J 1624

B.E. DEGREE EXAMINATION, MAY/JUNE 2006.

Second Semester

Information Technology

IF 144 — OBJECT ORIENTED PROGRAMMING

Maximum : 100 marks

Time : Three hours

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. With an example explain an abstract data type.

2. List the access specifiers in C++.

3. State why a destructor is used when developing an application in C++.

4. State the purpose of using a default constructor while developing an application in C++

5. State how an abstract class is implemented in C++.

6. Can a base class access members of a derived class? Discuss.

7. List the four integer types supported by JAVA.

8. What is multithreading?

9. State, which package contains the AWT classes?

10. "Applets are event driven". Is the above statement true? Discuss.

PART B — (5 × 16 = 80 marks)

11. (i) "Java programs perform I/O through steams". Discuss what a stream is and then discuss how Java implements streams? (8)

(ii) What are applets used for? With a programming example of your choice discuss clearly the use of applets. (8)

12. (a) With relevant examples discuss the following terms related to Oriented Paradigm :

(i) Encapsulation

(ii) Data abstraction

(iii) Polymorphism

(iv) Inheritance.

Or

(b) (i) With relevant examples discuss how reusability is achiev Object Oriented Programming is used in developing application

(ii) Discuss the merits and demerits of Object Oriented Methodolo

13. (a) With relevant examples discuss the different types of constructors C++.

Or

(b) (i) Develop a C++ program to overload Unary Operator for processi counters. It should support both upward and downward counti

(ii) Why is the friend function not allowed to access members of a cla directly although its body can appear within the class body? Discu the same with an example.

14. (a) With relevant examples discuss the different types of inheritance in C++. (16)

Or

(b) (i) Justify the need for virtual functions in C++. (4)

(ii) What are pure virtual functions? How do they differ normal virtual functions? (6)

(iii) How is dynamic binding achieved in C++? Discuss. (6)

15. (a) (i) Perform a comparative study between the features of C++ and JAVA. (10)

(ii) List and briefly discuss the four categories of Visibility addressed by JAVA for class members. (6)

Or

Object

(4)

(4)

(4)

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(b) (i) With a relevant example discuss how an interfaces is defined? Also discuss how, defining an interface is similar to and different from defining a class. (10)

(ii) Does JAVA support Multiple Inheritance? Discuss. (6)
