MID Term Examination 2020

Time Allowed: 2 Hrs
Max. Marks: 100
SUBMISSION PROCEDURES:
- WRITE ALL YOU ANSWERS ON PAPER.
- SCAN YOUR ANSWERS ON CAMSCANNER
- RENAME YOUR DOCUMENT WITH YOUR REGISTRATION NUMBER
- SEND THE DOCUMENT VIA EMAIL TO "oopdcse@gmail.com" within the allocated time.

Q1

1. The size of a char array that is declared to store a string should be one larger than the number of characters in the string. Why? [4]
2. What do you mean by dynamic initialization of a variable? Give an example. [4]
3. What is a reference variable? What is its major use? [4]
4. What is the application of the scope resolution operator :: in C++? [4]
5. What are the advantages of function prototypes in C++? [4]
6. When will you make a function inline? Why? [4]
7. How does an inline function differ from a preprocessor macro? [4]
8. When do we need to use default arguments in a function? [4]
9. What do you meant by overloading of a function? When do we use this concept? [4]
10. What do you mean by dynamic binding? How is it useful in OOP? [4]
11. Distinguish between the following terms: [8]
    (a) Objects and classes
    (b) Data abstraction and data encapsulation
    (c) Inheritance and polymorphism
    (d) Dynamic binding and message passing

12. Identify the error in the following program. [5]

```
include<iostream.h>
void main()
{
int num[]={1,2,3,4,5,6};
num[1]==[1]num ? cout<<"Success" : cout<<"Error";
}
```

13. Identify the errors in the following program. [8]

```
#include <iostream.h>
#define pi 3.14
int squareArea(int &);
int circleArea(int &);
void main()
{
int a-10;
cout << squareArea(a) << " ";
cout « circleArea(a) « ";
cout « a « endl;
{
int squareArea(int &a)
{
return a *== a;
}
int circleArea(int &r)
{
return r = pi * r * r;
}
```

14. Find errors, if any, in the following C++ statements. [10]

(a) char *cp = vp; // vp is a void pointer
(b) int code = three; // three is an enumerator
(c) int sp = new; // allocate memory with new
(d) enum (green, yellow, red);
(e) int const sp = total;
(f) const int array_size;
(g) for (i=1; int i<10; i++) cout << i << "/n";
(h) int & number = 100;
(i) float *p = new int 1101;
(j) char name[33] = "USA";

15. Find errors, if any, in the following function prototypes. [10]

(a) float average(x,y);
(b) int mul(int a,b);
(c) int display(….);
(d) void Vect(int? &V, int & size);
(e) void print(float data[], size = 201);

16. Identify the error in the following program. [4]

```
#include <iostream.h>
int fun()
{
return 1;
}
float fun()
{
return 10.23;
}
void main()
{
cout <<(int)fun() << ' ';
cout << (float)fun() << ' ';
}
```

17. Five different events are arranged at the same time in the University. Each event is numbered 1 to 5 and students are assigned by marking the students ticket with a number. Write a program to read the ticket and count the students assigned to each event using an array variable count. In case, a number read is outside the range of 1 to 5, the ticket should be considered as "discard" and the program should also count the number of "discard" tickets. [15]