Crack it! – C++ Duration- 45min

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**50**

Note: Every MCQ question carries 1 Mark each.

Four other questions carry marks allotted next to the question accordingly.

1. The memory address of the first element of an array is called
2. Floor address
3. Foundation address
4. First address
5. Base address
6. Which of the following is not the required condition for binary search algorithm?
7. The list must be sorted
8. there should be the direct access to the middle element in any sublist
9. There must be mechanism to delete and/or insert elements in list
10. None of the mentioned
11. A variable P is called pointer if
12. P contains the address of an element in DATA.
13. P points to the address of first element in DATA
14. P can store only memory addresses
15. P contain the DATA and the address of DATA
16. The term "push" and "pop" is related to the
17. Array
18. List
19. Stacks
20. All of the mentioned

1. The complexity of Binary search algorithm is
   1. O(n)
   2. O(log n)
   3. O(n2)
   4. O(n log n)
2. The elements of an array are stored successively in memory cells because
3. By this way computer can keep track only the address of the first element and the addresses of other elements can be calculated
4. The architecture of computer memory does not allow arrays to store other than serially
5. Both of the mentioned
6. None of the mentioned
7. Which of the following data structure is not linear data structure?
8. Arrays
9. Linked lists
10. Both of the mentioned
11. None of the mentioned
12. The operation of processing each element in the list is known as
13. Sorting
14. Merging
15. Inserting
16. Traversal

1. Arrays are best data structure
2. For relatively permanent collections of data
3. For the size of the structure and the data in the structure are constantly changing
4. For both of above situation
5. For none of above situation

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ enables you to hide, inside the object, both the data fields and the methods that act on that data.
2. Encapsulation
3. Polymorphism
4. Inheritance
5. Overloading
6. \_\_\_\_\_\_\_\_\_ is an abstract idea that can be represented with data structures and functions.
7. Class
8. Object
9. Loop
10. Data type
11. A class can allow non-member functions and other classes to access its own private data, by making them as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. Private
13. Protected
14. Friend
15. Public
16. \_\_ is the process of creating new classes, called derived classes, from existing classes called base class
17. Inheritance
18. Encapsulation
19. Polymorphism
20. Overloading

1. Which of the following statements is correct?
2. Base class pointer cannot point to derived class.
3. Derived class pointer cannot point to base class.
4. Pointer to derived class cannot be created.
5. Pointer to base class cannot be created.

1. Which of the following concepts means waiting until runtime to determine which function to call?
2. Data hiding
3. Dynamic casting
4. Dynamic binding
5. Dynamic loading

1. Which of the following concepts provides facility of using object of one class inside another class?
2. Encapsulation
3. Abstraction
4. Composition
5. Inheritance
6. Which of the following statement is correct?
7. A constructor is called at the time of declaration of an object.
8. A constructor is called at the time of use of an object
9. A constructor is called at the time of declaration of a class.
10. A constructor is called at the time of use of a class.

1. To ensure that every object in the array receives a destructor call, always delete memory allocated as an array with operator \_\_\_\_\_\_\_\_\_\_
2. destructor
3. delete[]
4. delete
5. kill[]

1. Which of the following statement is correct about constructors?
2. A constructor has a return type.
3. A constructor cannot contain a function call.
4. A constructor has no return type.
5. A constructor has a void return type
6. In case of multiple catch blocks,\_\_\_\_\_\_
7. The superclass exception must be caught first
8. The superclass of exception should not be caught first
9. Either super or subclass can be caught first
10. None of these
11. A better alternative to code based on pointer to function would be

a. Virtual Function

b. Static Function

c. Const Function

d. Macro Function

1. How to declare operator function?
2. Operator
3. Operator sign operator
4. Operator sign
5. None of the mentioned
6. Operator overloading is
7. Making c++ operator works with objects
8. Giving new meaning to existing operator
9. Making new operator
10. Both a & b
11. What is the Run-Time Type Information?
12. Information about an object’s datatype at runtime
13. Information about the variables
14. Information about the given block
15. None of the mentioned
16. What is meant by ofstream in c++?
17. Writes to a file
18. Reads from a file
19. Both a & b
20. None of the mentioned

**Design a solution by identifying all the classes and relationships from the problem statements.**

1. A customer can hold a savings and current account. A Corporate customer can additionally hold an Overdraft account.

(5 marks)

1. Every Project has a Project Manager and a manager can manage many projects. Many Project Leads work on a single project and report to a Project Manager.

(5 marks)

**Write Program for the below problem statements**

1. Print the Series 1, -4, 9, -25, 36, -49, 81, -100, … N (5 marks)
2. Write a Program to display the 1st, 2nd and 4th multiple of 7 which also gives the remainder 1, when divided by 2, 3, 4, 5, and 6. (10 marks)