

# NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

Department of Computer Science and Engineering

## Guidelines for submitting the assignment:

1. The assignments should be handwritten with your signature and enrollment number on each page.
2. The assignment sheets should be scanned and converted into a PDF and the PDF should be named as per the Enrollment Number of the student.
3. Due date for Assignment 1 : **19th May 2020**
- 4, Assignment 1 should be emailed to : [gousiahabib\\_01phd19@nitsri.net](mailto:gousiahabib_01phd19@nitsri.net)

1. A **2D array A[20][50]** of integers is stored in memory. Each integer takes **4 bytes** of storage. **Base Address of A is 3000**, determine the **location of A[10][15]** in :

a. Row Major representation

b. Column Major representation

2. Write :

a. Five Applications of Linked Lists

b. Advantages and disadvantages of Linked Lists over Arrays

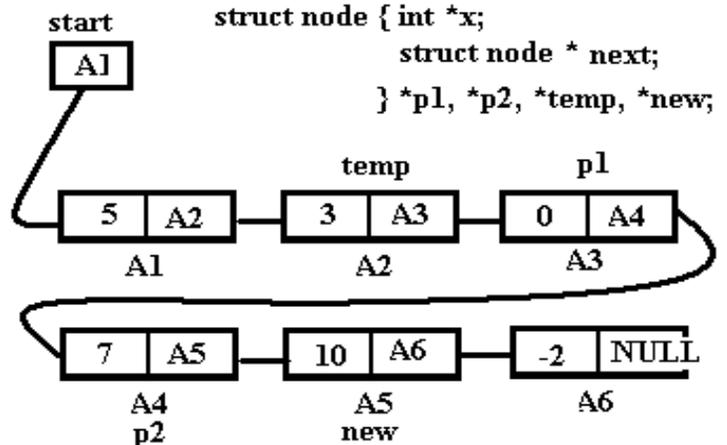
3. **/\* Programming \*/** Write a function to find the middle element of a linked list. If the list is of odd length, it prints the middle element and deletes it. If the list is of even length, it prints the central two elements, deletes both and inserts the sum of the two deleted nodes at the centre of the linked list.

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4. A linked list created using **struct node** is given below. How will the following statements affect the structure of the linked list shown in figure? **Draw the resulting linked list** ( In Order and with proper addresses in the next field )

1. temp->next = new;
2. temp = temp ->next;
3. new ->next = p2;
4. p2->next = p1;
5. p1->next = temp;
6. temp->next = start;
7. start= start->next
8. temp->next->next= NULL;
9. new=(struct node \*) malloc(sizeof(struct node));
10. new->x=100;
11. temp=temp->next;
12. temp->next = new;
13. new->next=NULL;



7A5

A4  
p2

10A6

A5  
new

-2NULL

A6