Register Number | 1 | 9 | 5 | 0 | 0 | 1 | 0 | 7 | 6 |

Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam – 603 110

(An Autonomous Institution, Affiliated to Anna University, Chennai)

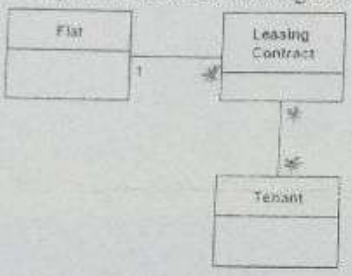
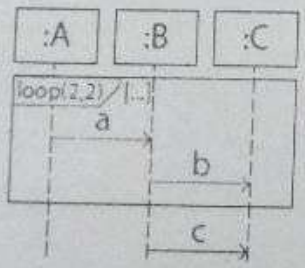
Computer Science and Engineering

Continuous Assessment Test – II

Question Paper

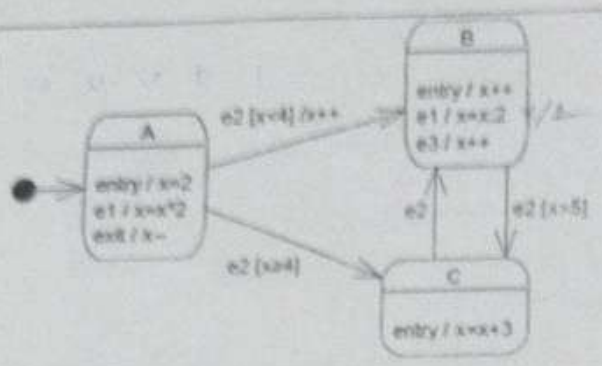
Degree & Branch	B.E. CSE				**Semester**	6
Subject Code & Name	UCS1604 - Object Oriented Analysis and Design				**Regulation:**	2018
Academic Year	2021-2022	**Batch**	2019-2023	**Date**	5/5/2022	FN
Time: 90 Minutes	**Answer All Questions**				**Maximum: 50 Marks**	

Part – A (6×2 = 12 Marks)

<K2>	1. Explain what the following class diagram represents? 	<CO2>
<K2>	2. Interpret the possible traces in the following sequence diagram. 	<CO3>
<K1>	3. Define abstract conceptual classes.	<CO2>
<K2>	4. Outline the difference between sequence diagram and communication diagram.	<CO3>
<K1>	5. When should the Component and deployment diagrams be used?	<CO3>
<K2>	6. Illustrate the state machine diagram for the telephone conversation.	<CO3>

Part – B (3×6 = 18 Marks)

<K3>	7. Make use of the following diagram to evaluate the value of x after the occurrence of the event chain given below. Justify your solution.	<CO3>

		
<K2>	8. Explain the UML package diagram with a suitable example.	<CO3>
<K2>	9. Explain in detail the relationships used in class diagram with an example.	<CO2>

Part – C (2×10 = 20 Marks)

<K3>	10. Model a class diagram for the following scenario by identifying the classes and their associations: Demonstrate a student class with the following attributes: 1) Reg No. 2) Name of the student 3) Marks in subject1, subject2, subject3 4) Total Marks. The total of three subject marks must be calculated only when the student pass in all the subject. The pass marks for each subject is 50. If a candidate fails in any one of the subjects, his total marks must be declared as 0.	<CO2>
	(OR)	
<K3>	11. Identify the use cases to relate the sequence diagram for the following case study: Clients may take money from their accounts, deposit money or ask for their current balance. All these operations are accomplished using either automatic teller machines (ATM) or counter tellers. Transactions on an account may be done by cheque, standing order or using the teller machine and card. There are two kinds of account: savings accounts and current accounts. Savings accounts give interest and cannot be accessed by the automatic tellers. When a cheque is deposited it must be cleared before the funds can be used by the depositor.	<CO2>
<K3>	12. Model the activity diagram for the given scenario. The buyer finds a house and makes an offer. The seller may accept the offer or may make a counter offer. If the seller makes a counter offer, the buyer may accept the counter offer or make another counter offer. This repeats until either the buyer or seller rejects the counter offer or accepts the counter offer. After an offer or counter offer has been accepted, the buyer simultaneously applies for a loan and a home inspector inspects the home. If the loan is approved and if the inspections pass, the escrow officer conducts a title search. If the seller actually holds the deed, the escrow officer transfers the deed to the buyer and transfers the buyer's money to the seller.	<CO3>
	(OR)	
<K3>	13. Model an Interaction diagram for the following case study (for the main success scenario): The SEVLabs Institute has been recently setup to provide state-of-the-art research facilities in the field of Software Engineering. Apart from research scholars (students) and professors, it also includes quite a large number of employees who work on different projects undertaken by the institution. As the size and capacity of the institute is increasing with the time, it has been proposed to develop a Library Information System (LIS) for the benefit of students and employees of the institute. LIS will enable the members to borrow a book (or return it) with ease while sitting at his desk/chamber. The system also enables a member to extend the date of his borrowing if no other booking for that particular book has been made. For the library staff, this system aids them to easily handle day-today book transactions. The librarian, who has administrative privileges and complete control over the system, can enter a new record into the system when a new book has been purchased, or remove a record in case any book is taken off the shelf. Any non-member is free to use this system to browse/search books online. However, issuing or returning books is restricted to valid users (members) of LIS only.	<CO3>