

2011

MCA

3rd SEMESTER EXAMINATION

OBJECT ORIENTED PROGRAMMING

PAPER—2303

Full Marks : 100

Time : 3 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 any five from the rest.

- 1. Answer any ten questions : 2×10**
- (i) What do you mean by the term "Abstract data type".
 - (ii) What is the difference between the method sleep () and wait ().
 - (iii) Can you write a Java class that could be used both as an applet as well as application.
 - (iv) What is member access operator ?
 - (v) What happens when we perform the following operations :
At1
At2 = t1 where A is a name of a class.

(Turn Over)

- (vi) How can we define a constant in Java.
- (vii) What is the task of arrow operator ?
- (viii) What do you mean by dynamic initialization of objects.
- (ix) When do we need mutable data members in C++.
- (x) When does the compiler supply a default constructor for a class.
- (xi) What happens when we try to compile the following class :

```
Class Person
{
};

Class student : protected person
{
};
```

- (xii) Is it necessary that exceptions can be either caught or rethrown to the calling function.
2. (a) Define the term exception handling. Write a program to raise and catch the exception if an attempt is made to divide a number of zero. 2+3
- (b) Explain the concept of operator Overloading ? Illustrate with suitable examples ? What are the operators that cannot be over loaded. 4+1

3. (a) Mention the different ways of passing class objects to a function. 6
- (b) Will an error occur if a class with the same name exists in two different packages that you import using * form? How can the error be avoided? 4
4. (a) What is the difference between Applets and an application program in Java? Explain. 5
- (b) What is copy constructor? What are the advantages of a copy constructor? Give examples. 5
5. (a) Justify the use of constructor & destructor in C++. 5
- (b) Differentiate between interface and abstract classes in Java with the help of Suitable example 5
6. (a) What is the difference between thread and a process. 2
- (b) Draw the transition diagram of a thread and explain briefly. 5
- (c) Why does Java does not support multiple inheritance. 3

7. (a) What is 'This' operation? Show with the help of example the explicit use of 'This' operator.

2+3

(b) Write a C++ program to declare a class called 'Person' having data members 'name', 'age' and 'salary' of the appropriate types. Write a constructor to define the value of data variables. Also write a method called display() that will display the current values of data variables. Create two objects of this class and set their data values as follows :

1. Name : Atul Age : 25 Salary : 20,000.00

2. Name : Mitul Age : 28, Salary : 25,000.00

5

8. (a) What is method overloading? Write a Java program to illustrate.

5

(b) "Java is architecture neutral, secure and distributed language." - Justify.

5

Internal Assessment — 30
