

BCA 2ND Semester (Hons.) Examination, 2022
BACHELOR OF COMPUTER APPLICATION

Course ID: 23312

Course Code: CC-04

Course Title: Object oriented programming using C++

Full Marks: 50

Time: 2 Hours

*The figures in the right hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.
Illustrate the answers wherever necessary.*

Group – A

1. Answer all the questions from the following:- **1x10=10**

- i. The programming language that has the ability to create new data types is called_____
 - a) Overloaded
 - b) Encapsulated
 - c) Reprehensible
 - d) Extensible
 - e) None of these

- ii. What is the output of the following program

```
#include<iostream>
using namespace std;
int main()
{
cout<<-1-1-1;
return 0;
}
```

 - a) Compilation Error
 - b) 0
 - c) 3
 - d) -3
 - e) None of these

- iii. Which type of memory is used by an Array in C++ Programming language
 - a) Contiguous
 - b) Non-contiguous
 - c) Both A and B
 - d) All of the above
 - e) None of these

iv. What is the output of below program?

```
int main()
{
    int a=10;
    cout<<a++;
    return 0;
}
```

- a) 10
- b) 11
- c) 12
- d) All of these
- e) None of these

v. What is the output of following program

```
Class Mycpp
{
    int Mycpp()
    {
        Cout<<"Constructor";
        return 0;
    }
};

int main()
{
    Mycpp obj;
    return 0;
}
```

- a) Constructor
- b) 0
- c) Compilation Error
- d) Runtime Error
- e) None of these

vi. Which of the following statements is correct about the formal parameters in C++?

- a) Parameters with which functions are called
- b) Parameters which are used in the definition of the function
- c) Variables other than passed parameters in a function
- d) Variables that are never used in function
- e) None of these

vii. What happens if the following C++ statements are compiled and executed?

```
int*ptr=NULL;
delete ptr;
```

- a) The program is not Semantically correct
 - b) The program is compiled and executed Successfully.
 - c) The program gives a compile time error.
 - d) The program compiled successfully but throws an error during run time.
 - e) None of these.
- viii. What happens if the following program is executed in C and C++

```
#include<stdio.h>
void func(void)
{
    printf("Hello");
}
void main()
{
    func();
    func(2);
}
```

- a) Outputs Hello twice in both C and C++
 - b) Error in C and successful execution in C++
 - c) Error in C++ and successful execution in C.
 - d) Error in both C and C++.
 - e) None of these
- ix. What is an abstract class in C++?
- a) Any class in C++ is an abstract class
 - b) Class from which any class is derived.
 - c) Class specifically used as a base class with at least one virtual function.
 - d) Class specifically used as a base class with at least one pure virtual function
 - e) None of these
- x. Which of the following constructors are provided by the C++ compiler if not defined in a class
- a) Copy constructor
 - b) Default constructor
 - c) Assignment Constructor
 - d) All of the above
 - e) None of these

Group – B

2. Answer any FIVE from the following:-

2x5=10

- a) What is pointer? What are the uses of pointer?
- b) What is function overloading? Give an example.
- c) What are the functions supported by C++ to handle uncaught exceptions?
- d) Write at least four rules for operator overloading.
- e) What are the characteristics of a static data member?
- f) What is function prototype?
- g) Define pure virtual function?
- h) What are the functions of standard stream?

Group – C

3. Answer any Four from the following:-

5x4=20

- a) How OOP differs from procedural programming?(Give five points)
- b) Write a C++ Program which override a function “Calculatearea()” of a base class shape to rectangle and square classes for calculating their area.
- c) Discuss different access modifiers in C++.
- d) Explain use of friend function with the help of suitable example.
- e) What is copy constructor? Explain with an example.
- f) Write a C++ program to discuss the concept of arrays of objects.

Group – D

4. Answer any ONE from the following:-

10x1=10

- a) What is polymorphism? Explain compile time and run time polymorphism with suitable example.
(2+8)
- b) **SHORT NOTE** (ANY TWO) (5x2)
 - i) Inline function
 - ii) Encapsulation
 - iii) This pointer
