Assignment 0

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

Due on 2018-08-07, 23:59 IST.

1) Which of the following is/are not a valid variable name/s in C-Language?

- a) int num;
- b) float rate@12;
- c) char* _123;
- d) float main;

No, the answer is incorrect.
Score: 0

Accepted Answers:
- b) float rate@12;

2) In C-Programming, function parameters are:

- a) Usually Passed by value
- b) Passed by reference for arrays
- c) Always Passed by address
- d) Non-pointer variables are passed by value and pointers are passed by reference

No, the answer is incorrect.
Score: 0

Accepted Answers:
- a) Usually Passed by value
- b) Passed by reference for arrays

3) Which of the following statement is/are the valid declaration of an array in C-Language?

- a) int num[10];
- b) int num[Size], where Size is a manifest constant having value = 10

No, the answer is incorrect.
Score: 0

Accepted Answers:
- b) int num[Size], where Size is a manifest constant having value = 10
4) a) int num[10];
   b) int num[Size]; where Size is a manifest constant having value = 10

   What will be the output of the following Program?
   ```c
   #include <stdio.h>
   int main() {
   int i = 0;
   for(i = 0; i < 20; i++) {
    switch (i) {
    case 0: i = i + 2;
    case 1: i = i + 5;
    case 5: i = i + 5;
    default: i = i - 3;
    break;
    }
    printf("%d", i);
   }
   return 0;
   }
   ```

   a) 2 7 12 15 16 17 18 19 20
   b) 2 5 10 13 16 19
   c) 15 19
   d) Compilation Error

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   c) 15 19

5) Consider the following linked list:

   I → I → K → G → P

   What is the output of following function when it is called with the head of the list?

   ```c
   void fun(struct node* start){
   if (start == NULL) return;
   printf("%c ", start->data); // Considering data is of 'char' type
   if (start->next != NULL) fun(start->next->next);
   printf("%c ", start->data);
   }
   ```

   a) I T G I G
   b) I T G G
   c) I T G G T I
   d) I T G I T G

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   c) I T G G T I

6) A single array A[1..MAXSIZE] is used to implement two stacks. The two stacks grow from opposite ends of the array. Variables top1 and top2 (top1 < top 2) point to the location of the topmost element in each of the stacks. If the space is to be used efficiently, the condition for stack full is:
7) The seven elements A, B, C, D, E, F and G are pushed onto a stack in reverse order, i.e., starting from G. The stack is popped five times and each element is inserted into a queue. Two elements are deleted from the queue and pushed back onto the stack. Now, one element is popped from the stack. The popped item is:

- a) A
- b) B
- c) F
- d) G

No, the answer is incorrect.
Score: 0
Accepted Answers:
- d) top1 = top2 - 1

8) Consider an array A[20][10], assume 4 words per memory cell and the base address of array A is 100. What is the address of A[11][5]? Assume row major storage and index starting with zero.

- a) 560
- b) 565
- c) 570
- d) 575

No, the answer is incorrect.
Score: 0
Accepted Answers:
- a) 560

9) Consider the following code snippet and identify the correct declaration statement/s inside function main(), associated with the definition of func().

```c
void func(int a) {
    printf("Value of a is %d\n", a);
}

int main() {
    void (*fun_ptr1)(int) = func; // Statement-1
    void (*fun_ptr2)(int) = &func; // Statement-2
    void (*fun_ptr3)() = &func;   // Statement-3
    void (*fun_ptr4)() = func;   // Statement-4

    return 0;
}
```

- a) Statement-1
- b) Statement-2
Consider an array `int num[] = {1, 2, 3, 4, 5, 6};`. `p1` and `p2` are two pointers of type `(int*)`. If `p1 = num` and `p2 = p1 + 5` then what is the value of `(char*)p2 - (char*)p1`.

Note: 'int' and 'char' takes 4 bytes and 1 byte respectively

- a) 5
- b) 16
- c) 20
- d) 24

No, the answer is incorrect. 
Score: 0
Accepted Answers:
- c) 20