CBCS SCHEME

21CS382

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Question Paper Version : A

Third Semester B.E. Degree Examination, Jan./Feb. 2023
Programming in C++

Time: 1 hr.]   [Max. Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.

2. Use only **Black ball point pen** for writing / darkening the circles.

3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**

4. Darkening two circles for the same question makes the answer invalid.

5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

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1. Which of the following approach is used by C++?
   a) Left-right   b) Right-left   c) Bottom-up   d) Top-down.

2. Object based language differs from object oriented language as it does not support features _____.
   i) Encapsulation   ii) Inheritance   iii) Dynamic Binding   iv) Abstraction
   a) Only (iii), (iv)   b) Only (i), (iii)   c) Only (ii), (iv)   d) Only (ii), (iii)

3. Who is founder of C++?
   a) Dennis Ritchie   b) Ken Thompson   c) Braian Kernighan   d) Bjarne Stroustrup.

4. Which of the following features must be supported by any programming language to become a pure object-oriented programming language?
   a) Inheritance   b) Encapsulation   c) Polymorphism   d) All of the above

5. Identify the user-defined types from the following?
   a) enumeration   b) classes
   c) int   d) both enumeration and classes

6. What is meant by polymorphism in C++?
   a) Class having only single form   b) Class having four forms
   c) Class having many forms   d) Class having two forms

7. Abstract class is the class with no objects created directly.
   a) True   b) False

8. How structures and classes in C++ differ?
   a) Structures by default hide every member whereas classes do not.
   b) In structures, members are public by default whereas, in classes, they are private by default.
   c) Structures cannot have private members classes can have.
   d) In structures, members are private by default whereas, in classes, they are public by default.

9. What is operator overloading in C++?
   a) Overriding the operator meaning by the user defined meaning for user defined data type.
   b) Redefining the way operator works for user defined types.
   c) Ability to provide the operators with some special meaning for user defined data type.
   d) All of the above.

10. The major goal of inheritance in C++ is
    a) To facilitate the conversion of data types.
    b) To help modular programming.
    c) To facilitate the reusability of code.
    d) To extend the capabilities of a class.

11. The class where objects behave like a data type, which is known as _____
    a) Method data type   b) Message data type
    c) User defined data type   d) Abstract data type.

12. Single class may have multiple objects associated with it
    a) True   b) False

13. Operators such as _____ cannot be overloaded
    a) +   b) ++   c) : :   d) = =

14. The function that can access and manipulate the private entities of class
    a) Abstract class   b) Method class
    c) User defined class   d) Friend function

15. _____ are explicitly reserved identifiers and cannot be used as names for the program variables or other user-defined elements.
    a) Keywords   b) Identifiers
    c) Constants   d) Strings

16. State whether the following statements are true or false for C++ identifiers:
    i) Only alphabetic characters, digits and underscores are permitted.
    ii) The name can start with a digit.
    iii) Uppercase and lowercase letters are distinct
    a) i – True, ii – True, iii – False
    b) i – True, ii – False, iii – True
    c) i – True, ii – False, iii – False
    d) i – True, ii – True, iii – True.

17. The binding of data and functions together into a single class type variable is referred to as _____
    a) Encapsulation   b) Polymorphism   c) Inheritance   d) Overloading

18. Which of the following is not the user defined data type in C++?
    a) Structure   b) Pointer   c) Union   d) Class

19. We can create _____ in C++ using the qualifier constant and defining a set of integer constant using enum keywords.
    a) Basic Constant
    b) Number constant
    c) Symbolic constant
    d) Named constant

20. Which of the following is the scope resolution operator in C++
    a) : :   b) : : *   c) > *   d) . *

21. The _____ manipulator is used in an output statement which causes a linefeed to be inserted.
    a) setw   b) delete   c) end*l*   d) symbol

22. Which of the following are the types of C++ expressions:
    i) Constant expressions   ii) Integral expressions
    iii) Float expressions   iv) Null expressions
    a) i, ii and iii only   b) ii, iii and iv only   c) i, ii and iv only   d) All of the above

23. _____ combine to or more relational expressions and produces bool type results.
    a) relational   b) float   c) logical   d) bitwise

24. The operator _____ is known as a compound assignment or short-hand assignment operator.
    a) = =   b) =   c) + =   d) + = =

25. The following is _____ expressions x = y = z = 10
    a) Embedded assignment
    b) Logical assignment
    c) Chained assignment
    d) Compound assignment

26. Constructor has the same _____ as that of the class.
   a) Variable   b) Object   c) Function   d) Name

27. What will be the output of the following C++ code?
   ```
   # include <iostream>
   using namespace std;
   void swap (int &a, int &b)
   {
      int temp;
      temp = a;
      a = b;
      b = temp;
   }
   int main( )
   {
      int a = 5, b = 10;
      swap (a, b);
      cout << "In main" << a << b;
      return 0;
   }
   ```
   a) In main 10 5   b) In main 5 10   c) Error   d) No output

28. A constructor that accepts no parameters is called _____
   a) default constructor   b) parameterized
   c) implicit constructor   d) null constructor

29. Constructors cannot be inherited, through a derived class can call the _____ constructor.
   a) base class   b) derived class
   c) void class   d) default class

30. What will be the output of the following C++ code?
   ```
   # include <iostream>
   using namespace std;
   int main( )
   {
      int a = 9;
      int & aref = a;
      a++;
      cout << "The value of a is" << aref;
      return 0;
   }
   ```
   a) 9   b) 10   c) error   d) 11

31. Destructor is a member function whose name is as the class name but is preceded by a ___

    a) tilde   b) hash   c) dot   d) dollor

32. The _____ inherits some or all of the properties of the _____ class.
    a) base, derived   b) derived, base   c) derived, initial   d) base, final

33. A class can inherit properties from more than one class which is known as _____ inheritance.
    a) single   b) multiple   c) multilevel   d) hierarchical

34. When the base class is publicly inherited, public members of the base class become _____ of the derived class?
    a) private members b) public members   c) protected   d) not inherited

35. _____ inheritance may lead to duplication of inherited members from a 'grandparent' base class.
    a) multipath   b) multilevel   c) hybrid   d) hierarchical

36. By default, all the files in C++ are opened in _____ mode.
    a) Binary   b) Text   c) ASCII   d) Numeric

37. Which operator is used to create the user-defined streams in C++?
    a) >>   b) <<   c) &   d) >> & <<

38. What does the cerr represent?
    a) Standard input stream   b) Standard output stream
    c) Standard error stream with no buffer d) Standard buffer stream

39. Function which reads a character from cin and stores what is read in ch is
    a) cin . get (ch)   b) get (ch)
    c) cout . put (ch)   d) cin . put (ch)

40. Which header file is used for reading and writing to a file?
    a) # include <iostream>   b) # include <fstream>
    c) # include <file>   d) # include <fe>

41. Which operator is used to insert the data into file?
    a) >>   b) <<   c) <   d) >

42. _____ is return type of is_open( ) function
   a) int   b) bool   c) float   d) char *

43. To create an output stream, we must declare the stream to be of class _____
   a) ofstream   b) ifstream   c) iostream   d) none of the above

44. What is an exception in C++ program?
   a) a problem that arises during the execution of a program.
   b) A problem that arises during compilation.
   c) Also known as syntax error.
   d) Also known as semantic error.

45. Out of range index and overflow is _____ exception.
   a) Asynchronous   b) Synchronous
   c) Both   d) None of the above

46. Keyboard interrupts are Asynchronous exceptions
   a) True   b) False

47. What is the difference between error and exception?
   a) Both are same.
   b) Both can be handled during runtime.
   c) Exceptions can be handled at the runtime but the errors cannot.
   d) Errors can be handled at the runtime but the exceptions cannot.

48. What is Rethrowing an exception means in C++?
   a) An exception that is thrown again as it is not handled by that catching block.
   b) An exception that is caught twice.
   c) An exception that is not handled in one caught hence thrown again.
   d) All of the above.

49. Which of the following is an exception in C++?
   a) Divide by zero   b) Semicolon not written
   c) Variable not declared   d) An expression is wrongly written

50. Throw statement can be used by the _____ forms:
   a) throw (exception) ;   b) throw exception ;
   c) throw   d) All of the above.

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