53 (CS 511) OOAD

2017

OBJECT ORIENTED ANALYSIS AND DESIGN

Paper : CS 511

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer Q. No. **1** *and* ***any six*** *from the rest.*

1. Answer ***any ten*** questions : 4×10=40

   (i) What is the relationship between abstraction, information hiding and encapsulation ?

   (ii) Differentiate between activity diagrams, flowcharts and state transition diagrams.

(iii) Name the UML diagram used for the following :

(a) Modelling requirements

(b) Modelling Workflows

(c) Modelling Behavior of Objects

(d) Interaction between a group of objects.

(iv) Is there any difference between the following object relationship "Football team and its player" and "General ledger and its accounts" ? If so how they differ ?

(v) Why object orientation is needed ?

(vi) Why UML is needed ?

(vii) Differentiate static and dynamic models.

(viii) Write the differences of Component Diagrams and Deployment Diagrams.

(ix) Draw an online shopping web application using Deployment Diagram.

(x) Briefly discuss the techniques used for object and class diagrams.

(xi) Draw the UML classification tree.

2. Draw a state transition diagram to depict the states of a CPU. 10

3. Explain the Relationship between classes. Identify and show the relationship between classes in the following statements :

"An airline company has employees. A team builds an airplane which has a number of components. An airplane lands and takes off from air script in an airport. The airplane carries passengers from source to destination. An airplane is managed by a captain and co-pilot along with his cabin crew consisting of air hostesses and attendants." 10

4. Explain about use case model for a case study of your own choice. 10

5. Compare Cohesion and Coupling with suitable examples. 10

6. Define the terms : Cardinality, is a relationship, has a relationship, uses a relationship, generalisation. 10

7. Construct design for Library Information System which comprises the following notations : 10

   (a) Aggregations

   (b) Composition

   (c) Association.

8. Draw a System sequence diagram for online shopping through a user. 10