



ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution



WORKSHEET – 42

Topic : Linked lists operations

Subject: COMPUTER SCIENCE

Class - 12

F.M:15

Chapter: Programming in C: Data Structures

Date: 21/11/2020

Choose the correct answer for each question:

15x1=15

- Structure is a _____ data type.
 - Mixed
 - Built-in
 - User-defined
 - None of these
- Which keyword is used to define a structure?
 - struct
 - structure
 - Node
 - struct node
- Consider the following definition in c programming language

```
struct node
{
    int data;
    struct node * next;
}
typedef struct node NODE;
NODE *ptr;
```

Which of the following c code is used to create new node?
 - ptr = (NODE*)malloc(sizeof(NODE));
 - ptr = (NODE*)malloc(NODE);
 - ptr = (NODE*)malloc(sizeof(NODE*));
 - ptr = (NODE)malloc(sizeof(NODE));
- What is the condition if ptr is NULL, after the code: ptr = (struct node *) malloc(sizeof(struct node *));
 - OVERFLOW
 - UNDERFLOW
 - NULL
 - None of these
- Which of the following can be used to move a pointer ptr to the last node of a linked list, whose first node is pointed by the pointer start?
 - ptr = start; while(ptr!=NULL) ptr = ptr ->next;
 - ptr = start; while(ptr->next!=NULL) ptr ->next = ptr;
 - ptr = start; while(ptr->next!=NULL) ptr = ptr ->next;
 - ptr = start; while(ptr!=NULL) ptr ->next =ptr;
- Which of the following can be used to delete the last node, whose first node is pointed by the pointer start?
 - ptr = start; while(ptr->next->next!=NULL) ptr = ptr ->next;
 - ptr = start; while(ptr->next->data!=NULL) ptr ->next = ptr;
 - ptr = start; while(ptr->next->next!=NULL) ptr ->next=ptr;
 - ptr = start; while(ptr->data->next!=NULL) ptr ->next =ptr;

7. What does the following code do?

```
ptr->data = item;
ptr->next = head;
head = ptr;
printf("\nNode inserted\n");
```

- a. Inserting an item at the beginning of the linked list
- b. Inserting an item at the end of the linked list
- c. Inserting an item after specified node of the linked list
- d. None of these

8. What does the following code do?

```
temp = head;
while (temp -> next != NULL)
{
    temp = temp -> next;
}
temp->next = ptr;
ptr->next = NULL;
```

- a. Inserting an item at the beginning of the linked list
- b. Inserting an item at the end of the linked list
- c. Inserting an item after specified node of the linked list
- d. None of these

9. What is the purpose the below code?

```
ptr = head;
head = ptr->next;
free(ptr);
```

- a. Deletion of node from the beginning of linked list
- b. Insertion of node at the beginning of linked list
- c. Deletion of node from the end of linked list
- d. Insertion of node at the end of linked list

10. What is the purpose of the below code?

```
while (ptr!=NULL)
{
    printf("\n%d",ptr->data);
    ptr = ptr -> next;
}
```

- a. Searching an element in linked list
- b. Traversing in linked list
- c. Inserting an item in linked list
- d. Deletion of an item in linked list

11. Which function deallocates the memory previously allocated?

- a. calloc()
- b. malloc()
- c. free()
- d. dealloc()

12. What is the return type of free()?
- a. int
 - b. struct
 - c. void
 - d. char *
13. Which header file is required to use free() in program?
- a. stdio.h
 - b. string.h
 - c. math.h
 - d. stdlib.h
14. Which function can be used to compute the size of its operand?
- a. sizeof()
 - b. size()
 - c. malloc()
 - d. calloc()
15. What does the following node represent?

```
struct node
{
    int data;
    struct node *next;
    struct node *prev;
}
```

- a. Single linked list
- b. Doubly linked list
- c. Circular linked list
- d. All of these

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