

5. Answer any **two** parts : **(10×2=20)**

- (a) What do you understand by the database connectivity ?
Give the connectivity model. Also discuss JDBC in detail with an example.
- (b) Write applets to draw the following figures with proper syntax :
- (i) A triangle inside another triangle.
 - (ii) A Square inside another square.
- (c) Write short notes on the following with suitable examples giving their significance in application development :
- (i) AWT v/s Swing.
 - (ii) Multithreading in Java.

Printed Pages—4

ECS503

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2166

Roll No.

B.Tech.

(SEM. V) ODD SEMESTER THEORY EXAMINATION 2012-13
OBJECT ORIENTED TECHNIQUES

Time : 3 Hours

Total Marks : 100

Note : (1) Attempt *all* questions.

(2) Make suitable assumptions if required.

1. Answer any **two** parts : **(10×2=20)**

- (a) (i) What do you mean by object oriented techniques ?
Explain with some example.
- (ii) Discuss the concept of encapsulation with suitable example.
- (iii) Describe the pros and cons of unified modeling language (UML).
- (b) (i) Give the conceptual model of UML. Use some example to illustrate the model in detail using diagram.
- (ii) Define link and association. Discuss the role of link and association in object modeling with suitable example.
- (c) (i) Define aggregation generalization. Explain.
- (ii) What do you mean by polymorphism ? Explain it with an example.

2. Answer any **two** parts : **(10×2=20)**

- (a) What is the difference between a class diagram and an instance diagram ? Discuss the significance of each. Also

prepare a class diagram for the following instance diagram as given in Figure 1 :

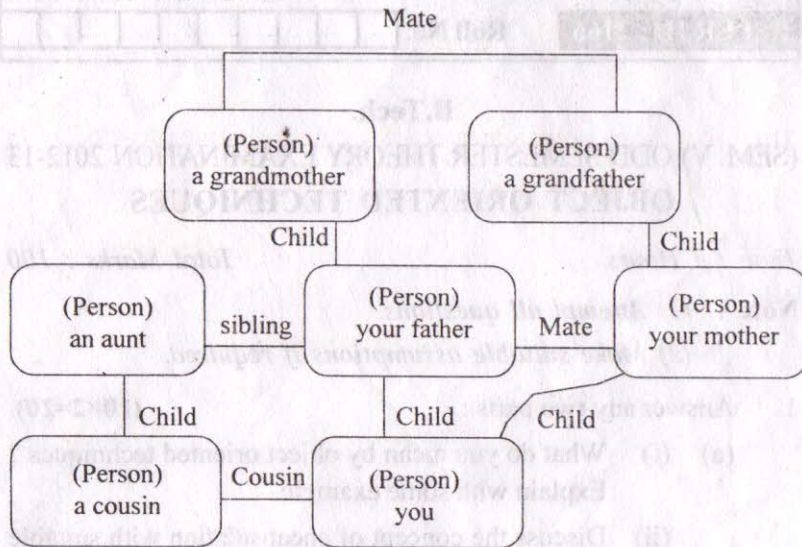


Figure 1

(b) Discuss the significance of sequence diagrams. How the following is implemented using sequence diagrams :

- (i) broadcast messages
- (ii) callback mechanism
- (iii) asynchronous messages with/without priority.

(c) (i) Write short notes on architectural modeling with suitable example and diagrams.

(ii) Categorize the following relationship into generalization, aggregation, or association :

- (1) A country has a capital city
- (2) Files contain records.

3. Answer any **two** parts : (10×2=20)

(a) Describe the following with example :

- (i) Passing arguments to methods.
- (ii) Features of object oriented languages.
- (iii) Implementation of Inheritance.

(b) (i) What do you mean by the optimization of design ? Discuss the design optimization with suitable example using diagrams.

(ii) Describe the structured analysis and structured design approach with an example.

(c) Write short notes on the following :

- (i) Compare procedural programming with object oriented programming with examples.
- (ii) Write a short note on Jackson Structured Development (JSD).

4. Answer any **two** parts : (10×2=20)

(a) What is the significance of data types in a programming language ? Describe the various data types used in Java. Also compare C++ and Java.

(b) (i) Write a program in Java to display the longest word in a given sentence of at least having 9 words.

(ii) Design a class using Java to create a singly linked list. Then also write the methods for adding a node to the linked list in the beginning and also to search a given node.

(c) Write in short on the following with suitable example in Java and explaining their significance :

- (i) Session beans and Entity beans.
- (ii) Java APIs.