

**BACHELOR OF COMPUTER APPLICATION
THIRD SEMESTER
OBJECT ORIENTED PROGRAMMING
BCA-302 (REPEAT)
[USE OMR FOR OBJECTIVE PART]**

**SET
A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

Marks: 20

$$1 \times 20 = 20$$

Choose the correct answer from the following:

- Which of the following is called line feed operator in C++?
 - a. delete
 - b. endl
 - c. new
 - d. setw
- The programming language that has the ability to create new data types is called _____.
 - a. Overloaded
 - b. Encapsulated
 - c. Reprehensible
 - d. Extensible
- In which of the following situation(s) inline functions may not work properly?
 - i) Function contain static variable
 - ii) If the function is recursive
 - iii) Return a value with a loop or switch
 - a. i) only
 - b. ii) only
 - c. i) & ii)
 - d. i), ii) & iii)
- What is the output of the given program?

```
using namespace std;
```

```
int main()
```

1

```
int array[] = {10, 20, 30};
```

```
cout << -2[array];
```

```
return 0;
```

3

- a. -15 b. -30
c. Compiler error d. Garbage value

5. Default arguments in C++ are assigned the value from the list of arguments in the function call statements as _____
- Left to right
 - Right to left
 - Where value is found
 - Maximum to minimum
6. Which of the following statement is correct about Virtual Inheritance?
- It is a technique to ensure that a private member of a base class can be accessed
 - It is a technique to optimize the multiple inheritances
 - It is a technique to avoid the multiple inheritances of the classes
 - It is a C++ technique to avoid multiple copies of the base class into the derived or child classes
7. Consider the following given program and choose the most appropriate output from the given options:

```
using namespace std;
class A{
public:
    A(){
        cout<<"Constructor called\n";
    }
    ~A(){
        cout<<"Destructor called\n";
    }
};
int main()
{
    A *a = new A[5];
    delete[] a;
    return 0;
}
```

- Segmentation failure.
- Error.
- The Constructor will be invoked five times, and after that destructor will be invoked only once.
- The Constructor will be invoked five times, and after that destructor will also be invoked five times.

8. Which of the following can be considered as the correct syntax for declaring an array of pointers of integers that has a size of 10 in C++?
 - a. `int arr = new int[10];`
 - b. `int *arr = new int*[10];`
 - c. `int **arr = new int*[10];`
 - d. `int *arr = new int[10];`
9. A protected member of base class when inherited privately become _____ in derive class
 - a. Public
 - b. Protected
 - c. Private
 - d. Do not inherited
10. Which of the following can be used to create an abstract class in the C++ programming language?
 - a. By using the pure virtual function in the class
 - b. By declaring a virtual function in the base class
 - c. By declaring the virtual keyword afterward, the class Declaration
 - d. None of the above
11. Which of the following statements is correct about the friend function in C++ programming language?
 - a. A friend function is able to access private members of a class
 - b. A friend function can access the protected members of a class
 - c. A friend function is able to access the public members of a class
 - d. All of the above
12. Which one of the following cannot be used with the virtual keyword?
 - a. Constructor
 - b. Destructor
 - c. Member function
 - d. None of the above
13. A base class constructor is invoke, when _____
 - a. Object of derive class created
 - b. Object of base class created
 - c. To be called by derive constructor
 - d. Do not invoked
14. Which of the following concept refers to adding new components to the program at the run time?
 - a. Dynamic Loading
 - b. Dynamic binding
 - c. Data hiding
 - d. Both A & B
15. Dynamic polymorphism is achieve with _____
 - a. Pointer to Base object
 - b. Pointer to Derive object
 - c. This pointer
 - d. Using dynamic constructor
16. Which of the following refers to the wrapping of data and its functionality into a single individual entity?

- a. Modularity
- c. Encapsulation

- b. Abstraction
- d. None of the above

17. A static data member can be called using _____

- a. A static function only
- b. The class name where it belongs
- c. Object of that class only
- d. All of the above

18. What will be the output of the following C++ code?

```
cout.precision(2);  
cout.width(5);  
cout<<1.2345;
```

- a. 123.45
- b. 12.345
- c. 12345
- d. 1.23

19. Which of the following concept is used by pre-increment?

- a. call by value
- b. call by reference
- c. Queue
- d. call by name

20. Which of the following is the output of the given statements?

```
cout.fill('*'); cout.width(10); cout<<5250;
```

- a. *****5250
- b. *****5250
- c. 5250*****
- d. 5250*****

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(Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What is inheritance? What are the different types of inheritance available? Explain with block diagram. 10
2. (a) Write down the roles of protected data member in inheritance? 5+5=10
(b) Explain the roles of scope resolution operator with examples.
3. (a) Explain the hierarchy of ios class in OOPs. 5+5=10
(b) What are the applications of abstract classes?
4. (a) Give a brief comparison between the overloading with Friend function and member function. 5+5=10

(b) Write a C++ program to convert an integer value to an time object.
5. (a) Write a C++ program to multiply two complex numbers using overloaded '*' operator 5+5=10
(b) What is polymorphism? How can you achieve runtime polymorphism? Give example.
6. What are constructors? Why they are used in programming? How Constructors are different from Destructors? Give example. 10
7. (a) Define Template. How do you classify template in C++? Explain with suitable example. 5+5=10
(b) What is Virtual base class? Why it is used in inheritance? Give example
8. Write short notes on: (any two) 5+5=10
 - a. Basic to Class Conversion
 - b. Friend functions
 - c. Manipulators

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