(6 pages)

Reg. No. : ....

Code No. : 30470 E   Sub. Code : CEPH 51

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2024.

Fifth Semester

Physics

Major Elective — PROGRAMMING IN C++

(For those who joined in July 2021-2022 only)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. How the constants are declared?

   (a) const keyword

   (b) #define preprocessor

   (c) both (a) and (b)

   (d) none of the above

2. Which of the following is a correct identifier in C++?

   (a) VAR_1234   (b) $ var_name

   (c) 7VARNAME   (d) 7var_name

3. In C++, the const keyword can be used with?

   (a) variables   (b) member functions

   (c) objects   (d) all the above

4. Which are the types of overloading in C++

   (1) function overloading

   (2) namespace overloading

   (3) class overloading

   (4) operator overloading

   (a) (1) and (2)   (b) (1) and (4)

   (c) (1) and (3)   (d) (4) and (2)

5. How can we make a class abstract?

   (a) By making all member functions constant

   (b) By making at least one member function as pure virtual function

   (c) By declaring it abstract using the static keyword

   (d) None of the above

6. Which constructor function is designed to copy objects of the same class type?

   (a) Create constructor

   (b) Object constructor

   (c) Dynamic constructor

   (d) Copy constructor

7. Which keyword is used to overload operators in C++?

   (a) overload   (b) operator

   (c) operate   (d) op

8. Syntax of inheritance

   (a) class < child class name > extends < parent class name >

   (b) class < child class name > : < parent class name >

   (c) class < child class name > : < access specifier < parent class name >

   (d) class < child class name > : < parent class name > access specifier

9. Which of the following header file is used for file handling in C++?

   (a) <file>   (b) <filestream>

   (c) <stream>   (d) <fstream>

10. Which of the following function is used to check a file is opened or not?

    (a) is_open( )   (b) isopen( )

    (c) isopened( )   (d) None of the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Describe input and output operators.

    Or

    (b) An unsigned int can be twice as large as the signed int. Explain it.

12. (a) What is array? Why is an array called a derived data type?

    Or

    (b) Define function. Discuss with C++ examples.

13. (a) How does a C++ structure differ from a C++ class?

    Or

    (b) What is a parameterized constructor?

14. (a) What does inheritance mean in C++?

Or

(b) What is operator overloading?

15. (a) What is a stream in C++?

Or

(b) What are the steps followed for opening a file in a C++ program?

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).
Each answer should not exceed 600 words.

16. (a) Describe with examples the uses of enumeration data types.

Or

(b) Discuss about expressions. Explain their types.

17. (a) Describe the different styles of writing prototypes.

Or

(b) Write a program to add two matrices and print the output.

18. (a) What is a friend function? Explain with an example. What are the merits and demerits of using friend function?

Or

(b) Describe the types of constructors.

19. (a) What are different forms of inheritance? Give an example for each.

Or

(b) What are the rules for overloading operators?

20. (a) Discuss briefly about formatted console I/P operations.

Or

(b) Describe the various classes available for file operations.

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