

BCA
THIRD SEMESTER (SPECIAL REPEAT)
OBJECT ORIENTED PROGRAMMING WITH C++
BCA-301

(Use separate answer scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

(PART-A : Objective)

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. By default how the value are passed in c++?
 - a. call by value
 - b. call by reference
 - c. call by pointer
 - d. call by object
2. What is the size of empty class?
 - a. 0
 - b. 1
 - c. 2
 - d. 4
3. What is abstract class?
 - a. A class with abstract keyword
 - b. A class with no functions in it
 - c. A class with atleast one pure virtual function
 - d. Empty Class
4. Which type is best suited to represent the logical values?
 - a. Integer
 - b. Boolean
 - c. Character
 - d. All of the mentioned
5. How many class objects can be created of a class in C++?
 - a. 1
 - b. 5
 - c. No limit
 - d. 256
6. Function overloading is also similar to which of the following?
 - a. Operator overloading
 - b. Constructor overloading
 - c. Destructor Overloading
 - d. None of the mentioned
7. Where does the return statement returns the execution of the program?
 - a. main function
 - b. caller function
 - c. same function
 - d. block function
8. When the inheritance is private, the private methods in base class are _____ in the derived class (in C++).
 - a. Inaccessible
 - b. Accessible
 - c. Protected
 - d. Public
9. Which of the following cannot be passed to the function in C++?
 - a. One
 - b. Structure
 - c. Array
 - d. Header file
10. C++ actually supports following two complete dynamic allocation systems:
 - a. One is defined by C++ and other not defined by
 - b. One defined by C and one specific to C++
 - c. Both are specific to C++
 - d. Both of them are improvement of C

11. Important advantages of using New and Delete operator in C++ is:
 - a. Allocation of memory
 - b. Frees the memory previously allocated
 - c. Initialization of memory easily
 - d. Allocation of memory and frees the memory previously allocated
12. The programming languages C and C++ are not strongly typed languages because:
 - a. C and C++ allows functions for which parameters are not type checked
 - b. C and C++ allows functions for which parameters are type checked
 - c. C and C++ allows functions for which parameters are not type checked and also the union types in these languages are not type checked.
 - d. Union types in these languages are not type checked
13. A copy constructor is invoked when:
 - a. A function returns a value
 - b. An argument is passed by value
 - c. A function returns by reference
 - d. None of these
14. Runtime polymorphism can be achieved by:
 - a. Accessing virtual function through the pointer of base class
 - b. Accessing the virtual function through the object
 - c. The derived class
 - d. None of these
15. Enumeration is a process:
 - a. Declaring a set numbers
 - b. Sorting a list of strings
 - c. Assigning a list of legal values possible for a variable
 - d. Sequencing a list of operators
16. Which of the following is the correct syntax of including a user defined header files in C++?
 - a. #include <userdefined.h>
 - b. #include <userdefined>
 - c. #include "userdefined"
 - d. #include [userdefined]
17. If a data item is declared as a protected access specifier then it can be accessed:
 - a. Anywhere in the program
 - b. By the base and derived classes
 - c. Only by the base class
 - d. Only by the derived class
18. The friend function are used in situation where:
 - a. We want to have access to unrelated class
 - b. Dynamic binding is required
 - c. Exchange of data between classes to take place
 - d. None of these
19. A _____ is special method used to initialize the instance variable of a class.
 - a. Member function
 - b. Destructor
 - c. Constructor
 - d. Virtual function
20. The associability of which following operator is left to right in C++?
 - a. Unary operator
 - b. Logical Not
 - c. Array access operator
 - d. Address of

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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

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

1. Write about the features of Object Oriented Programming. 10
2. What is abstract class? Write a program having 'Student' as an abstract base class and create derived classes such as Science, Arts, Commerce, Engineering, Medical etc. from the student class. Create their objects and process them. 2+8=10
3. 'C++ programming concept is better than C programming concept'- Explain it. 10
4. What is constructor and destructor? Write the characteristics of constructor and destructor. 4+6=10
5. Explain the advantages of pointer use in programming. Under which circumstances use of pointer is indispensable? How can pointer be useful in runtime memory management? 10
6. a) What is operator overloading? Write a program to decrement a value using operator overloading. 2+5+3=10
b) What is polymorphism?
7. a) Define inline function with example. 5+5=10
b) Define friend function and friend class.
8. Mr. X is a business man. He started his business with stationary items. Gradually he expanded his business with grocery items and cloths. As programmer how can you represent his business model? What are the features that helps you to represent his model. 10

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