

Code No. : 20482 E Sub. Code : CMCS 21/
CMSE 21

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023

Second Semester

Computer Science/Software Engineering - Core
OBJECT ORIENTED PROGRAMMING IN C++

(For those who joined in July 2021-2022)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. _____ are the basic run-time entities in an object-oriented system.
- (a) Struct (b) Union
(c) Pointers (d) Object

6. When the inheritance is private, the private methods in base class are _____ in the derived class?
- (a) Inaccessible (b) Accessible
(c) Protected (d) Public

7. What does the following statement mean?

int (*fp) (char*);

- (a) pointer to a pointer
(b) pointer to an array of chars
(c) pointer to function taking a char* argument and returns an int
(d) function taking a char* argument and returning a pointer to int
8. A virtual function is a member function of which of the following class?
- (a) Derived class (b) Parent class
(c) base class (d) Both (a) and (b)
9. Which stream class is to only write on files?
- (a) ofstream (b) ifstream
(c) iostream (d) fstream

2. Variables that are elements of a class are called _____ variables
- (a) member (b) object
(c) token (d) friend
3. What happens when a class with parameterized constructors and having no default constructor is used in a program and we create an object that needs a zero-argument constructor?
- (a) Compile-time error
(b) Preprocessing error
(c) Runtime error
(d) Runtime exception
4. Destructor has the same name as the constructor and it is preceded by _____
- (a) ! (b) ?
(c) ~ (d) \$
5. While overloading binary operators using member function, it requires _____ arguments.
- (a) Zero (b) One
(c) Two (d) Three

10. Templates are powerful features of C++ which allows us to write _____ programs.
- (a) generic (b) overloading
(c) procedure (d) event-driven

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write about Classes and Objects.
Or
(b) How to pass objects as arguments to functions? Explain.
12. (a) Examine the Dynamic initialization of objects.
Or
(b) List out characteristics of Destructors.
13. (a) Describe the overloading binary operators using friends.
Or
(b) Write note on Single Inheritance.

14. (a) Summarize the purpose of 'this' pointer.

Or

(b) What is meant by Dynamic binding?

15. (a) Enumerate the various classes available for file operations.

Or

(b) Mention the usage of Template.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Describe the features of inline function.

Or

(b) Write note on Static Data members and Static member functions.

17. (a) Illustrate the copy constructor with suitable example.

Or

(b) Enumerate the principles of Dynamic constructors.

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18. (a) Explain the Rules for overloading operators.

Or

(b) Discuss the Multiple inheritance with an example.

19. (a) Narrate the rules for virtual functions.

Or

(b) Distinguish between getline() with write() function.

20. (a) How to perform the operations opening and closing a file? Explain.

Or

(b) Write in detail about Class Templates.

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