F - 353

M.Sc. (IT) (First Semester)
Examination, Dec.-Jan., 2021-22
Paper First
Object Oriented Programming With C++

Time : Three Hours]   *[Maximum Marks : 100*
     [Minimum Pass Marks : 40

Note: Attempt all sections as directed

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Section A   **1 Mark each**
(Objective / Multiple choice Questions)

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1. 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

2. Which design patterns benefit from the multiple inheritances?

A. Adapter and observer pattern
B. Code pattern
C. Glue pattern
D. None of the mentioned

3. Inheritance allow in C++ Program?

A. Class Re-usability
B. Creating a hierarchy of classes
C. Extendibility
D. All of the above

4. The order in which operands are evaluated in an expression is predictable if the operator is

A. Addition
B. Modulus
C. Multiply
D. &&

5. Which of the following is a mechanism of static polymorphism?

A. Templates
B. Function overloading
C. Operator overloading
D. All of the above

6. IS A relationship in C++ is

A. Inheritance
B. Encapsulation
C. Composition
D. None of the above

7. Which symbol is used to create multiple inheritance?

A. Dot
B. Comma
C. Dollar
D. None of the above

8. _____ inheritance may lead to duplication of inherited members from a "grandparent" base class.

A. Multipath
B. Multiple
C. Multilevel
D. Hierarchical

9. C++ Inheritance relationship is?

A. Association
B. Is-A
C. Has-A
D. None of the above

10. Reusability of the code can be achieved in CPP through _____ .

A. Polymorphism
B. Encapsulation
C. Inheritance
D. Both A and C

11. Which keyword is used to handle the exception?

A. Try
B. Throw
C. Catch
D. None of the above

12. Which value is placed in the base class?

A. Derived values
B. Default type values
C. Both default type & derived values
D. None of the above

13. While overloading binary operators using member function, it requires __ argument?

A. 2
B. 1
C. 0
D. 3

14. A class is made abstract by declaring at least one of its functions as?

A. impure virtual function
B. pure virtual function
C. pure abstract function
D. impure abstract function

15. A friend function can be

A. A method of another class
B. A global function
C. Both A and B
D. None of the above

16. Which operator is used to signify the namespace in c++?

A. conditional operator
B. ternary operator
C. scope operator
D. None of the mentioned

17. A pointer can be initialized with

A. Null
B. Zero
C. Address of an object of same type
D. All of the above

18. Choose the right option string* x, y;

A. x is a pointer to a string, y is a string
B. y is a pointer to a string, x is a string
C. Both x and y are pointers to string types
D. none of the above

19. Which other keywords are also used to declare the class other than class?

A Struct
B Union
C. Object
D Both struct & union

20. Which of the following gets called when an object is being created?

A. Constuctor
B. Virtual Function
C. Destructors
D. Main

Section – B   2 Marks each

(Very Short Answer Type Questions)

1. What are main features of OOP?
2. What is Inheritance? What is the purpose?
3. What is Constructor?
4. What are some major Object Oriented Programming languages?
5. Why is OOPs so popular?
6. How much memory does a class occupy?
7. What is a subclass?
8. What are the different data types present in C++?
9. What is C++ stream class.
10. What is friend class

Section – C   3 Marks each

(Short Answer Question)

1. What is Polymorphism? How is it supported by C++?
2. What are the differences between references and pointers?
3. What are VTABLE and VPTR?
4. What is Compile time Polymorphism and how is it different from Runtime Polymorphism?
5. What are the various types of constructors in C++?
6. What is the difference between overloading and overriding?
7. What are file mode.
8. Write in short about binary operators
9. what is reference variable in C++
10. Explain access specifiers.

Section – D   6 Marks each

(Write in 150 words)

1 .What are data types in C++ . Write a program to generate random numbers between 0 to 100.

2 . Explain function and passing argument to function by giving example.

3. Discuss object and class. Write a C++ program to generate the sum of square of first n natural numbers.

4.What is static polymorphism. Write a program to check whether a number is Armstrong or not using function.

5.Write short notes on i) C++ stream Class   ii) get() and put()