

# CBCS SCHEME

MMC204



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## Second Semester MCA Degree Examination, Dec.2025/Jan.2026 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.*

Module – 1			M	L	C
Q.1	a.	Explain activities of software process which are fundamental to Software Engineering.	10	L2	CO1
	b.	Software has characteristics that are considerably different than those of hardware. Justify also explain various software myths.	10	L2	CO1
OR					
Q.2	a.	Briefly explain the principles to achieve Agility.	10	L2	CO1
	b.	What is XP planning process? How does it involve user stories, estimation and iteration planning?	10	L2	CO1
Module – 2					
Q.3	a.	What is Software requirement specification? Discuss the key components and significance.	10	L2	CO1
	b.	Distinguish between functional and non-functional requirement.	10	L2	CO1
OR					
Q.4	a.	Discuss the use of object modeling using UML. What are the advantages of using UML in requirement analysis?	10	L3	CO2
	b.	What is the use of an activity diagram? Draw an activity diagram for withdrawing money from a Bank ATM.	10	L3	CO2
Module – 3					
Q.5	a.	Explain four essential elements of design pattern by 'gang of four'. Explain the same with observer pattern.	10	L3	CO2
	b.	What is layered architecture? Explain the difference between Layered & Tiered Architecture.	10	L3	CO2
OR					
Q.6	a.	Explain publish and subscribe design pattern and it's applications.	10	L3	CO2
	b.	Explain the strategy design pattern and it's applications.	10	L3	CO2
Module – 4					
Q.7	a.	What is Unit Testing? Explain its significance in software quality.	10	L3	CO3
	b.	What is Debugging? How does it differ from Testing? Explain.	10	L3	CO3
OR					
Q.8	a.	Write about White Box Testing Technique with a suitable example.	10	L3	CO3
	b.	Define Program Analysis. How is it useful for Software Maintenance? Explain.	10	L3	CO3
Module – 5					
Q.9	a.	Define Software Project Management. What are its main objectives? Explain.	10	L4	CO4
	b.	Describe the process of Architecture Building and Testing.	10	L4	CO4
OR					
Q.10	a.	What is DevOps? Explain its importance in modern software development.	10	L4	CO4
	b.	Explain the different stages in the Deployment Pipeline.	10	L4	CO4

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