6)
Which of the following is/are not true for Harvard architecture?

- a. There is a single memory unit where both instructions and data are stored.
- b. There are separate memories for storing instructions and data.
- c. They are used in conventional computer systems like desktops and laptops.
- d. None of these.

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

1 point

1 point
7) Which of the following are typical of microcontrollers?
   a. Size of program memory limits the maximum size of the program that can be executed.
   b. A complex operating system ensures efficient resource utilization.
   c. It is the heart of modern computer systems like desktops.
   d. None of these.

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

8) Consider a 5-stage pipeline with stage delays (in nanoseconds) of 20, 25, 10, 15 and respectively. What will be the maximum clock frequency with which the pipeline can operate?
   a. 20 MHz
   b. 40 MHz
   c. 50 MHz
   d. None of these

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

9) Consider a 5-stage pipeline with stage delays (in nanoseconds) of 20, 25, 10, 15 and respectively. Total time required to process 1500 data items in the pipeline will be ....... nanoseconds.

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   (Type: Numeric) 60160

10)
In which processor mode an ARM processor works while handling normal (low priority) interrupts?

a. User  
b. FIQ  
c. IRQ  
d. System  

- (a)  
- (b)  
- (c)  
- (d)  

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