

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086
(For candidates admitted from the academic year 2023 – 2024 and thereafter)

M.Sc. DEGREE EXAMINATION – APRIL 2026
INFORMATION TECHNOLOGY

FOURTH SEMESTER

COURSE : ELECTIVE
PAPER : SOFTWARE TESTING
SUBJECT CODE : 23CS/PE/ST15
TIME : 1 ½ HOURS

MAX. MARKS: 50

Q. No.	SECTION A Answer all the questions (6 X 5 = 30)	CO	KL
1.	a) Explain the concept of verification and validation in software testing. (OR) b) Describe different levels of functional testing.	CO1	K1
2.	a) Describe the common tools and techniques used in test planning. (OR) b) Explain the concept and purpose of mutation testing in software development.	CO1	K2
3.	a) Identify the use of boundary value analysis in black box testing. (OR) b) Identify the concept and purpose of decision table testing in software development and explain.	CO2	K3
4.	a) Apply McCall's quality factors to evaluate the quality of an e-commerce application. (OR) b) Describe Agile testing principle of collaboration to prevent defects.	CO2	K3
5.	a) Analyse the use of shift-left testing practices to reduce defect leakage. (OR) b) Explain data flow testing with example.	CO3	K4
6.	a) Explain the purpose of state transition testing in the software development lifecycle. (OR) b) Differentiate functional and non-functional testing.	CO3	K4
Q. No.	SECTION B Answer all the questions (2 x 10=20)	CO	KL
7.	a) Apply software testing activities to prepare a basic test plan for an online food delivery application. (OR) b) Apply unit testing concepts to design test cases for a function that calculates the factorial of a number.	CO2	K3
8.	a) Differentiate between branch coverage and decision coverage. (OR) b) Summarize the key characteristics of effective security testing.	CO3	K4
