

Code No: RT41052

**R13****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February/March - 2018****UML & 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 THEE questions from Part-B*

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**PART-A (22 Marks)**

1. a) Define the terms: disciplines, artifact and phase. [3]
- b) Define inception? What is the purpose of inception? [4]
- c) What is a domain model? Why call a domain model “a visual dictionary”? [4]
- d) Give the structure for ‘singleton’ design pattern. [4]
- e) How to apply state chart diagrams in UML. [3]
- f) When to define conceptual subclass and conceptual super class. [4]

**PART-B (3x16 = 48 Marks)**

2. a) What is UML? List and explain how the UML can be applied. [8]
- b) What are the unified processes (UP) disciplines? Explain with diagrams. [8]
3. a) Write and explain about artifacts in inception. [8]
- b) Explain and write the requirements for the case study ‘monopoly game’ in the Use case model. [8]
4. a) What are conceptual classes? How to find the conceptual classes. [8]
- b) How to create methods from interaction diagrams? Explain with examples. [8]
5. a) Write and explain about principles, solution, examples, benefits, control indication and relative pattern of fabrication in detail. [8]
- b) Write and explain about principle, structure, example, implementation, and design issues and advantages of facade design pattern. [8]
6. a) What are activity diagrams? Explain the symbols used in activity diagram with examples. [8]
- b) What are the uses of deployment diagram? Explain the basic elements of a deployment diagram with neat diagram? [8]
7. a) Write and explain the design principles of package design. [8]
- b) Explain the include and extend relationships with example diagrams. [8]