VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
Accredited by NAAC with A++ Grade
B.E. (I.T.) VII-Semester Supplementary Examinations, July-2022
Object Oriented Analysis and Design (PE-IV)

Time: **3 hours**　　　　　　　　　　　　　　　　　　　　Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	What are the advantages of class diagrams?	2	1	1	1
2.	Define coupling	2	1	1	1
3.	Explain creator principle in GRASP.	2	2	2	3
4.	Describe is the inception phase in Unified process?	2	1	2	3
5.	What is a scenario in use case design?	2	2	3	2
6.	What is domain model?	2	2	3	2
7.	Explain UML constraints in stack class.	2	3	4	3,9
8.	What is singleton class?	2	2	4	3,9
9.	Compare composition and inheritance in object-oriented software.	2	2	5	2
10.	What is du path?	2	1	5	2

Part-B (5 × 8 = 40 Marks)

		M	L	CO	PO
11. a)	In a super bazaar identify the modules. Redesign the modules in such a way that they have high cohesion. What are the advantages of high cohesion?	4	4	1	1
b)	Identify different activities taking place in a library? Sketch an activity diagram for those activities in UML	4	4	1	1
12. a)	Explain different types of inheritance with examples.	4	2	2	3
b)	Categorize different types of responsibilities in GRASP.	4	4	2	3
13. a)	In Nextgen POS, is cashier or customer the primary actor? Discuss.	4	3	3	2
b)	Explain the typically layers in an object-oriented system. Explain the guidelines in designing with layers	4	1	3	2

			M	L	CO	PO
14.	a)	What are frame operators in UML sequence diagrams? Explain their role.	4	1	4	3,9
	b)	Draw an uml sequence for admission of students via a common entrance exam. Use at least two frame operators.	4	4	4	3,9
15.	a)	What are the High-level use cases for the IRCTC website for booking railway tickets?	4	3	5	2
	b)	Explain the role of Event and Message Driven petri nets in object-oriented testing.	4	2	5	2
16.	a)	Explain the unified process model	4	2	1	1
	b)	Explain why low coupling and high cohesion will lead to the development of better software.	4	3	2	3
17.		Answer any *two* of the following:				
	a)	Explain the difference between the Sequence diagram and collaborating diagram.	4	2	3	2
	b)	In library management system identify the use cases. Explain how you rank the use cases for implementation.	4	4	4	3,9
	c)	How do you create methods (operations in class diagram) from Interaction diagrams? Explain with example.	4	2	5	2

M : Marks;　L: Bloom's Taxonomy Level;　CO; Course Outcome;　PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	37.50%
iii)	Blooms Taxonomy Level – 3 & 4	42.50%

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