CBCS SCHEME

17CS551

USN

Fifth Semester B.E. Degree Examination, July/August 2021
Object Oriented Modeling and Design

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1 a. Explain Object Orientation. What are the aspects of object orientation? **(06 Marks)**
  b. Explain the concepts of object oriented Themes. **(04 Marks)**
  c. List and explain various restricting techniques used with respect to workarounds. **(10 Marks)**

2 a. Prepare a class diagram for group of classes, show atleast 3 relationships (associations, generalization) sink, freezer, table, light, switch, window, refrigerator, smoke alarm, burglar alarm, cabinet, bread, cheese, ice door, and kitchen. **(10 Marks)**
  b. Explain the following with the example:
     i) Qualified association
     ii) Aggregation
     iii) Ordering
     iv) Association class. **(10 Marks)**

3 a. Define :
     i) Actor
     ii) Guard condition
     iii) Pseudostate
     iv) State
     v) Object lifeline. **(05 Marks)**
  b. Write Usecase diagram of order entry subsystem for RMO showing a system boundary. **(05 Marks)**
  c. Explain System Sequence Diagram of simplified Telephone order scenario for the create new order usecase. **(10 Marks)**

4 a. Write Short notes on :
     i) Nested states
     ii) Concurrency. **(10 Marks)**
  b. List the steps for developing state charts. **(10 Marks)**

5 a. What is software development process? Explain the stages of software development. **(10 Marks)**
  b. Prepare a data dictionary for an ATM system. **(10 Marks)**

6 a. Define system concept. What are the ways to find new system concept. **(05 Marks)**
  b. Explain any 5 criteria's to select right attributes. **(05 Marks)**
  c. Elaborate and explain the questions to be answered for a good system concept. **(10 Marks)**

7	a.	What is a stereotype? Describe the standard stereotype found in design models?	(10 Marks)

	b.	Write short notes on :
		  i) Encapsulation
		  ii) Navigation Visibility.
			(10 Marks)

8	a.	Describe the symbols used in communication diagram.	(05 Marks)
	b.	Write short notes on separation of responsibilities.	(05 Marks)
	c.	Explain the symbols used to define a design class notation.	(10 Marks)
9	a.	What is a design pattern? Explain 4 essential elements of pattern.	(10 Marks)

	b.	Write short notes on :
		  i) Singleton pattern
		  ii) Prototype pattern.
			(10 Marks)

10	a.	Explain the adapter in structural pattern.	(10 Marks)
	b.	Explain step by step approach to use a design pattern.	(07 Marks)
	c.	Differentiate between Patterns and frameworks.	(03 Marks)

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