

BCA Semester-II (Hons) Examination, 2022-23
BACHELOR OF COMPUTER APPLICATION

Course ID : 23312

Course Code : CC-04

Course Title : Object Oriented Programming Using C++

Time : 2 Hours

Full Marks : 50

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.

GROUP - A

1. Choose the best alternative from the following options for each question: $1 \times 10 = 10$

i) Which of the following is not valid expression?

- a) $33/9/3$
- b) $23\%(5\%2)$
- c) $34(7/3)$
- d) All of these
- e) None of these

ii) Evaluate $m\%n++$, assuming $m=24$ and $n=7$

- a) 4
- b) 3

- c) 2
- d) All of these
- e) None of these

iii) Elements in array are identified by a unique

- a) Symbol
- b) order
- c) Subscript
- d) Data type
- e) None of these

iv) What will be the output of the following program?

```
#include<iostream>
int main()
{
    do
    {
int b=0;
cout<<b;
b++;
}
while(b!=10);
}
```

- a) There is nothing wrong in the programming
- b) variable 'b' must not be initialized in the loop
- c) variable 'b' must not be declared in the loop
- d) The condition for while loop is not valid
- e) None of these

v) What will be the output of the following program?

```
#include<iostream>
void main()
{
a=32;
cout<<a<<endl;
int a;
}
```

- a) 32
 - b) 0
 - c) Compile time error
 - d) Run time error
 - e) None of these
- vi) What will be the output of the following program?

```
#include<iostream>
void main()
```

```
{
int a = 0, x;
x=++a*--a;
cout<<++a<<" "<<a++<<" "<<x<<endl;
```

- a) 0, 0, 0
- b) 2, 0, 0
- c) 2, 2, 2
- d) 3, 2, 2,
- e) None of these

vii) Sending a copy of data to a function of a program module is called?

- a) Recursion
- b) Passing a reference
- c) Passing a value
- d) All of these
- e) None of these

viii) What is the wrong with following program?

```
#include<iostream>
void main()
{
int a[5]={0}
for (int i=0;i<2;i++)
```

```
a[i]=1;
for (int i=0;i<5;i++)
cout<<a[i]<<endl;
```

- a) Array 'a' is not initialized properly
 - b) There is no problem
 - c) Redeclaration of variable 'i'
 - d) There is run time error
 - e) None of these
- ix) Which of the following statement is false about pointer?
- a) The ++and — operator may be used with pointer variable.
 - b) An integer may be added and subtracted from a pointer variable
 - c) A pointer may be added to another pointer
 - d) A pointer may be subtracted from another pointer
 - e) None of these
- x) A null pointer is a pointer that contain
- a) The address 0
 - b) The address that point to 0
 - c) The address that point to '\0'
 - d) The address that points to -1
 - e) None of these

GROUP-B

2. Answer any **five** from the following: $2 \times 5 = 10$
- a) Define reference variable? Give its syntax.
 - b) Write down the syntax and example to create class.
 - c) What do you mean by token?
 - d) Define pure virtual function.
 - e) What is the need of abstract class in C++?
 - f) What is the file stream?
 - g) What is data encapsulation?
 - h) What is inline function?

GROUP-C

3. Answer any **four** from the following: $5 \times 4 = 20$
- a) What is copy constructor? Explain with an example. $2+3=5$
 - b) Write a C++ program to overload area() function to calculate area of shapes like Triangle, square, circle. 5
 - c) List and define the two types of polymorphism. 5
 - d) Define ternary operator. Compare it with if and if-else statement. $2+3=5$

- e) What are the features of object oriented programming? 5
- f) What are different ways to define member function of a class? What is the role of Scope resolution operator in the definition of member function? 2+3

GROUP-D

4. Answer any **one** from the following: 10×1=10
- i) Discuss the role of access specifiers in inheritance and show their visibility when they are Inherited as public, private and protected. 4+6
- ii) a) Write down a detailed C++ program to demonstrate the use of try, catch and throw and nested try.
- b) Write a C++ program to implement function overloading. $2\frac{1}{2}+2\frac{1}{2}+2\frac{1}{2}+2\frac{1}{2}$
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