Code No: **RT41052** **R13** **Set No. 1**

IV B.Tech I Semester Regular Examinations, November - 2016

UML & DESIGN PATTERNS

(Common to Computer Science & 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)	What are different perspectives to apply UML?	[3]
	b)	What are different types and categories of requirements in UP?	[4]
	c)	What is the purpose of GRASP patterns?	[5]
	d)	Write the intent of fabrication design pattern?	[4]
	e)	Define sub-machine?	[3]
	f)	Define package and draw the UML notation for Package.	[3]

PART–B (3x16 = 48 Marks)

2.	a)	What is a design? Explains the goals of good design?	[8]
	b)	Explain MVC architecture with an Example?	[8]
3.	a)	What is use case? Explain different elements in use case with an example?	[8]
	b)	Draw a neat use case diagram for online railway reservation system?	[8]
4.	a)	Briefly discuss about the GRASP design patterns?	[8]
	b)	What are different artifacts that may start in elaboration phase? Explain.	[8]
5.	a)	Explain Intent, Motivation and Applicability for factory design pattern with an example?	[8]
	b)	Describe the concept of Publish-Subscribe?	[8]
6.	a)	Explain common modeling techniques for State chart diagram?	[8]
	b)	Draw a neat Activity diagram for ATM application?	[8]
7.	a)	Explain in detail about Use case relationships.	[8]
	b)	Briefly explain about packaging model elements.	[8]

Code No: **RT41052** **R13** **Set No. 2**

IV B.Tech I Semester Regular Examinations, November - 2016

UML & DESIGN PATTERNS

(Common to Computer Science & 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)	Mention different types of workflows in OOAD?	[3]
	b)	Write short notes on FURPS model?	[4]
	c)	What are the advantages of Domain Modeling?	[4]
	d)	Write the intent of Indirection design pattern?	[3]
	e)	Describe Fork and Join in activity diagram?	[4]
	f)	Define Association and Aggregation.	[4]

PART–B ***(3x16 = 48 Marks)***

2.	a)	Explain Iterative development with an example?	[8]
	b)	Briefly discuss about the steps how to select a design pattern?	[8]
3.	a)	How are requirements organized in UP artifacts?	[8]
	b)	Explain use case diagram with an example?	[8]
4.	a)	How to create a domain model? Explain with one example.	[8]
	b)	Write short notes on Information expert, Creator of GRASP and Cohesion.	[8]
5.	a)	Explain in detail about factory design pattern?	[8]
	b)	Explain Applicability, Structure and participants for singleton design pattern with an example?	[8]
6.	a)	Explain common modeling techniques for Activity diagram?	[8]
	b)	Draw a neat component diagram for online shopping?	[8]
7.	a)	Explain use case template with an example?	[8]
	b)	Explain the usage of generalization relationship in various UML diagrams?	[8]

Code No: **RT41052** **R13** **Set No. 3**

IV B.Tech I Semester Regular Examinations, November - 2016

UML & DESIGN PATTERNS

(Common to Computer Science & 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)	What are the benefits of Iterative Development?	[5]
	b)	Describe the scope of the use case model?	[4]
	c)	Mention any three differences between sequence and collaboration diagrams?	[3]
	d)	Write the intent of publish-subscribe design pattern?	[4]
	e)	Write the differences between class and object diagrams?	[3]
	f)	Write short notes on specialization relationship?	[3]

PART–B ***(3x16 = 48 Marks)***

2.	a)	Explain different phases in unified process?	[8]
	b)	Write short notes on Describing design patterns?	[8]
3.	a)	Explain use case types and formats with examples?	[8]
	b)	What different artifacts that may start in Inception phase? Explain.	[8]
4.	a)	Explain system sequence diagram with an example.	[8]
	b)	What are conceptual classes? What are different strategies to find conceptual classes?	[8]
5.	a)	Explain differences between pure fabrication and indirect fabrication?	[8]
	b)	Explain Applicability, Structure and participants for façade design pattern with an example?	[8]
6.	a)	Explain common modeling techniques for component diagram?	[8]
	b)	Draw a neat state chart diagram for library management system?	[8]
7.	a)	Explain stereo types for dependency relationships in detail?	[8]
	b)	Define guidelines to model association classes, abstract classes and association role names?	[8]

Code No: **RT41052** **R13** **Set No. 4**

IV B.Tech I Semester Regular Examinations, November - 2016

UML & DESIGN PATTERNS

(Common to Computer Science & 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)	Define design pattern? State use of design pattern?	[4]
	b)	What is the purpose of Inception phase?	[4]
	c)	What is meant by interaction diagram?	[4]
	d)	Write the intent of factory pattern.	[3]
	e)	Define Events, States and Transitions.	[3]
	f)	Explain generalization relationship with example?	[4]

PART–B (3x16 = 48 Marks)

2.	a)	Explain about Object Oriented Analysis and Design process.	[8]
	b)	Write about Unified Process work flows.	[8]
3.	a)	How to find use cases? Explain with an example.	[8]
	b)	What are three types of use cases? Explain with examples.	[8]
4.	a)	Explain the operation of Mapping Designs to Code.	[8]
	b)	Explain GRASP designing objects with responsibilities.	[8]
5.	a)	Explain about Façade design pattern.	[8]
	b)	Discuss about Indirection pattern with an example.	[8]
6.	a)	Discuss about activity diagrams.	[8]
	b)	What artifacts to be identified for drawing component diagram.	[8]
7.	a)	What are association classes? What are the guidelines to add association class? Illustrate with an example.	[8]
	b)	Discuss about Aggregation and Composition relationships.	[8]