(Affiliated to University of Mumbai)	***End Semester Examination (R-24/R-25) SH 2026 Answer Key with marking scheme***
Branch: CSEIOT	Course: Software Engineering and ProjectManagement
Year/ Semester: TE /V	Course code:CSEC502
Time: 03 hours	Marks: 80

		Marks
Q. 1	All questions are compulsory.	
A.	Explain 5 levels of CMM levels 1 M each	05
B.	What is requirement elicitation Describe any 5 elicitation methods 1 M each	05
C.	Modularity 1M Explain effective modular design with its advantages 4 M	05
D.	COCOMO definition -1M Project categories -2M Basic COCOMO equations -2M	05
E.	Explain people product and project in management spectrum with their interrelationship -5 M	05
F.	Verification vs Validation — 5 M Verification (2): checks whether work products meet specifications ("building the product right"); example: design/code review against the SRS. Validation (2): checks whether software meets user needs ("building the right product"); example: user acceptance testing. Difference (1): verification often uses reviews/static checks, while validation commonly executes the software.	05
Q.2 A	Explain Scrum framework -4 M Responsibilities of Product Owner, Scrum Master, and Developers involved in the food ordering system -2 M Each of the role	10
	OR	
Q.2B.	Introduction to XP-1 M Explain XP life cycle with diagram -6M Application of XP in the development of the Online Banking Application-3M	10
Q.3 A	Identify requirements for Hospital Management System 2M Prepare IEEE format SRS document for Hospital Management System covering the Introduction, Overall Description, Functional Requirements, Non-Functional equirements, External Interface Requirements, System Constraints, and assumptions and Dependencies -8M (1 M for each component)	
	OR	
Q.3B	Identify requirements-2M Identify actors-2M Draw use case diagram-5M Show relationship betweenactors-1M	

Q.4 A	Explain Design concepts with design guidelines -5M Architectureal styles with diagram -5 M	
	OR	
Q.4B	Cohesion and Coupling — 5 marks Definitions (2): cohesion is how strongly elements in a module belong together; coupling is dependency between modules. Importance (2): high cohesion gives a clear responsibility; low coupling limits ripple effects and improves testing, reuse and maintenance. Example (1): an Order module handles order totals and accesses Payment only through a defined interface. Types of coupling 5M	
Q.5 A	**Assessment Criteria** — **Marks** COCOMO II effort formula — 3 Effort calculation — 3 Development time formula and calculation — 3 Staffing estimation — 2 Interpretation	
	OR	
Q.5B	AON diagram-2M Forward and backward pass-4M Critical path identification and critical activities-2M Find duration-2M	10
Q.6 A	Define Process to: identify risks; estimate probability/impact; prioritize; plan mitigation, monitoring and contingency; assign owners/triggers; update the risk register throughout the project. 2 M Prepare Risk table for all identified risks-3M	10
	Use equivalence partitioning and design test cases-3m Design test cases for boundary value analysis -2 M	
	OR	
Q.6B	Use of Git in version control show the steps -3 M Show steps of change managemet-2M	05
	Design test case with equivalence partitioning for the given input -3M Validate using boundary value analysis-2M	05
	********* All the Best*********	