



November 2016: END SEMESTER ASSESSMENT (ESA) MCA. V SEMESTER

UC14MC601 - Object Oriented Modeling and Design

Time: 3 Hrs

Answer All Questions

Max Marks: 100

1.	a)	Describe the models in Object Oriented Development. Bring out the relationship among all the UML diagrams.	3+5
	b)	Explain the following concepts with the help of sample class diagrams. (i) Attributes and operations with convention (ii) Multiple Inheritance with overlapping classes (iii) Triggering (iv) Reification	3+3+3+3
2.	a)	Draw a complete use case diagram for Out Patient Department (OPD) in a hospital with advance relationships.	8
	b)	Explain special constructs in activity model with example.	9
	c)	Describe the concept – ‘Synchronization of Concurrent Activities’ with an example.	3
3.	a)	Describe different sub-stages of analysis during software development with an example.	4
	b)	Describe the techniques used for finding new system concept for development.	7
	c)	Illustrate with an example how to shift level of abstraction during domain class model.	4
	d)	Explain with a state diagram, how to evaluate correct states in domain state model for account class in ATM.	5
4.	a)	How to define the boundary classes? Explain major decisions made while handling boundary conditions.	3+3
	b)	Explain different conditions addressed during preparation of activity diagrams for a complex use case.	5
	c)	Illustrate how to organize actors and use cases of ATM system in application interaction model.	5
	d)	How to formulate an algorithm for each operation during class design?	4
5.	a)	Define Pattern. Draw the complete general structure of MVC design pattern.	1+5
	b)	Discuss the implementation steps of client-dispatcher pattern.	6
	c)	What is view handler design pattern? Explain three-part rule with OMT Class diagram of view handler pattern.	1+3+4