22MCA23

USN

Second Semester MCA Degree Examination, June/July 2023
Software Engineering

Time: 3 hrs.   Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

			M	L	C
		Module – 1			
Q.1	a.	Describe software engineering code of ethicks and professional practices as defined by IEEE/ACM.	10	L2	CO1
	b.	Why the software engineering is important? List the reasons. Brief the essential attributes of good software.	10	L2	CO1
		OR			
Q.2	a.	Describe the waterfall and incremental software process models with suitable diagram.	10	L2	CO1
	b.	Discuss the principles of Agile methods.	05	L2	CO1
	c.	Explain the extreme programming release cycle.	05	L2	CO1
		Module – 2			
Q.3	a.	Explain the classification of non-functional requirement with neat sketch and example.	10	L1	CO2
	b.	Explain the notations used in writing the software requirement specifications.	10	L1	CO2
		OR			
Q.4	a.	Discuss the various difficulties that a software engineer faces during the eliciting and understanding requirements.	10	L1	CO2
	b.	Discuss the important activities of requirements engineering process with neat diagram.	10	L1	CO2
		Module – 3			
Q.5	a.	Explain the generalization and inheritance with examples.	10	L1	CO3
	b.	Discuss about navigation of class models with suitable diagram and examples.	10	L1	CO3
		OR			
Q.6	a.	What is N-array association? Illustrate the aggregation with associations and compositions with suitable examples.	10	L1	CO3
	b.	Explain the concept of reification and constraints with neat diagram and examples.	10	L1	CO3

		Module – 4			
Q.7	a.	Explain system models with suitable example.	10	L2	CO4
	b.	With neat diagram, explain the working procedure of RUP with its advantages.	10	L2	CO4
		OR			
Q.8	a.	Define design pattern. Explain the essential elements of design patterns.	10	L2	CO4
	b.	Explain in detail about the implementation issues involved in software engineering.	10	L2	CO4
		Module – 5			
Q.9	a.	Discuss "Test Driven Development" (TDD) with its process and list out its benefits.	10	L4	CO5
	b.	Explain software evolution process with neat diagram.	10	L4	CO5
		OR			
Q.10	a.	Describe the three main types of software maintenance. List of some difficulties and distinguishes between them.	10	L4	CO5
	b.	Explain why problems with support software might mean an organization has to replace legacy systems.	10	L4	CO5

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