Register Number:……..

KUMARAGURU college of technology
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B.E / B.TECH DEGREE EXAMINATIONS: APRIL/MAY 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 tests.

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.	Compare the terms testing and debugging	CO1	[K_2]
2.	List down any four design defects.	CO1	[K_1]
3.	What is loop testing? Name the types of loops to be tested	CO2	[K_1]
4.	Consider a module that allows a user to enter new widget identifiers into the database. Identifier should consist of 4-10 alphanumeric characters of which the first one must be a capital letter. What equivalence partitions would you create for the above scenario?	CO2	[K_3]
5.	Compare functional and non-functional testing.	CO3	[K_2]
6.	Show the difference between Alpha with Beta testing	CO3	[K_2]
7.	Describe the role of test manager and test lead.	CO4	[K_2]
8.	What is a test plan and what it describes?	CO4	[K_2]
9.	List down the information to be contained in the test item transmittal report	CO5	[K_1]
10.	Write down the configuration management tasks	CO5	[K_1]

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

11.	a)	Describe the tester's role in a software development organization	8	CO1	[K_2]
	b)	Summarize the Requirements and specifications defects and coding defects that would occur during software development using examples	8	CO1	[K_2]

12.	a)	1.int main()
		2.{
		3. int i, num;
		4. printf("Enter any number to find its factor: ");
		5. scanf("%d", &num);
		6. printf("All factors of %d are: \n", num);
		7. for(i=1; i<=num; i++)
		8. {
		9 . if (num % i == 0)
		10. {
		11. printf("%d, ",i);
		12. }
		13. }
		14. return 0;
		15.}
		Draw the control flow graph and compute the cyclomatic complexity using three different methods for the above code.
			8	CO2	[K3]

	b)	For a valid Indian mobile number, the first character must be '+'. The second and third characters must be '91'. The next 10 characters (characters 4 to 13) must be digits. If the first character is not '+', it is an invalid phone number. If the second and third characters are not '91', it is not an Indian number. If the total length is less than or greater than 13, it is an invalid Indian mobile number. Draw the Cause-Effect graph for the above scenario	8	CO2	[K3]
13.	a)	What is system testing? Describe the various types of system testing.	12	CO3	[K2]
	b)	Explain Web testing. What are the testing types/techniques used in Web testing?	4	CO3	[K2]
14.	a)	Illustrate about the Testing and Debugging goals and policies.	12	CO4	[K2]
	b)	What is the role of developers/testers in test planning and policy development.	4	CO4	[K2]
15.	a)	Describe about the components of a review plan.	12	CO5	[K2]
	b)	Write down the Criteria for Test Completion.	4	CO5	[K1]
16.	a)	Discuss any six test plan components described by IEEE for software testing.	8	CO4	[K2]
	b)	State the various software testing principles.	8	CO1	[K1]

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