Reg. No.															

Question Paper Code	13565

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Fourth Semester

Computer Science and Engineering

(Common to Sixth Semester - Computer and Communication Engineering)

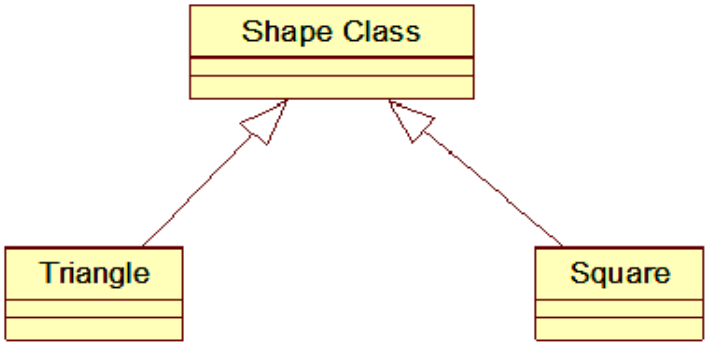
20CSPC403 - OBJECT ORIENTED SOFTWARE ENGINEERING

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Which of the following is NOT a generic software process framework activity? (a) Communication (b) Planning (c) Debugging (d) Construction	1	K1	CO1
2.	Select a major advantage of Agile development. (a) More upfront planning (b) Quick adaptation to changes (c) No need for testing (d) Strict sequential development	1	K1	CO1
3.	Which of the following is NOT a type of feasibility study? (a) Technical feasibility (b) Economic feasibility (c) Social feasibility (d) Mathematical feasibility	1	K1	CO2
4.	Which of the following is NOT a key factor in requirements validation? (a) Completeness (b) Consistency (c) Source Code Compilation (d) Feasibility	1	K1	CO2
5.	The relationship where a use case includes another use case is called as? (a) Include (b) Extend (c) Inherit (d) Aggregate	1	K1	CO3
6.	The purpose of Elaboration phase in Unified Process is (a) To Deploy the system (b) To refine the system architecture and design (c) To Finalize a user manuals (d)To create test scripts	1	K1	CO3
7.	Select the interaction that the use case description has (a) Product and Actor (b) Use case (c) Actor (d) Product	1	K1	CO4
8.	What type of relationship is represented by Shape class and Square?  (a) Realization (b) Generalization (c) Aggregation (d) Dependency	1	K1	CO4
9.	The primary goal of applying GRASP principles is …… (a) To increase code complexity (b) To improve code readability and maintainability (c) To reduce the number of classes in a system (d) To make the system faster	1	K1	CO5
10.	Testing of software with actual data and in an actual environment is known as (a) Regression testing (b) Beta testing (c) Alpha testing (d) None of the above	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11.	List the various Process Models.	*2*	*K1*	*CO1*
12.	What are the Problems with agile methods?	*2*	*K1*	*CO1*
13.	Differentiate functional and non-functional requirements.	*2*	*K2*	*CO2*
14.	Define Data Dictionary.	*2*	*K1*	*CO2*
15.	Differentiate between "Include" and "Extend" relationships with suitable examples.	*2*	*K2*	*CO3*
16.	How does a Class Diagram aid software developers in understanding system structure?	*2*	*K1*	*CO3*
17.	Compare and contrast between sequence diagrams and collaboration diagrams.	*2*	*K2*	*CO4*
18.	List the purpose of a state machine diagram with an example.	*2*	*K1*	*CO4*
19.	Compare and Contrast Component and Deployment diagram.	*2*	*K2*	*CO5*
20.	What is meant by cohesion?	*2*	*K1*	*CO5*
21.	Illustrate any two major differences between verification and validation.	*2*	*K2*	*CO6*
22.	Define Refactoring.	*2*	*K1*	*CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Discuss in detail about the process model which is best suited for risk management. List its advantages and disadvantages.	*11*	*K2*	*CO1*
		OR			
	b)	Compare the various Software Development Life Cycle models (SDLC) in software development.	*11*	*K2*	*CO1*
24.	a)	Explain the distinct task involved in Requirement Engineering process.	*11*	*K2*	*CO2*
		OR			
	b)	Outline the architectural styles with an example.	*11*	*K2*	*CO2*
25.	a)	Make use of elaboration phase supports risk assessment in software development.	*11*	*K3*	*CO3*
		OR			
	b)	Model a System Sequence Diagram, Collaboration Diagram, State Machine Diagram and Activity Diagram for ATM system.	*11*	*K3*	*CO3*
26.	a)	Explain in detail about interaction diagrams and also its notations.	*11*	*K2*	*CO4*
		OR			
	b)	Outline an activity diagram for a Hotel Booking System.	*11*	*K2*	*CO4*
27.	a)	With an example clearly explain the package, component and deployment diagrams.	*11*	*K2*	*CO5*
		OR			
	b) (i)	Compare and Contrast Adapter and Bridge Patterns.	*6*	*K2*	*CO5*
	(ii)	Describe the concept of the Singleton pattern.	*5*	*K2*	*CO5*
28.	a)	Explain in detail about basis path testing and control structure testing.	*11*	*K2*	*CO6*
		OR			
	b)	Demonstrate the main activities involved in Business Process Engineering.	*11*	*K2*	*CO6*