Course Code: 23CS5D01

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

III - B.Tech I-Semester Supplementary Examinations (BR23), Mar/Apr - 2026

OBJECT ORIENTED ANALYSIS AND DESIGN

(CSE)

Time: 3 hours | Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A andPart-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	List the five attributes of a complex system	(2M)	CO1	BL1
b)	What are the limitations of human capacity for dealing with complexity?	(2M)	CO1	BL2
c)	What is Modeling? Outline the importance of modelling.	(2M)	CO2	BL2
d)	Define the terms: interaction, link, and message.	(2M)	CO2	BL1
e)	What is state of an object?	(2M)	CO3	BL2
f)	What are active classes?	(2M)	CO3	BL1
g)	What is the purpose of swimlanes?	(2M)	CO4	BL2
h)	How to specify space constraints in modeling a system?	(2M)	CO4	BL2
i)	Define Events and Signals.	(2M)	CO5	BL1
j)	List different components of a state chart diagram	(2M)	CO5	BL1

PART–B (5X10 = 50M)

2.	Explain about allocating nonfunctional requirements and specifying interfaces in satellite-based navigation.	10(M)	CO1	BL3
	(OR)			
3a.	Discuss about the canonical form of a complex system.	5(M)	CO1	BL3
b.	Explain about algorithmic and object-oriented decompositions.	5(M)		BL3
4	Design the use case diagram for Train Traffic Management System case study.	10(M)	CO2	BL4
	(OR)			
5a.	Discuss various phases of software development life cycle.	5(M)	CO2	BL3
b.	Explain common modeling techniques of classes.	5(M)		BL4
6a.	What is an object diagram? Explain identifying objects in object diagrams.	5(M)	CO3	
b.	Discuss about designing the controller of Cryptanalysis.	5(M)		BL4
	(OR)			
7a.	Explain the blackboard objects of Cryptanalysis.	5(M)	CO3	BL3
b.	Explain common modeling techniques of class and object diagrams.	5(M)		BL4

8a.	Discuss about analysis and design model of Vacation Tracking System.	10(M)	CO4	BL4
	(OR)			
9a.	Explain about terms and concepts of activity diagrams.	5(M)	CO4	BL3
b.	Describe terms and notations of use cases with suitable examples.	5(M)		
10a	Explain primary use cases for Weather Monitoring system with a neat diagram.	10(M)	CO5	BL4
	(OR)			
11a	With an example, explain how timing constraints are modeled in UML.	5(M)	CO5	BL4
b.	Assuming a simple scenario, draw the state chart diagram for an online banking system.	5(M)		BL4

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