08/12/2022

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

(Autonomous College Affiliated to University of Mumbai)

End Semester Exam

Nov – Dec 2022-23

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

Examination: LY Semester: VII

Course Code: ITDLC7034 and **Course Name**: Software Testing and Quality Assurance

Duration: 2.30 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 importance.	02	CO1	2
ii)	Explain Mutation testing.	02	CO2	2
iii)	Describe structure of testing group.	02	CO3	2
iv)	List the importance of automation testing.	02	CO4	1
v)	Explain web based software.	02	CO5	2
vi)	List software quality factors of software.	02	CO6	1
vii)	List the Software Testing Terminologies.	02	CO1	1

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viii)	Describe verification and validation testing.	02	CO2	2
Q.2	**Solve any four questions out of six.**	16		
i)	List and explain goals of software testing.	04	CO1	2
ii)	Boundary Value Analysis (BVA) method.	04	CO2	2
iii)	Describe Test organization and Test planning key elements of test management.	04	CO3	2
iv)	Explain importance of automated testing.	04	CO4	2
v)	Describe Agile Testing Life Cycle.	04	CO5	-
vi)	Explain ISO-9000-2000 requirements for software quality management.	04	CO6	2
Q.3	**Solve any two questions out of three.**	16		
i)	Explain Effective and Exhaustive Software Testing in details .	08	CO1	2
ii)	Describe the feature of Selenium tool.	08	CO4	2
iii)	Explain the traditional software and web-based software testing.	08	CO5	2
Q.4	**Solve any two questions out of three.**	16		
i)	Explain equivalence class testing, with given example, a program reads three numbers, A, B, and C, with a range [1, 50] and prints the largest number. Design test cases for this program using equivalence class testing technique.	08	CO2	2
ii)	List and explain test plan components.	08	CO3	2
iii)	Explain McCall's quality factors.	08	CO6	2