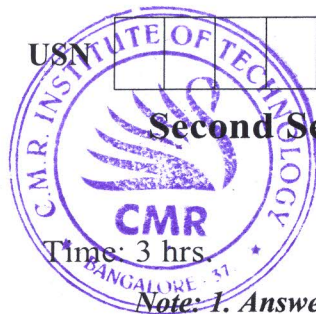


# CBCS SCHEME

22MCA23



## Second Semester MCA Degree Examination, June/July 2024 Software Engineering

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 the essential attributes of good software that are common to all software process.	10	L2	CO1
	b.	Bring out the significance of being ethical and moral responsibility of respected software professional.	10	L1	CO2
OR					
Q.2	a.	Differentiate between water fall and incremental development process.	10	L2	CO1
	b.	Explain the phases of Rational Unified Process with a neat diagram and example.	10	L1	CO2
Module – 2					
Q.3	a.	Differentiate between Agile and Plan driven methodologies.	10	L2	CO2
	b.	What are Functional and Non-functional requirements? Explain the different types of Non-functional requirements.	10	L2	CO3
OR					
Q.4	a.	Discuss requirement Engineering process with a neat diagram.	07	L2	CO2
	b.	Explain requirements elicitation and analysis process.	07	L2	CO3
	c.	What are the requirements validation techniques? Explain briefly	06	L2	CO2
Module – 3					
Q.5	a.	What is Object Oriented Design? Describe the stages of object oriented methodology used in software development.	10	L2	CO4
	b.	Describe the three models which support for modeling system in different view points.	10	L4	CO5
OR					
Q.6	a.	Write short notes on: i) Generalization                      ii) Ordering                      iii) Bags and sequence iv) Multiplicity                      v) N-array association	10	L2	CO4
	b.	Draw a class diagram for library management system and explain working process in detail.	10	L4	CO5
Module – 4					
Q.7	a.	What is use case diagram? Explain the importance of use case modeling.	10	L2	CO4
	b.	Draw a sequence diagram for weather forecasting system and explain the functionality in detail.	10	L4	CO5
OR					
Q.8	a.	Discuss the importance of Behavioral model with suitable example.	10	L2	CO4
	b.	What is design pattern? Explain four elements of design pattern.	10	L4	CO5
Module – 5					
Q.9	a.	Write in detail any two black box testing techniques with example.	10	L4	CO4
	b.	Justify when to use verification and validation with suitable example.	10	L4	CO5
OR					
Q.10	a.	Define Program Evolution dynamics. Discuss Lehman's law for program evolution dynamics.	10	L4	CO4
	b.	Explain the four strategic options of Legacy System Management.	10	L4	CO5

\*\*\*\*\*

**CMRIT LIBRARY**  
BANGALORE - 560 037