2213

M.C.A. (2nd Year)/M.Sc. (Comp. Sc.)

(Second Year) EXAMINATION

(New Scheme)

MCA-MSC-DE-23

OBJECT ORIENTED METHODOLOGY
USING C++

Time : Three Hours *Maximum Marks : 70*

Note : Attempt any *Five* questions. All questions carry equal marks.

1. Differentiate between the following :

   (a) Abstraction and encapsulation 5

   (b) Abstract class and concrete class 4

   (c) Meta class and container class. 5

2. Explain the following terms with suitable examples : link, association, multiplicity, link attribute, qualifier, ordering and aggregation. 14

3. What are two main processes of Booch's methodology ? Explain the subphases of each process in sufficient detail. 14

4. What is functional model ? What is DFD ? Draw '0'-level and '1'-level DFD for a library management system. 14

5. What is OMT ? What is Object Model of OMT ? Draw an object diagram for university admission system. 14

6 (a) What are different types of access specifiers in C++ ? Explain with an example. 7

(b) What is inheritance ? How is it implemented in C++ ? 7

7. What are constructors ? What are their roles ? How are they different from destructors ? 14

8. What is operator overloading ? Give one example of unary and one example of binary operator overloading. 14

9. (a) What is friend function ? Explain its need. 7

(b) What is pure virtual function ? Explain its use with an appropriate example. 7

10. (a) What is template class ? Give an example. 7

(b) Exception the use of 'try', 'catch' and 'throw' key words. 7