Reg. No.																

Question Paper Code	13896

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

Seventh Semester

Computer Science and Engineering (IoT)

20CSOE902 - SOFTWARE ENGINEERING PRACTICES

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	The Waterfall model is also known as: (a) Linear sequential model (b) Spiral model (c) RAD model (d) Prototype model	1	K1	CO1
2.	The evolutionary model emphasizes: (a) One-time delivery (b) Building the full product at once (c) Developing an initial version and refining it (d) Ignoring user feedback	1	K1	CO1
3.	In a DFD, a circle represents: (a) Process b) Data flow c) Data store d) External entity	1	K1	CO2
4.	Requirement validation ensures that: (a) The code runs correctly (b) The requirements reflect customer needs accurately (c) The design is modular (d) The testing is efficient	1	K1	CO2
5.	Which one is not a design concept? (a) Abstraction (b) Compilation (c) Refinement (d) Modularity	1	K1	CO3
6.	User interface design mainly concerns: (a) Interaction between user and system (b) Database design (c) Algorithm design (d) Code optimization	1	K1	CO3
7.	Refactoring aims to: (a) Improve internal code structure without changing behavior (b) Add new features (c) Remove all comments (d) Compile faster	1	K1	CO4
8.	Verification ensures that: (a) Software correctly implements specific functions (b) The right product is built (c) User is satisfied (d) Code runs fast	1	K1	CO4
9.	Which of the following is a Lower-Case Tool? (a) Rational Rose (b) Code Generator (c) MS Project (d) Requirement Analysis Tool	1	K1	CO5
10.	Which chart is most used for project scheduling in project planning? (a) Fishbone Chart (b) Gantt Chart (c) Scatter Plot (d) Bar Chart	1	K1	CO5

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	What are the goals of Software Engineering?	2	K1	CO1
12.	Write the concept of a process framework in software development.	2	K1	CO1
13.	Relate functional and non-functional requirements.	2	K1	CO2
14.	List out the applications of Petri nets in software engineering.	2	K1	CO2
15.	Define modularity.	2	K1	CO3
16.	What is an architectural style?	2	K1	CO3
17.	State reengineering.	2	K1	CO4
18.	List any two objectives of unit testing.	2	K1	CO4
19.	What is earned value analysis?	2	K1	CO5

20.	Relate the purposes of a Work Breakdown Structure (WBS).		*2*	*K1*	*CO5*
21.	Define requirement elicitation.		*2*	*K1*	*CO2*
22.	Compare spiral model and Agile model.		*2*	*K2*	*CO1*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Explain the various SDLC models and identify which model is most suitable for developing web-based applications.	*11*	*K2*	*CO1*
		OR			
	b)	Explain the principles of Agile development process.	*11*	*K2*	*CO1*
24.	a)	Outline the importance of software requirement specification (SRS) and documentation with a suitable example.	*11*	*K2*	*CO2*
		OR			
	b)	Illustrate requirement engineering process and how each step would be carried out in detail.	*11*	*K2*	*CO2*
25.	a)	Plan and model a software system using the concepts of Layered Architecture and Client–Server Architecture. Illustrate your design with suitable diagrams and examples.	*11*	*K3*	*CO3*
		OR			
	b)	Apply the concepts of coupling and cohesion in software design to illustrate how it can be achieved in object-oriented systems.	*11*	*K3*	*CO3*
26.	a)	Explain software reengineering and describe the BPR model with neat diagrams.	*11*	*K2*	*CO4*
		OR			
	b)	Summarize the concept of Basis Path Testing with a suitable example program. Compute the Cyclomatic Complexity for any program and identify the independent paths**.**	*11*	*K2*	*CO4*
27.	a)	Apply PERT/CPM technique in software management and compare their features.	*11*	*K3*	*CO5*
		OR			
	b)	Make use of RMMM Plan to explain the risk management process.	*11*	*K3*	*CO5*
28.	a)	Develop a Gantt chart for a simple project.	*11*	*K3*	*CO5*
		OR			
	b)	Apply CASE tools in different project management activities and explain it.	*11*	*K3*	*CO5*