Reg. No.												

Question Paper Code	12447

B.E./ B.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023

Fourth Semester

Computer Science and Engineering

20CSPC403 - OBJECT ORIENTED SOFTWARE ENGINEERING

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	What is Scrum?	*2,K1,CO1*
2.	Why it is called "Extreme Programming"?	*2,K1,CO1*
3.	Classify the following as functional / non functional requirements for a banking system : Verifying bank balance, Completion of transaction in less than 1 sec.	*2,K2,CO2*
4.	Distinguish between the term inception, elicitation and elaboration with reference to requirements.	*2,K2,CO2*
5.	What is aggregation?	*2,K1,CO3*
6.	Name the two types of UML interaction diagrams.	*2,K1,CO3*
7.	Give the GRASP patterns used for object design.	*2,K1,CO4*
8.	What is meant by cohesion?	*2,K2,CO4*
9.	Describe the steps needed to create a test plan.	*2,K2,CO5*
10.	What is unit testing?	*2,K2,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	What is a process model? Describe the process model that you would choose to develop a project. Explain giving suitable reasons.	*13,K2,CO1*
		OR	
	b)	(i) Define Agile Software Development. Write down any three principles of Agile Manifesto.	*7,K2,CO1*
		(ii) Differentiate Agile software development and waterfall model.	*6,K2,CO1*
12.	a)	Explain briefly the requirement engineering process with neat sketch and describe each process with an example.	*13,K3,CO2*
		OR	
	b)	(i) Explain briefly about requirements validation.	*6,K2,CO2*

(ii) What is the purpose of data flow diagram? What are the notations used for the same. Explain by constructing a context flow diagram level 0 and 1 for a library management system? *7,K2,CO2*

13. a) Consider the process of ordering food over the phone. Draw the use case diagram and activity diagram representing each step of the process, from the moment you pick up the phone to the point where you start eating the food. Include activities that others need to perform. Add exception handling to the activity diagram you developed. Consider at least two exceptions: Delivery person wrote down wrong address, deliver person brings wrong food. *13,K3,CO3*

OR

b) Write a problem statement for online test system. Design the UML use case diagram, activity diagram, class diagram, sequence diagram, state chart diagram and package diagram. *13,K3,CO3*

14. a) What are GoF patterns? Outline the application of GoF design patterns with suitable example. *13,K3,CO4*

OR

b) With an illustrated example diagram, brief on adapter pattern. *13,K3,CO4*

15. a) Explain integration testing in detail. Distinguish top down and bottom up integration with suitable example. *13,K2,CO5*

OR

b) (i) Consider the pseudo code for simple subtraction given below: *7,K2,CO5*

```
Input(x,y)
Output(x)
Output(y)
If x>y then z=x-y
Else z=y-x
Endif
Output(z)
```

Perform basic path testing and generate test cases.

(ii) How is testing different from debugging? *6,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain White box testing types and Techniques with example. *15,K2,CO6*

OR

b) Explain about Reverse Engineering and forward engineering. *15,K2,CO6*