

(7 pages)

Reg. No. :

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Sub. Code : WCSM 12/
VCSC 12

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

First Semester

Computer Science — Core

OBJECT ORIENTED ANALYSIS AND DESIGN
AND C++

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is a First generation language?
- (a) IPL V (b) Simula
(c) ALGOL 60 (d) COBOL

2. _____ denotes the essential characteristics of an object that distinguish it from all other kinds of objects.

(a) Encapsulation (b) Modularity
(c) Abstraction (d) Hierarchy

3. _____ of an object represents its outwardly visible activity.

(a) State (b) Action
(c) Operation (d) Behavior

4. A _____ is a set of objects that share a common structure, common behavior, and common semantics.

(a) class (b) object
(c) inheritance (d) encapsulation

5. Candidate classes derive from how many sources?

(a) three (b) two
(c) four (d) five

6. A _____ is a class or object that forms part of the vocabulary of the problem domain.

(a) pattern (b) MVC
(c) object (d) key abstraction



7. The _____ statement uses >> (extraction operator) before a variable name.
(a) cout (b) cerr
(c) clog (d) cin
8. The _____ class controls the buffer and its related member functions.
(a) istream (b) ostream
(c) streambuf (d) fstream
9. Which of the following is the default return value of functions in C++?
(a) int (b) char
(c) float (d) void
10. What happens if a class does not have a name?
(a) It will not have a constructor
(b) It will not have destructor
(c) It is not allowed
(d) It will neither have a constructor or destructor
11. Constructor is executed when _____.
(a) an object is executed
(b) an object is used
(c) a class is declared
(d) an object goes out of scope

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12. Operator overloading is also called _____.
(a) run time (b) initial time
(c) compile time (d) completion time
13. A pure virtual function is a virtual function that
(a) has no body (b) returns nothing
(c) is used in base class (d) both (a) and (c)
14. By default, all the files are opened in _____.
(a) Binary (b) Text
(c) String (d) Array
15. How exception handling is implemented in the C++ program?
(a) Using exception keyword
(b) Using try-catch block
(c) Using exception block
(d) Using error handling schedules

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PART B — (5 × 4 = 20 marks)

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

Each answer should not exceed 250 words.

16. (a) Determine the generation of programming languages with an example.

Or

- (b) Describe the benefits of object model.

17. (a) Explain the association and multiplicity of a class.

Or

- (b) Discuss the identification and refinement of key abstractions and mechanisms.

18. (a) Illustrate the unformatted console I/O operation with an example.

Or

- (b) Classify function prototyping with an example.

19. (a) Write a C++ program to collect the name and age of person using class and object.

Or

- (b) Classify this pointer with an example.

20. (a) Interpret virtual function and its rules with an example.

Or

- (b) Explain the various operations performed on files.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

21. (a) Explain the meaning of abstraction and its types with an example.

Or

- (b) Illustrate the operations, role and responsibility of an object.

22. (a) Summarize interface and implementation of a class and its life cycle.

Or

- (b) Categorize the classical and modern approaches to classification in detail.

23. (a) Compare the difference between C and C++ I/O function with an example.

Or

- (b) Classify about branching and looping statement in C++ with an example.



24. (a) Categorize the various types of constructor in detail.

Or

- (b) Summarize the inheritance and its types in detail with an example.

25. (a) Write a C++ program to perform writing and reading the data content using file.

Or

- (b) Explain how to overloading the function template with an example.
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