Question No: 36 (Marks: 3)
If the requested memory is not available in the system then what does **calloc/malloc** and **new** operator return?
Answer:-
malloc returns a void pointer to the allocated space or NULL if there is insufficient memory available. To return a pointer to a type other than void, use a type cast on the return value. The storage space pointed to by the return value is guaranteed to be suitably aligned for storage of any type of object. If size is 0, malloc allocates a zero-length item in the heap and returns a valid pointer to that item.
By default, malloc does not call the new handler routine on failure to allocate memory. You can override this default behavior so that, when malloc fails to allocate memory, malloc calls the new handler routine in the same way that the new operator does when it fails for the same reason.

Question No: 37 (Marks: 3)
If we want to send the data by reference and don't want that original data should be affected then what can we do to prevent any change?

Question No: 38 (Marks: 5)
Write down the disadvantages of the templates.
Answer:-repeated

Question No: 39 (Marks: 5)
The following code segment has errors. Locate as many as you can and explain briefly.

```
class Circle // no need to enter colon here , so I removed it
{
private : //colon missing
double centerX;
double centerY;
double radius;
public: //colon missing
void setCenter(double, double);
void setRadius(int);
};//semi colon missing
```

Question No: 40 (Marks: 10)
Write a program which consists of two classes, **Date** and **Person.**
Date class should contain three data members **day**, **month**, **year** and setter and getter function for these data members. Date class should also contain **showdate()** member function to display date.

Person class should contain three data members **Name, Address,** and **Bday**, where Name and Address are char pointer while Bday(Date of birth) is of type Date, Person class should further contain two member functions **Display()** and **setdate().**

In main program Create an object of Class person and call the member functions with it.
ANSWER:

```
#include <stdio.h>
#include <iostream>
#include <cstring>
using namespace std;
```

```
class Date
{
public:
        int day;
        int month;
        int year;

public:
        Date()
                {
                        day=0;
                        month=0;
                        year=0;

                }

        void setDay(int);
        void setMonth (int);
        void setYear(int);

        int getDay();
        int getMonth();
        int getYear();

        void showDate();
};
void Date: :setDay(int d)
{
        if{d<1 | | d>31)
        cout<<"Invalid month Renter it";
        cin>>d;
}
        day=d;
}
```

```
void Date: :setMonth (int m)
{
        if(m<1 | | m>12)
{
        cout<<"Invalid month Renter it";
        cin>>m;
}
        month=m;
}
        void Date: :setYear (int y)
{
        year=y;

        int Date: :getDay()
{
        return day;
}
        int Date: :getMonth()
{
        return month:
}
        int Date: :getYear()
{
        return year;
}
        void Date: :showDate()
{
        cout<<day<<"-"<<month<<"-"<<year<<end1;
}
Class Person
{
public:

        char *Name;
char *Address
        Date Bday;
```

```
public:
        Student()
        {
        Name=new char[20];
        Address=new char[10];
        cin.getline(Name,20);
        cout<<"Enter Address:";
        cin.getline(Address,10);
        }

void setDate()
{
        cout<<"Enter Day:";
        cin>>Ad_date.day;
        cout<<"Enter month:";
        cin>>Ad_date.month;
        cout<<"Enter Year:";
        cin>>Ad_date.year;
        }
void Display()
        {
        cout<<"Name: "<<end1;
        cout<<"Address: "<<Address<<end1;
        cout<<"Date of Birth: ";
        Ad-date.showDate();
        }
};
void main()
```

```
{
        Person object;
        object.setDate();

        object.Display();

        system("pause");
}
```

Question No: 41 (Marks: 10)

Write a C++ program that contains a class 'myClass' having two data members of type int.
The class must have

- A default constructor which must initialize all the data members to their meaningful values.
- A destructor with no implementation.
- Setter member functions to set all data members of class
- Getter member functions to get all data members of class

In main function of the program

5. Prompt the user to enter the number of objects to be created.
6. Dynamically allocate memory to objects according to the size entered by user.
7. De-allocate memory that was allocated to objects

Answer:

```
#include <stdio.h>
#include <iostream>
#include <cstring>
using namespace std;

class myclass

{

public:
int a;
int b;
int *iptr, *sptr;
```

```
construct{int,int.int}

        void seta(int);
        void setb(int);
        void setc(int);

        int geta();
        int getb();
        int getc();
 };

 void Person: :seta(int aa)
 {

        a=aa;
}

void Person: :setb (int bb)
{

        b=bb;
}
        void Person: :setc (int cc)
{
        c=cc;
}

main()

{

int num;

cout<<"Enter the number of objects to be created";

cin>>num;

for (int i =1;i==num;i++)
{

Person i_

}
}
```