Reg. No.															

Question Paper Code	13922

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

Fifth Semester

Information Technology

20ITPW502 - OBJECT ORIENTED ANALYSIS AND DESIGN WITH LABORATORY

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	To hide the internal implementation of an object we use_____ (a) inheritance (b) encapsulation (c) polymorphism (d) none of these	1	K1	CO1
2.	Abstraction provide an operation named as ____ (a) encapsulation (b) call back (c) turndown (d) inheritance	1	K1	CO1
3.	To distinguish between active and non-active object which property is applied? (a) abstraction (b) polymorphism (c) concurrency (d) aggregation	1	K1	CO2
4.	Subclass represents _____ abstractions (a) Generalized abstractions (b) Specialization abstractions (c) Both (d) None of the mentioned	1	K1	CO2
5.	The time oriented diagram includes _____. (a) sequence (b) classes (c) activity (d) none of these	1	K1	CO3
6.	The vertical dimension of a sequence diagram shows (a) abstract (b) line (c) time (d) messages	1	K1	CO3
7.	How many principles are in GRASP Patterns? (a) 8 (b) 9 (c) 5 (d) 12	1	K1	CO4
8.	What is meant by a pattern? (a) it is a model for imitation (b) it solves a software design problem (c) a &b (d) none of the above	1	K1	CO4
9.	The construction of object oriented software begin with the creation of (a) design model (b) analysis mode (c) code level (d) both analysis and design model	1	K1	CO5
10.	Which requirement is the foundation from which quality is measured? (a) hardware (b) software (c) programmers (d) none of the above	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	State about OOA.	2	K1	CO1
12.	Write the purpose of UP.	2	K1	CO1
13.	Illustrate about when to use class diagram.	2	K2	CO2
14.	Differentiate aggregation from composition.	2	K2	CO2
15.	Name the various dynamic diagrams.	2	K1	CO3
16.	Compare and contrast component diagram and deployment diagram.	2	K2	CO3
17.	Define GRASP? Give example.	2	K1	CO4
18.	List the types of design Pattern.	2	K1	CO4
19.	Compare the key features of coupling with cohesion.	2	K2	CO5
20.	List out the benefits of adapter pattern.	2	K1	CO5

21.		What is meant by SQA? List its benefits.	*2*	*K1*	*CO6*
22.		Illustrate GoF Pattern.	*2*	*K2*	*CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Discuss about the UML diagram and its types.	*11*	*K2*	*CO1*
		OR			
	b) (i)	Discuss about the Inception and its advantages.	*5*	*K2*	*CO1*
	(ii)	Draw a use case diagram for ATM transaction.	*6*	*K2*	*CO1*
24.	a)	Discuss domain model with suitable example.	*11*	*K2*	*CO2*
		OR			
	b)	Explain Sequence diagram with example and state the relationship between sequence and activity diagram.	*11*	*K2*	*CO2*
25.	a)	Develop an interaction and activity diagram for library management system.	*11*	*K3*	*CO3*
		OR			
	b)	Construct the component diagram and deployment diagram for Online Reservation system.	*11*	*K3*	*CO3*
26.	a)	Identify and discuss about when to use UML deployment and component diagrams.	*11*	*K3*	*CO4*
		OR			
	b)	Identify the use of UML package diagram and classify the three layers of the package diagram. Give example.	*11*	*K3*	*CO4*
27.	a)	Identify and discuss about the various GRASP pattern.	*11*	*K3*	*CO5*
		OR			
	b)	Identify GoF Pattern and their uses with example.	*11*	*K3*	*CO5*
28.	a)	Discuss various Object Oriented methodologies and state their advantages.	*11*	*K2*	*CO6*
		OR			
	b)	Describe the various Teat cases and Test plans with suitable example.	*11*	*K2*	*CO6*