

(6 pages)

Reg. No. :

Code No. : 30771 E Sub. Code : EMCS 31

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

Third Semester

Computer Science — Core

PROGRAMMING IN C++

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Who invented C++?
(a) Dennis Ritchie (b) Ken Thompson
(c) Brian Kernighan (d) Bjarne Stroustrup
2. Which of the following is a correct identifier in C++?
(a) VAR_1234 (b) \$var_name
(c) 7VARNAME (d) 7var_name

3. What does a class in C++ holds?
(a) data
(b) functions
(c) both data and functions
(d) arrays
4. Which is used to define the member of a class externally?
(a) : (b) ::
(c) # (d) !!\$
5. What is inheritance in C++?
(a) Wrapping of data into a single class
(b) Deriving new classes from existing classes
(c) Overloading of classes
(d) Classes with same names
6. How many specifies are used to derive a class?
(a) 1 (b) 2
(c) 3 (d) 4
7. Which among the following is the language which supports classes but not polymorphism?
(a) SmallTalk (b) Java
(c) C++ (d) Ada

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8. Which among the following best describes polymorphism?

- (a) It is the ability for a message/data to be processed in more than one form
- (b) It is the ability for a message/data to be processed in only 1 form
- (c) It is the ability for many messages/data to be processed in one way
- (d) It is the ability for undefined message/data to be processed in at least one way

9. Which of the following is used to create an output stream?

- (a) ofstream (b) ifstream
- (c) iostream (d) fastream

10. Which of the following is used to create a stream that performs both input and output operations?

- (a) ofstream (b) ifstream
- (c) iostream (d) fstream

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PART B — (5 × 5 = 25 marks)

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

11. (a) Recall in detail about Object Oriented Programming Paradigm.

Or

(b) Relate in brief about various standard manipulators used in C++ syntax with example.

12. (a) Explain in detail classes and objects in C++ syntax with example.

Or

(b) Outline in brief about static member variables and functions in C++ syntax with example.

13. (a) Enumerate in detail about single inheritance in C++ syntax with example.

Or

(b) Summarize in detail about multilevel inheritance in C++ syntax with example.

14. (a) Illustrate in detail about array of classes in C++ syntax with example.

Or

(b) Illuminate in brief about new and delete operators in C++ syntax with example.

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[P.T.O.]



15. (a) Analyze the general form of function template with illustration.

Or

- (b) Examine in brief about try with multiple catch statements with example.

PART C — (5 × 8 = 40 marks)

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

16. (a) Elucidate in brief about else-if-ladder in C++ syntax with example.

Or

- (b) Write a program using switch statement to do the 4 basic arithmetic operators between 2 numbers.

17. (a) Examine in brief about friend functions in C++ syntax with example.

Or

- (b) Summarize in brief about multiple and copy constructor with example.

18. (a) Illuminate in detail about Hierarchical inheritance in C++ syntax with example.

Or

- (b) Infer in detail about multiple inheritance in C++ syntax with example.

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19. (a) Clear up in brief about virtual function in C++ syntax with example.

Or

- (b) Examine in detail about file streams available in opening, closing and processing files.

20. (a) Analyze in brief about class templates syntax with example.

Or

- (b) Write a C++ program to perform the concatenation of given two strings.
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