OBJECT ORIENTED PROGRAMMING

QUIZ#1(paper A)

SOLUTION

Total Marks(10 marks)

Question # 1

Define a class IntArr which hosts an array of integers. Provide the following member functions:

- A default constructor.
- A parameterized constructor which initializes the array of the integers.
- A function called display to display the array contents.
- A function called search to search for an element in the array.
- A function called compare which compares two IntArr objects for equality
- Illustrate all the constructors as well as all the methods by defining objects.

Marks(4 marks)

```
#include<iostream>
using namespace std;
class intArr
{
	private:
		int array[5];
	public:
		intArr(int arr[])
		{
			for(int j=0;j<5;j++)
			{
				array[j]=arr[j];
			}
		}
		void display()
		{
			cout<<"Array Elements:\n";
			for(int i=0;i<5;i++)
			cout<<array[i]<<",";
		}
		void search(int num)
		{
			for(int i=0;i<5;i++)
			{
				if(array[i]==num){
					cout<<"Number found in array object at Location"<<i+1<<endl;
					return ;
					}

			}
			cout<<"Number not found in array object"<<endl;
```

```
        }
        void compare(intArr obj1)
        {
                int temp=0;
                for(int a=0;a<5;a++)
                {
                        if(this->array[a]==obj1.array[a])
                        temp++;
                }
                cout<<temp<<"  elements are same in both int array objects."<<endl;
        }
};
int main()
{
        int arr[5],numb;
        cout<<"Please Enter Array Values"<<endl;
        for(int i=0;i<5;i++)
        cin>>arr[i];
        intArr arr_obj1(arr);
        arr_obj1.display();
        cout<<"\nEnter number to search in array object: " <<endl;
        cin>>numb;
        arr_obj1.search(numb);
        int arr2[]={1,2,33,44,55};
        intArr arr_obj2(arr2); //second object is created to compare.
        arr_obj1.compare(arr_obj2);
}
```

Question # 2: Write True/False

1. An instance of a class is called an object.
2. Every class declaration contains keyword class followed immediately by the class's name.
3. A method declaration that is below keyword protected indicates that it can be called by other classes declared outside the class declaration.
4. Keyword void indicates that a method will return any information when it completes its task.
5. Keyword private is a _____.
6. Object creation expressions begin with the new operator and create new objects in C++.
7. To call a method of an object, follow the variable name with a member access operator (.),
8. Each object (instance) of a class has the same copy of each instance variable.
9. Declaring instance variables with access modifier private is known as information hiding.
10. A constructor can be used to initialize an object of a class when the object is destroyed.
11. When a member function is defined outside the class definition, the function header must include the class name and the _____, followed by the function name to "tie" the member function to the class definition.

12. Return type _____indicates that a function will perform a task but will not return any information when it completes its task.

Marks(6 marks)

1	**true**	**5**	**Access specifier**	**9**	**true**
2	**true**	**6**	**false**	**10**	**false**
3	**false**	**7**	**false**	**11**	**:: (Scope Resolution Operator)**
4	**false**	**8**	**true**	**12**	**void**