

**TILAK MAHARASHTRA VIDYAPEETH, PUNE**  
**BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)**  
**SPECILIZATION IN CYBER SECURITY (CS)**  
**EXAMINATION : DECEMBER - 2022**  
**SEMESTER - II**

**Sub: Object Oriented Programming using C++**  
**(BCA -242-18/BCA-242-20/BCA-CS-242-20)**

---

**Date :29/12/2022**

**Total Marks : 60**

**Time: 2.00 pm to 4.30 pm**

---

**Instructions:**

1. All questions are compulsory unless and otherwise stated.
  2. Bold figures to the right of every question are the maximum marks for that question.
  3. Candidates are advised to attempt questions in order.
  4. Answers written illegibly are likely to be marked zero.
  5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
  6. Draw neat and labelled diagrams wherever necessary.
- 

**Q.1. Fill in the blanks.**

**(5)**

1. The \_\_\_\_\_ is the predefined object of the istream class
  - a)cout
  - b) ios
  - c) cin
  - d) stream
2. The \_\_\_\_\_ moves get pointer to a specified location
  - a)seekg()
  - b) tellp()
  - c) seekp()
  - d)tellg()
3. Exceptions are the errors that occur at \_\_\_\_\_
  - a) compile time
  - b) error time
  - c) runtime
  - d) None of the above
4. ----- feature of the OOPS gives the concept of reusability.
  - a) Abstraction
  - b) Encapsulation
  - c) Inheritance
  - d)None of the above
5. ----- in C++, is inherited in a derived class from base class.
  - a) Constructor
  - b) Destructor
  - c) Data members
  - d) virtual methods

**Q.2. State True/False.**

**(5)**

1. A derived class with only one base class is called single inheritance
2. The operator >> is used for output.
3. The throw block is immediately followed by the catch block
4. Virtual functions can be static members
5. ios::in means it opens for reading only

**Q.3. Answer the following. (Solve any 5) (10)**

1. Which are the operators cannot be overloaded?
2. How dynamic memory allocation can be done in C++ ?
3. Give the difference between C and C++
4. When should we use an inline function?
5. When functions throw an exception?
6. What is Destructor?

**Q. 4. Answer the following in detail. (Solve any 6) (30)**

1. Explain “Access Specifiers” in details?
2. What is “this” pointers?
3. Explain function overloading with proper example
4. Comments on Virtual function, give small program for pure virtual function.
5. What are streams? What are the stream classes? Explain its hierarchy?
6. Explain friend function.
7. Explain object oriented concept.

**Q. 5. Answer the following in detail. (Solve any 1) (10)**

1. What are the different types of constructor? Explain copy constructor
2. What are the different types of inheritance? Explain any two type of inheritance

\_\_\_\_\_