

K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2025
(B. Tech) Program: B.Tech. (Computer Engineering)Scheme :III
Regular: TY Semester: V
Course Code:CEC503 and Course Name: Software Engineering
Date of Exam: 01/12/25 Duration: 02.5 Hours Max. Marks: 60

Instructions:
(1)All questions are compulsory.
(2)Draw neat diagrams wherever applicable.
(3)Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Calculate the cyclomatic complexity for the given control structure diagram <p align="center">(A)</p>		5	AP
b)	Draw and explain a Level-0 DFD for an Online Shopping System.		2	AP
c)	Explain LOC-based estimation with a suitable example.		3	U
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Draw the component diagram for courseware management system.		4	AP
b)	What are the key activities in Software Configuration Management (SCM)?		6	U
c)	Explain the Incremental process model.	1	U	

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Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Draw the activity diagram for railway reservation system using swimlane and normal approach.		4	AP
b)	Explain the different techniques in black box testing..		5	U
c)	What is maintenance? Explain its types in detail.		6	U
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	What are different categories of risks? Explain RMMM plan with suitable example.		6	U
b)	Explain COCOMO Model for software cost estimation		3	U
c)	Explain Extreme Programming (XP) and its main practices.		1	U
