USN											Course Code	2	1	C	S	4	2

Fourth Semester B.E. Degree Examinations, September/October 2023
SOFTWARE ENGINEERING
(Common to CSE & AIML)

Duration: 3 hrs   **Max. Marks: 100**

Note: 1. Answer any **FIVE** *full questions, choosing* **ONE** *full question from each module.*
         2. Missing data, if any, may be suitably assumed

Q. No		*Question*	*Marks*	*(RBTL:CO: PI)*

MODULE – 1

1.	a.	Define Software engineering. Identify and explain key challenges in Software Engineering?	06	(3 :1: 1.4.1)
	b.	Identify the various Professional Responsibilities of Software Engineer.	06	(3 :1: 1.4.1)
	c.	Demonstrate with a neat diagram Spiral model of software development and identify its advantages.	08	(3 :1: 1.4.1)

OR

2.	a.	Identify the problems with natural language for expressing requirements and discuss the Guidelines for writing requirements.	06	(3 :1: 1.4.1)
	b.	Demonstrate with a figure, Requirement Elicitation and Analysis process.	06	(3 :1: 1.4.1)
	c.	What is Requirements validation? Identify different types of checks carried out during the process.	08	(3 :1: 1.4.1)

MODULE – 2

3.	a.	What is system modeling? Identify different perspective of system modelling.	06	(3 :2: 1.4.1)
	b.	Illustrate sequence diagram with example of view patient information	08	(3 :2: 1.4.1)
	c.	Classify the three models of object-oriented development and explain in detail.	06	(3 :3: 1.4.1)

OR

4.	a.	Show the metrics for specifying Non-Functional requirements.	06	(3 :2: 1.4.1)
	b.	Design a state diagram to demonstrate different components of a weather station system.	08	(3 :2: 1.4.1)
	c.	Discuss the various proposals for the identification of Object classes.	06	(3 :3: 1.4.1)

MODULE – 3

5.	a.	Illustrate with a block diagram, the general model of Software Testing.	06	(3 :4: 1.4.1)
	b.	Identify tests those should be included in object class testing?	06	(3 :4: 1.4.1)
	c.	Develop a scenario that could be used to help design tests for the wilderness Weather station system.	08	(3 :4: 1.4.1)

OR

Note: (**RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI - Performance Indicator**)

6.	a.	Show software evolution process with neat diagram.	06	(3 :4: 1.4.1)
	b.	Illustrate the following with respect to Legacy system management.	06	(3 :4: 1.4.1)
		i. Strategic options ii. Clusters of system		
	c.	What is software maintenance? Identify three different types of software maintenance and explain in detail.	08	(3 :3: 1.4.1)

MODULE – 4

7.	a.	What is Software pricing? Identify and explain various factors affecting Software pricing.	06	(3 :5: 1.4.1)
	b.	Identify three stages of project planning. Illustrate planning process with a neat sketch with a project plans.	06	(3 :5: 1.4.1)
	c.	Identify and explain various COCOMO Cost Estimation Model.	08	(3 :5: 1.4.1)

OR

8.	a.	What is Program Inspection? Identify inspection check list.	06	(3 :5: 1.4.1)
	b.	Illustrate the Re-engineering Process in detail.	06	(3 :5: 1.4.1)
	c.	Identify the Project Scheduling process and explain each phase.	08	(3 :5: 1.4.1)

MODULE – 5

9.	a.	Identify and explain two ways of coping with change and changing requirements.	06	(3 :5: 1.4.1)
	b.	Illustrate the scaling of Agile methods in large systems with its advantages and disadvantages.	06	(3 :5: 1.4.1)
	c.	Demonstrate Agile process development using SCRUM method with its characteristics and advantages.	08	(3 :5: 1.4.1)

OR

10.	a.	Illustrate Extreme Programming Release Cycle and explain in detail.	06	(3 :5: 1.4.1)
	b.	Demonstrate with a figure, the process of prototype development. Identify the benefits of a prototype.	06	(3 :5: 1.4.1)
	c.	Identify and explain in detail the following:	08	(3 :5: 1.4.1)
		i. Agile Methods		
		ii. Testing in XP		

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