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
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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. (i) Association class (ii) Aggregation (iii) Multiplicity (iv) Constraint	[8]
	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]

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