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Reg. No. :

Code No. : 20730

**Sub. Code : R 3 CS 21/
B 3 CS 21**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2012.

Second Semester

Computer Science — Main

Paper II — OBJECT ORIENTED PROGRAMMING
C++

(For those who joined in July 2008 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

1. Which of the following is output statement in C++?
(a) Print (b) Write
(c) Cout (d) Cin
2. The mechanism that allows same functions to act differently on different classes is known as
(a) Encapsulation (b) Polymorphism
(c) Abstraction (d) Inheritance

3. Inline functions are invoked at the time of
(a) Run time
(b) Compile time
(c) Depends on how it is invoked
(d) Both (b) and (c) above
4. The default access level assigned to members of a class is _____.
(a) Protected (b) Public
(c) Private (d) None of these
5. How do we define a constructor?
(a) `X~() {}` (b) `X() {}~`
(c) `X()~{ }` (d) `~X() { }`
6. Which of the following operators cannot be overloaded?
(a) `>>`
(b) `?:`
(c) `+`
(d) No such operator exists

7. Which of the following language feature is not an access specifier in C++?

- (a) Public (b) Private
- (c) Protected (d) Internal

8. Virtual void display() = 0. The display function is

- (a) Pure virtual function
- (b) Pure member function
- (c) Both (a) and (b)
- (d) None

9. The object of fstream class provides

- (a) Both read and write operations
- (b) Only read operation
- (c) Only write operation
- (d) None of these

10. The source stream that provides data to the program

- (a) Input stream (b) Output stream
- (c) Source stream (d) None of these

PART B — (5 × 5 = 25 marks)

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

11. (a) Write a note on applications of OOP.

Or

(b) Explain the software evolution.

12. (a) Describe nesting of member functions.

Or

(b) Write a program to overload a function volume() to find the volume of cube, cylinder and rectangular box.

13. (a) Write a note on destructors with example.

Or

(b) List out the rules for overloading operators.

14. (a) Explain in what ways constructors are used in derived classes.

Or

(b) Give the rules for virtual function.

15. (a) What is meant by stream classes? Explain stream classes for console operations.

Or

- (b) Explain how to update a file in random access mode.

PART C — (5 × 8 = 40 marks)

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

16. (a) Describe scope resolution operator with examples.

Or

- (b) Explain reference variables.

17. (a) Write a program to process mark sheet using array of objects.

Or

- (b) Explain pointers to members with an example.

18. (a) Write a program to add two complex type objects using operator overloading.

Or

- (b) Explain conversion from class type to basic type and conversion from one class type to another class type.

19. (a) Explain single inheritance.

Or

- (b) Explain pointers to derived classes.

20. (a) Explain how to manage output with manipulators in detail.

Or

- (b) Explain the various classes available for file operations.