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K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22

(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

Nov – Dec 2021-22

(B.Tech/M.Tech.) Program: Information Technology

Examination: LY Semester: VII

Course Code: 1UITDL7034 and Course Name: Software Testing and Quality Assurance

Duration: 03 Hours

Max. Marks: 60

Instructions:

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

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	List and describe software testing goals.	02	CO1	2
ii)	Explain Black Box Testing.	02	CO2	2
iii)	Describe structure of testing group.	02	CO3	2
iv)	List the importance of automation testing.	02	CO4	1
v)	Describe Agile Testing.	02	CO5	2
vi)	List and describe software quality factors.	02	CO6	1
vii)	List the Software Testing Terminologies.	02	CO1	1

viii)	Describe White box testing.	02	CO2	2
Q.2	Solve any four questions out of six.	16		
i)	Describe Effective and Exhaustive Software Testing.	04	CO1	2
ii)	Describe Unit validation and Integration testing.	04	CO2	2
iii)	Describe Test organization and Test planning key elements of test management.	04	CO3	2
iv)	Explain manual testing and automated testing.	04	CO4	2
v)	Describe Agile Testing Life Cycle.	04	CO5	2
vi)	Explain ISO-9000-2000 requirements for software quality management.	04	CO6	2
Q.3	Solve any two questions out of three.	16		
i)	Describe Software Testing Life Cycle (STLC).	08	CO1	2
ii)	Describe the guidelines to be followed by selecting a testing tool.	08	CO4	2
iii)	Explain the challenges in testing for web-based software.	08	CO5	2
Q.4	Solve any two questions out of three.	16		
i)	Describe BVC with given example, a program reads an integer number within the range [1,100] and determines whether it is a prime number or not. Design test cases for this program using BVC, robust testing, and worst-case testing methods.	08	CO2	2
ii)	List and explain classification of software metrics.	08	CO3	2
iii)	Explain ISO 9126 quality standard in software testing.	08	CO6	2