

END TERM EXAMINATION

FIFTH SEMESTER [B.TECH(CSE/IT)] NOVEMBER-DECEMBER 2018

Paper Code: IT-309 Subject: Object Oriented Software Engineering

Time: 3 Hours

Note: Attempt five questions in all including Q.no.1 which is compulsory. Maximum Marks: 75

Q1 Answer following in brief: (Any Five)

(5x5=25)

- What is object orientation. How the objects & classes are identified in an object model?
- Write a note on inheritance & polymorphism.
- How object oriented system developments is carried out? Explain its phases.
- Differentiate between Association, Aggregation, Composition, Abstraction, Generalization, and Realization relationship. Differentiate between links and associations
- In UML class diagrams, what are Boundary Classes, Control Classes, and Entity Classes? Explain using suitable diagram.
- What is behavioral modeling? How constraints are handled in behavioral modeling?
- What is multiple inheritance. How it can be shown using generalization?

Q2

- Enlist various building blocks of UML. What are the goals of UML? Discuss the advantages of using UML? In what sense UML is unified?

(6+6.5=12.5)

- Discuss different views supported by UML diagrams and explain the significance of Packages? Prepare an object and state transition diagrams for priority queues or heaps storing numbers, where in the operations of the shift up and shift down are possible.

Q3

- Write a note on Object Oriented Analysis. Briefly write the characteristics of Booch Method, the Coad and Yourdan method, Jacobson method and Raumbaugh method.

(6+6.5=12.5)

- Write a note on Object Oriented Design. Discuss the importance of system design? What are activities and actions in dynamic model?

Q4

- How the classes are identified in an object model? What is its significance? Draw a class diagram of the class student. Make necessary assumptions but clearly state them all. Clearly mark private, public and protected members.

(6+6.5=12.5)

- Explain the significance of object diagrams. What are the essential characteristics of object diagram? Create an object diagram for an employee by making some assumptions.

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- Q5
- What are abstract classes? How it is different from a normal class? What is their significance? What are static functions? (6+6.5=12.5)

- What are components of use case model? Create a use case model for library management system. Explain 'Extends' relationship with suitable example.

Q6

- Describe the components of activity diagram. Draw a sequence diagram for a successful login into a system by a user. Describe the components of sequence diagram. (6+6.5=12.5)

- Describe the components and uses of interaction diagrams.

Q7

- 'State diagrams depict the life cycle of an object' comment. Explain the need for deployment diagrams with suitable examples. What are collaboration diagrams? (6+6.5=12.5)

- What are Components? How Components are organized? Explain the usage of component diagrams with suitable examples.

Q8

- Differentiate between testing and debugging? Explain the Testing Life Cycle. Write a note on Object Oriented testing strategies? (6.5+6=12.5)

- Write a note on following testing in brief

- Black Box and White Box Testing
- Alpha and Beta Testing
- Stress Testing
- Regression Testing
- Performance Testing
- Acceptance Testing
