Reg.No.:												

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 60023

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. 2026
Sixth Semester
Computer Science and Engineering
U19IT620 – SOFTWARE ENGINEERING
(Regulation 2019)

Time: Three Hours | Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	How does the Incremental process model improve software development?	2	K2	CO1
2.	Define the term "software process model".	2	K1	CO1
3.	What is the purpose of brainstorming in requirements elicitation?	2	K1	CO2
4.	Write a simple use case scenario for an ATM withdrawal.	2	K3	CO2
5.	List the advantages of UML diagrams.	2	K1	CO3
6.	Differentiate between Sequence diagram & Collaboration diagram.	2	K2	CO3
7.	What are the difference between architectural design and component-level design?	2	K2	CO4
8.	Give an example of a commonly used design pattern.	2	K2	CO4
9.	What are software testing strategies?	2	K1	CO5
10.	Mention the steps involved in system testing.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.		Questions	Marks	KL	CO
11.	a)	Explain the Waterfall model with a neat diagram and discuss its advantages and disadvantages.	13	K2	CO1

		(OR)			
	b)	Illustrate the Scrum process model with a diagram. Infer its roles, ceremonies and artifacts.	13	K2	CO1
12.	a)	Develop a use case diagram for online shopping system.	13	K3	CO2
		(OR)			
	b)	What is requirements monitoring? Explain its importance and list the key benefits of continuous requirements monitoring in software engineering.	13	K2	CO2
13.	a)	Illustrate and explain Class Diagram & Sequence Diagram. Design a Class diagram and Sequence Diagram and for a Library Management System.	13	K3	CO3
		(OR)			
	b)	Define Unified Modeling Language. Explain its significance in software development with suitable examples.	13	K2	CO3
14.	a)	Define architectural design and describe its role in the software development process. Provide an example of how architectural design influences system quality.	13	K2	CO4
		(OR)			
	b)	Explain the concept of class-based components in component-level design. Illustrate the design process with an example class diagram.	13	K2	CO4
15.	a)	What is validation and system testing? Explain their significance in software development, how they differ, and the impact of improper validation testing.	13	K2	CO5
		(OR)			
	b)	Explain Software Configuration Management (SCM). Discuss its objectives, benefits and how it helps maintain software versions and changes efficiently.	13	K2	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.		Questions	Marks	KL	CO
16.	a)	Show the importance of an activity diagram in modeling workflows. Draw an activity diagram and use case diagram for an Hospital Management process.	15	K3	CO3
		(OR)			
	b)	Illustrate the SCM repository and its role in software development. Provide an example of how a company uses an SCM repository in real projects.	15	K3	CO5