

Roll No.

Total Pages : 3

OMCA/M-18

10510

OBJECT ORIENTED PROGRAMMING WITH C++

Paper : MCA-205

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *five* questions in all. Question No. 1 is compulsory.
Attempt *four* more questions selecting *one* question from
each Unit.

Compulsory Question

1. Answer the following questions in brief :

- (a) What is read-only object? How is it created in C++?
- (b) How can you allocate and deallocate memory dynamically in C++.
- (c) What is operator overloading? Explain its need.
- (d) Differentiate between implicit and explicit type conversions in C++.
- (e) What is pure virtual function? Explain its need.
- (f) Explain the need of protected access specifier.
- (g) How are uncaught exception caught in C++? Explain.
- (h) What are strengths and weaknesses of text mode and binary mode I/O? (8×3=24)

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[P.T.O.]

UNIT-I

2. (a) What is constructor? Explain the use of copy constructor with an example in C++. 7
- (b) What are inline functions? How are they different from external linkage functions? 7
3. (a) What is constructor? Explain the roles of constructors in creating dynamic objects. 7
- (b) Explain the purpose of different classes in the hierarchy of console classes. 7

UNIT-II

4. (a) Overload '==' operator for the class 'Distance'. 7
- (b) What are rules to overload binary operator? Overload '+' operator to subtract two matrices. 7
5. (a) Overload 'insertion' and 'extraction' operators for the class 'String'. 7
- (b) How can a class object be converted to a value of fundamental data type? Explain with an example. 7

UNIT-III

6. (a) What is inheritance? Give an example of hierarchical inheritance and implement it in C++. 7
- (b) What is function overriding? Explain with an example in C++. 7

7. (a) What is virtual function? How does the compiler resolve the call to a virtual function? 7
- (b) What is virtual destructor? Explain it with a suitable example in C++. 7

UNIT-IV

8. (a) What are class templates? What is the need for class template? When and how does the C++ compiler generate an actual class definition from its template? Explain with an example. 7
- (b) Which three keywords are provided by C++ for implementing exception handling? Explain those with a suitable example. 7
9. (a) Describe the use of the following manipulators: setw(), setiosflags(), setprecision, setfill(). 7
- (b) Describe how the contents of a disk file can be accessed randomly in C++? 7