

UTTARANCHAL UNIVERSITY, DEHRADUN
UTTARANCHAL SCHOOL OF COMPUTING SCIENCES
MID TERM EXAMINATION
EVEN SEMESTER 2023-24

BCA | 2nd Semester

OBJECT ORIENTED PROGRAMMING USING C++ | BCA – C202

Time: 1:15 Hour

Max. Marks: 30

Note: All questions are compulsory.

Q.1- Answer the following questions.

(1 x 6 = 6 Marks)

Multiple Choice Questions

a) Evaluate the output for this program?

```
#include <iostream>
```

```
int main()
```

```
{ int b,a,x = false + true + 0.4;
```

```
std::cout << x;
```

```
return 0;}
```

(CO-1, BL-5)

a. syntax error

b. logical error

c. 0

d. 1

b). What is used for dereferencing?

(CO-3, BL-1)

1. pointer with asterisk

2. pointer without asterisk

3. value with asterisk

4. value without asterisk

c) Evaluate the output for this program?

```
Class Car
```

```
{
```

```
public:
```

```
int speed;
```

```
void Car() { speed = 0; }
```

```
};
```

(CO-2, BL-6)

a. Incorrect class

b. Missing data

c. No error

encapsulation

d. Inheritance misuse

State True/ False

- a) Constructors do not return any value. (CO-2, BL-3)
- b) The keywords cannot be used as variable names. (CO-1, BL-3)
- c) There are only two possible values for the bool data type. (CO-1, BL-3)

Q.2-Write short note on any two (up to 70 words) (2 x 3 = 6 Marks)

- a) Describe namespaces. And design a program to explain the concept of scope resolution operator. (CO-1, BL-1,6)
- b) What do you understand by direct and indirect base class? And also design a program to explain the concept of private inheritance. (CO-3, BL-2,6)
- c) What are the advantages of inline function over normal function? (CO-1, BL-1)

Q.3-Attempt any one of the following (1 x 6 = 6 Marks)

- a) Define array. And also design a program to explain the concept of Array of objects with example. (CO-2, BL-1,6)

OR

- b) What do you understand by the data abstraction and data encapsulation? And also explain the different type of data types used in C++ language (CO-1, BL-2,1)

Q.4- Attempt any one of the following. (1 x 6 = 6 Marks)

- a) Describe class and object with example. And also design a program to use the Constant member function in a class. (CO- 2, BL-1,6)

OR

- b) Define multiple inheritance. And also design a program for both to explain the ambiguity problem arises in multiple inheritance and to resolve this. (CO- 3, BL-1,6)

Q.5- Attempt any one of the following. (1 x 6 = 6 Marks)

- a) What do you understand by the Constructor? And also explain the types of constructor with proper example (CO-2, BL-2,1)

OR

- b) What is the advantage of using function in c program? And what do you understand by the concept of function with arguments and without return value, function with arguments and with return value. (CO- 2, BL-1,2)