

Reg. No. :

Code No. : 30372 E Sub. Code : SMCS 21/
SMSE 21/AMCS 21/
AMSE 21/CMCS 21/
CMSE 21

(CBCS) DEGREE EXAMINATION, APRIL 2022

Second Semester

Computer Science/Software Engineering — Core

OBJECT ORIENTED PROGRAMMING IN C++

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

Which of the following is the address operator?

- (a) @ (b) #
(c) & (d) %

When the inheritance is private, the private methods in base class are _____ in the derived class (in C++).

- (a) Inaccessible (b) Accessible
(c) Protected (d) Public

Which pointer can be initialized with

- (a) Null
(b) Zero
(c) Address of an object of same type
(d) All of the above

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 message/data to be processed in one way
(d) It is the ability for undefined message/data to be processed in at least one way

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

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

2. Which of the following features must be supported by any programming language to become a pure object-oriented programming language?
(a) encapsulation (b) inheritance
(c) polymorphism (d) all of the above
3. What is the role of a constructor in classes?
(a) To modify the data whenever required
(b) To destroy an object
(c) To initialize the data members of an object when it is created
(d) To call private functions from the outer world
4. What is a copy constructor?
(a) A constructor that allows a user to move data from one object to another
(b) A constructor to initialize an object with the values of another object
(c) A constructor to check the whether to objects are equal or not
(d) A constructor to kill other copies of a given object
5. While overloading binary operators using member function, it requires _____ argument.
(a) 2 (b) 1
(c) 0 (d) 3

10. Which of the following statements are correct?
(i) It is not possible to combine two or more file opening mode in open() method.
(ii) It is possible to combine two or more file opening mode in open() method.
(iii) ios::in and ios::out are input and output file opening mode respectively
(a) (i), (iii) (b) (ii), (iii)
(c) (iii) only (d) (i), (ii)

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write a short note on classes and objects.
Or
(b) Write a short note on arrays of objects.
12. (a) What are the features of constructors?
Or
(b) What is constructor overloading? Explain with example.
13. (a) Write a short note on operator overloading.
Or
(b) Write a short note on inheritance.

14. (a) Describe in detail about managing output with manipulators

Or

(b) Explain about compile time polymorphism.

15. (a) What is the use of Fstream header file in C++?

Or

(b) List the file modes and give a short note.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Write a brief note on functions.

Or

(b) Explain in detail about passing object as function arguments.

17. (a) Explain in detail about types of constructor.

Or

(b) Difference between constructor and destructor with example.

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18. (a) Explain about types of inheritance.

Or

(b) Explain :

(i) Virtual base classes and

(ii) Abstract classes.

19. (a) Answer the below : (i) and (ii) questions.

(i) What is virtual functions with example.

(ii) What are the rules for virtual functions?

Or

(b) Explain in detail about pointers to derived class with example.

20. (a) How to opening and closing a file using C++ file handling with example?

Or

(b) Explain about sequential input and output operators with put(), get(), write() and read() functions.

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