

Code No: RT41052

R13**Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February - 2019

UML AND DESIGN PATTERNS

(Common to Computer Science and Engineering and Information Technology)

Time: 3 hours

Max. Marks: 70

*Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

PART-A(22 Marks)

1. a) List the benefits of iterative development model. [3]
- b) What is actor generalization and use case generalization in use case diagrams? [3]
- c) Define the terms sequencing and interaction. [4]
- d) Write the purpose of Indirection design pattern. [4]
- e) What are different types of states and events? [4]
- f) Differentiate between Realization and Dependency with example. [4]

PART-B(3x16 = 48 Marks)

2. a) Explain about workflows of Unified Process Model. [8]
- b) Discuss about mapping disciplines to UML artifacts. [8]
3. a) Explain use case types and formats with examples. [8]
- b) Describe the FURPS+ model and its importance. [8]
4. a) Write the purpose of following terms with suitable examples and UML notations with respect to class model. [8]
(i) Association class (ii) Aggregation (iii) Multiplicity (iv) Constraint
- b) Why we need Pattern? Explain the importance of GRASP Design Patterns. [8]
5. a) Compare and contrast between Fabrication and Façade design patterns. [8]
- b) Enumerate the creational patterns? Discuss any one creational pattern with example. [8]
6. a) Explain any four purposes of activity diagrams during system development process. [8]
- b) How we relate components and interfaces in a component diagram? Explain with an example. [8]
7. a) Explain different stereo types that can applied for Generalization relationship. [8]
- b) Why software architecture is so important in system design? Enlist and briefly explain different architectural styles. [8]