Reg. No.																

Question Paper Code	14049

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

Third Semester

Computer Science and Engineering

(Common to Information Technology &M.Tech. - Computer Science and Engineering (5Years Integrated))

24ITPC302 - SOFTWARE ENGINEERING

Regulations - 2024

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 characteristic of good software? (a) Functionality(b) Maintainability (c)Security (d) Complexity	1	K1	CO1
2.	What does RAD stands for (a) Relative Application Development(b) Rapid Application Development (c) Rapid Application Document (d) None of the above	1	K1	CO1
3.	Find the Functional requirement from the given options. (a) Maintainability(b) Portability(c) Security(d) None of the above	1	K1	CO2
4.	Requirements Elicitation is said to be a difficult task because of _____ (a) Volatility in requirements (b) Problem of proper Understanding (c) Scope definition (d) All of the above	1	K1	CO2
5.	The output of the design process is called: (a) Test plan (b) Design model (c) Source code (d) Requirement document	1	K1	CO3
6.	Abstraction in software design means: (a) Hiding irrelevant details (b) Reusing code (c) Writing complex algorithms (d) Showing complete details	1	K1	CO3
7.	Basis path testing is a type of: (a) Black-box testing (b) Regression testing (c) White-box testing (d) System testing	1	K1	CO4
8.	System testing is carried out: (a) Before unit testing (b) After integration testing (c) Only during coding (d) By end-users	1	K1	CO4
9.	A Request for Proposal (RFP) is used to: (a) Request project budget approval (b) Solicit bids or proposals from vendors (c) Hire project team members (d) Define project scope internally	1	K1	CO5
10.	The measure of the likelihood that a risk will occur is known as: (a) Risk impact (b) Risk probability (c) Risk exposure (d) Risk mitigation	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	Outline the merits of incremental model.	2	K2	CO1
12.	Define Software Engineering.	2	K1	CO1
13.	Interpret the outcome of a Feasibility Study.	2	K2	CO2
14.	Compare User and System requirements with examples.	2	K2	CO2
15.	Infer the various elements of Design Model.	2	K2	CO3
16.	Outline the various types of coupling.	2	K2	CO3
17.	List the salient features of good testing.	2	K1	CO4
18.	Interpret the various techniques associated with White Box testing.	2	K2	CO4
19.	What is the purpose of a Work Breakdown Structure (WBS)?	2	K1	CO5
20.	Define Function Point (FP) and its significance in software estimation.	2	K1	CO5

21.	List the steps associated with Risk Management.		*2*	*K1*	*CO6*
22.	Infer the advantages of using CASE tools.		*2*	*K2*	*CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Identify the Principles, advantages and disadvantages associated with Agile Process Development.	*11*	*K3*	*CO1*
		OR			
	b)	Organize the various task regions of a Spiral Model with a neat sketch.	*11*	*K3*	*CO1*
24.	a)	Use Petri net and Data Dictionary to represent the functional behavior of an application.	*11*	*K3*	*CO2*
		OR			
	b)	Identify the various characteristics of a good System Requirements Specification (SRS) and illustrate with a suitable example.	*11*	*K3*	*CO2*
25.	a)	Organize the various architectural styles used in software design with suitable examples.	*11*	*K3*	*CO3*
		OR			
	b)	Apply the principles of software design to design a Student Information System application.	*11*	*K3*	*CO3*
26.	a)	Compare Regression, Unit testing and Integration testing with respect to its salient features.	*11*	*K4*	*CO4*
		OR			
	b)	Examine the various testing strategies under Control Structure testing and explain which would be most effective for detecting logical errors.	*11*	*K4*	*CO4*
27.	a)	Explain the purpose of the COCOMO model in software project estimation.	*11*	*K2*	*CO5*
		OR			
	b)	Interpret the role of Earned Value Analysis (EVA) in tracking project progress.	*11*	*K2*	*CO5*
28.	a) (i)	Analyze how effective Risk identification can minimize project failure in software development.	*6*	*K4*	*CO6*
	(ii)	Examine the relationship between risk probability and impact using a suitable example.	*5*	*K4*	*CO6*
		OR			
	b)	Analyze how various CASE tools support different phases of the Software Life Cycle with suitable examples.	*11*	*K4*	*CO6*