Code No.: R22CS743PE	R22	H.T.No.			8	R						

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
IV–B.TECH–I–Semester End Examinations (Regular) - December- 2025
SOFTWARE TESTING METHODOLOGIES
(CSE)

[Time: 3 Hours] **[Max. Marks: 60]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(10 Marks)**

1. a)	Define Debugging.	[1M]
b)	What are the Reasons for Testing?	[1M]
c)	What is meant by data flow testing?	[1M]
d)	Define ugly domain.	[1M]
e)	Define path sum with example.	[1M]
f)	Write short notes on Logic Based Testing.	[1M]
g)	What is Good State graph?	[1M]
h)	Define state testing.	[1M]
i)	What are Graph matrices?	[1M]
j)	Define partitioning algorithm.	[1M]

PART-B **(50 Marks)**

2.a)	Define testing and explain the purpose of testing.	[5M]
b)	List the elements of flow graph and explain each element with suitable diagram.	[5M]
	OR	
3.	Define Bug. Briefly discuss about possible consequences of Bugs.	[10M]
4.	Discuss about Nice & Ugly domains with examples.	[10M]
	OR	
5.a)	Illustrate the restrictions for domain testing.	[5M]
b)	Discuss two dimensional domains and path testing.	[5M]
6.	Explain Karnaugh map method to minimize the given function.	[10M]
	OR	
7.a)	Explain about Logic based testing.	[5M]
b)	Briefly explain about regular expressions and flow-anomaly detection.	[5M]
8.	Explain state graphs and transition testing.	[10M]
	OR	
9.	What are the principles of state testing? Discuss advantages and disadvantages.	[10M]
10.a)	Explain about node reduction algorithm.	[5M]
b)	Write about building tools of graph matrices.	[5M]
	OR	
11.	What are graph matrices and their applications? Explain in detail.	[10M]

****