Register Number:……..

KUMARAGURU
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B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2024

(Regulation 2018)

Sixth Semester

COMPUTER SCIENCE AND ENGINEERING

U18CST6004**:** Software Testing

COURSE OUTCOMES

CO1: Apply software testing fundamentals and testing design strategies to enhance software quality.

CO2: Design test cases for unit test, integration test, system test, regression, and acceptance test.

CO3: Discover how work test plan components, test measurements and reviews.

CO4: Perform Testing in software with various testing tools.

CO5: Develop and validate a test plan.

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Define Software testing	CO1	[K_1]
2.	Recall the role of Defect repository in testing	CO1	[K_2]
3.	Define White Box testing	CO2	[K_1]
4.	What is meant by Control Flow Graph (CFG)	CO2	[K_1]
5.	Recall the importance of unit testing	CO3	[K_2]
6.	Write short notes on Regression testing.	CO2	[K_2]
7.	List any 5 test plan components	CO4	[K_2]
8.	Outline the role of clients in test planning	CO3	[K_2]
9.	Define Software Configuration Management (SCM)	CO4	[K_1]
10.	List the requirements for a test tool.	CO4	[K_2]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	Imagine a team developing an online banking application with features like funds transfer, balance inquiry, and transaction history. As the application nears completion, it needs rigorous testing to ensure functionality and compliance with specifications.	8	CO1	[K_3]

		In the context of above scenario, explain with relevant examples of each, how the QA team could differentiate between verification and validation activities.			
	b)	Explain the six essentials of Software Testing	8	CO1	[K_2]
12.	a)	Explain the Equivalence Partitioning technique with an example	8	CO2	[K_2]
	b)	Explain Boundary Value Testing with an example	8	CO2	[K_2]
13.	a)	Explain the different levels of testing with appropriate examples	6	CO2	[K_2]
	b)	A team is working on an e-commerce website that allows users to browse products, add items to a shopping cart, proceed to checkout, and make payments. The website is in the final stages of development, and the QA team needs to ensure it functions smoothly across various devices and browsers before launch. In the above context, explain the various web testing activities involved to ensure the website is functional, user-friendly, compatible across platforms, performs well under load, and is secure before it goes live for customers.	10	CO2	[K_3]
14.	a)	What is meant by 'Testing Policy'? Outline a sample testing policy statement appropriate for a Testing Maturity Model (TMM) level 2 Organization	16	CO3	[K_2]
15.	a)	Explain in detail the test automation framework along with its types with relevant examples	16	CO4	[K_2]
16.	a)	"Reviews are useful not only for finding and eliminating defects, but also for gaining consensus among the project team"-Interpret the statement and explain the different types of reviews involved in software testing process.	10	CO5	[K_2]
	b)	Outline the challenges and issues in testing services organizations	6	CO3	[K_2]

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