**53 (CS 511) OOAD**

**2018**

# OBJECT ORIENTED ANALYSIS DESIGN

Paper : CS 511

*Full Marks : 100*

Time : Three hours

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

*Answer **any ten** questions.*

*(Each contains **4** Marks)* 4×10=40

1. What is the relationship between abstraction, information hiding and encapsulation ?

2. Difference between activity diagrams, flow charts and state transition diagrams.

3. Name the UML diagram used for the following :

   *a.* Modeling requirements

   *b.* Modeling Workflows

   *c.* Modeling behaviour of object

   *d.* Interaction between a group of objects.

4. Is there any difference between the following object relationships "Football team and its player" and "General Ledger and its account" ? If so how they differ ?

5. Why object orientation is needed ?

6. Why UML is needed ?

7. Differentiate static and dynamic models.

8. Write the differences of Component Diagrams and Deployment Diagrams.

9. Draw an online shopping web application UML deployment diagram.



10. Briefly discuss the techniques used for object and class diagrams.

11. Draw the UML classification tree.

*Answer **any six** questions.*

*(Each contains **10** Marks)* 6×10=60

1. Draw a system sequence diagram for generating new order.

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

3. Explain the relationship between classes. Identify and show the relationships between classes in the following statement :

   "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 hostess and attendants."

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

5. Compare cohesion and coupling with suitable examples.

6. Define the terms : cardinality, is-a relationship, has-a relationship, uses-a relationship, generalization.

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

   *a.* Aggregations

   *b.* Compositions

   *c.* Associations.

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