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SHIVAJI UNIVERSITY, KOLHAPUR

DATTAJIRAO KADAM ARTS, SCIENCE AND COMMERCE COLLEGE, ICHALKARANJI

**B.C.A. Part-II Semester-IV (NEP) Examination, March, -2024**

**Object Oriented Programming using C++**

**Sub. Code: 91178**

Day and Date : Monday, 08-04-2024

Total Marks:80

Time : 10:30 a.m. to 01:30 p.m.

*Instructions: 1) Q. 1 and Q. 8 are compulsory*

*2) Attempt any three from Q. 2 to Q. 7*

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**Q.1. Select the correct alternative and rewrite the sentence.**

**[12]**

1. C++ language was developed by \_\_\_\_\_ .
  - a) Dennis Recharad
  - b) Dennis M. Ritchie
  - c) Bjarne Stroustrup
  - d) Anders Hejlsberg
  
2. Which of the following refers to using the existing code instead of rewriting it?
  - a) Inheritance
  - b) Encapsulation
  - c) Abstraction
  - d) Both A and B
  
3. Which of the following refers to the wrapping of data and its functionality into a single individual entity?
  - a) Modularity
  - b) Abstraction
  - c) Encapsulation
  - d) None of the above
  
4. A constructor that does not have any parameters is called \_\_\_\_\_ constructor.
  - a) custom
  - b) dynamic
  - c) static
  - d) default
  
5. \_\_\_\_\_ is the OOP feature and mechanism that binds together code and the data it manipulates, and keep both safe from outside world.
  - a) Data Binding
  - b) Data Encapsulation
  - c) Data Storing
  - d) Data Abstraction
  
6. By default, members of the class are \_\_\_\_\_ in nature.
  - a) protected
  - b) private
  - c) public
  - d) static

7. Choose the correct option which is mandatory in a function.
- a) return\_type
  - b) function\_name
  - c) parameters
  - d) Both (a) and (b)
8. What is the number of parameters that a default constructor requires?
- a) 0
  - b) 1
  - c) 2
  - d) 3
9. What is an object in C++?
- a) It is function of class
  - b) It is instance of class
  - c) It is data type of class
  - d) It is part of the syntax of class
10. 'cin' is an \_\_\_\_\_
- a) class
  - b) object
  - c) package
  - d) namespace
11. Which of the following is used for implementing the late binding?
- a) Operator Functions
  - b) Constant Functions
  - c) Virtual Functions
  - d) Both (a) and (b)
12. Why inline functions are useful?
- a) Functions are large and contain several nested loops
  - b) Usually, it is small, and we want to avoid the function calls
  - c) The function has several static variables
  - d) All of the above

**Q.2.** Define polymorphism? Explain late binding in detail with suitable example. **[16]**

**Q.3.** Explain in detail static class members. **[16]**

**Q.4.** Define inheritance. Explain single, multiple and multilevel inheritance with suitable example. **[16]**

**Q.5.** Explain constructor in detail. Explain default, parameterized and copy constructor with suitable example. **[16]**

**Q.6.** Explain various object oriented programming concepts. **[16]**

**Q.7.** How parameters are passed to function in C++? **[16]**

**Q.8.** Write Short Notes on following. **(ANY FOUR)** **[20]**

1. What is class? Explain it with suitable example.
2. Features of OOP's.
3. Pure virtual function
4. Differentiate between POP and OOP
5. inline function
6. friend function