Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 13220

B.Tech. DEGREE EXAMINATION, MAY/JUNE 2012.

Sixth Semester

Computer Science and Engineering

080230028 — OBJECT ORIENTED SYSTEM DESIGN

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Mention the various stages of activity performed in object oriented methodology.

2. What is meant by Qualified Associations? Give example.

3. List the issues to be considered when choosing the visibility of a feature in the class.

4. Draw one shot state diagram for a simplified chess game.

5. Differentiate Waterfall and Iterative development life cycle.

6. How does one prepare data dictionary in domain class model?

7. What is a pattern? Mention its advantages.

8. What is meant by refactoring? Specify its uses.

9. How does one implement association as an object?

10. List the key issues to be managed during data conversion.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the various object oriented themes that enhance the functionality of object oriented system. (8)

(ii) Explain the functionality of three models used to represent the system. Discuss the relationship between these models. (8)

Or

(b) Prepare a class diagram for the following group of classes. Add the relationships (associations and generalizations) to each diagram. Use association names and end names where needed. Also use qualified associations and show multiplicity.

School, playground, principal, school board, classroom, book, student, teacher, cafeteria, restroom, computer, desk, chair, ruler, door, swing.

12. (a) (i) Discuss Aggregation, Metadata and Reification with suitable examples. (8)

(ii) Prepare a state diagram for telephone answering machine. (8)

Or

(b) (i) Prepare an activity diagram for computing a restaurant bill. There should be charge for each delivered item. The total amount should be subject to tax and service charge of 10%. (8)

(ii) Prepare use case diagram for online flight reservation/ cancellation. (8)

13. (a) (i) Prepare a problem statement for an automatic teller machine. (8)

(ii) Discuss the steps involved in constructing an Application Class Model. (8)

Or

(b) Discuss the steps involved in constructing a Domain Class Model. Consider the working of an automatic teller machine as an example to demonstrate the model.

14. (a) Discuss the process involved in

(i) Breaking a system into subsystems (6)

(ii) Identifying concurrency and (6)

(iii) Allocating the subsystems. (4)

Or

(b) Explain the steps involved in Class design. Illustrate each process with suitable example.

15. (a) Discuss the basic and advanced concepts required for implementing the database structure.

Or

(b) Discuss the steps involved in implementing the class functionality using any of the object oriented languages (C++ /java).
