Reg. No. : ....

Code No. : 20598 E   **Sub. Code : SMCS 21/**
SMSE 21/AMCS 21/
AMSE 21

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Second Semester

Computer Science/Software Engineering — Core

OBJECT ORIENTED PROGRAMMMING IN C++

(For those who joined in July 2017 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer :

1.   ———— are the basic run time entities in an object oriented system.

    (a)   Data   (b)   Objects

    (c)   Classes   (d)   All the above

2. The entire set of data and code can be made user defined by

   (a) Objects   (b) Classes

   (c) Encapsulation   (d) Polymorphism

3. Constructors are used to

   (a) Initialize variables

   (b) Allocate memory

   (c) Both the above

   (d) None of the above

4. A destructor can have ————— arguments.

   (a) One   (b) Many

   (c) Void   (d) No

5. From the following find out which one cannot use friend function

   (a) =   (b) ( )

   (c) [ ]   (d) All the above

6. Grand parent base class is

   (a) an object   (b) virtual

   (c) a class   (d) all the above

7. We cannot use virtual

   (a) objects   (b) classes

   (c) constructors   (d) destructors

8. In C++ by default the floating number are printed with ————— digits after the decimal points.

   (a) 4   (b) 6

   (c) 8   (d) 16

9. The stream state number uses ————— fields to store status.

   (a) binary   (b) bit field

   (c) non zero   (d) file name

10. ————— is a generic programming.

   (a) inheritance   (b) polymorphism

   (c) data types   (d) templates

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write short note on ODL.

Or

(b) Give the applications of OOP.

12. (a) Explain about constructors with default arguments.

Or

(b) Construct a matrix object and display the same.

13. (a) Write a C++ program to overload unary minus.

Or

(b) How constructors are used in derived class?

14. (a) With suitable example explain pointer arithmetic in C++.

Or

(b) Write a program in C++ to search an element in an array using pointers.

15. (a) Explain the functions for manipulation of file pointer.

Or

(b) How will you overload a template function?

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Give the syntax of a class. Explain with example.

Or

(b) How will you define member function?

17. (a) Write a C++ program to find simple interest using dynamic initialization of objects.

Or

(b) Explain parameterized constructor with example.

18. (a) Explain the rules for overloading operators and hence give the operators that cannot be overloaded.

Or

(b) What are virtual base classes? Give example.

19. (a) Give an account of virtual function in C++.

Or

(b) Explain in detail the formatted console I/O operation.

20. (a) Discuss about opening and closing a file.

Or

(b) Explain various class template with example.

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