de: 20CS635PE | SET-I | HT NO: | | | 7 | R | | | | | |

CMR TECHNICAL CAMPUS

UGC AUTONOMOUS

B. Tech. VI Semester Regular End Examinations, May-2023

Software Testing & Methodologies

Common to CSE, IT, CSM&CSD

Time: 3 Hours **Max. Marks: 70**

Note

i. This Question paper contains Part- A and Part- B.
ii. All the Questions in Part A are to be answered compulsorily.
iii. All Questions from Part B are to be answered with internal choice among them.

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PART-A

10 X 02 = 20 Marks

			Marks	CO	BL
1.	a	What are the Goals of Software Testing?	02	CO1	L1
	b	Differentiate Testing and Debugging	02	CO1	L2
	c	What is Transaction? What are the different tasks in Online Information retrieval system.	02	CO2	L1
	d	Explain Open and Closed Domains.	02	CO2	L2
	e	What are Decision tables? Give example.	02	CO3	L1
	f	Discuss Distributive Laws and Absorption Rule	02	CO3	L2
	g	What is Dead state?	02	CO4	L1
	h	What is State? Give examples for Improper States.	02	CO4	L1
	i	State the Basic Principles of Graph Matrix.	02	CO5	L2
	j	Explain Matrix Powers and Products.	02	CO5	L2

PART- B

5 X 10 = 50 Marks

			Marks	CO	BL
2.	a	With a Neat Diagram Explain Model for Testing	05	CO1	L2
	b	What are Structural Bugs? Explain	05	CO1	L2
		OR			
3	a	What is Control Flow graph? Explain each Element with Suitable Diagrams.	06	CO1	L2
	b	Explain Consequence of Bugs.	04	CO1	L2
4	a	Discuss the Complications in Transaction Flow Testing.	04	CO2	L6
	b	What is Data flow Graph? Discuss different Data Flow Anomalies.	06	CO2	L2
		OR			

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5	a	What is meant by Transaction Flow Testing? Discuss Transaction Flow Structure	05	CO2	
	b	Explain Nice and Ugly Domains?	05	CO2	L2
6	a	Explain Path Sums and Path Products with Examples	05	CO3	L2
	b	Decision Tables as a basis for Test Case Design. Discuss in Detail.	05	CO3	L6
		OR			
7	a	Explain Regular Expressions and Flow Anomaly Detection.	10	CO3 CO3	L2
8	a	Explain about Good State and Bad State Graphs.	05	CO4	L2
	b	What are the Principles of State Testing? Discuss Advantages and Disadvantages.	05	CO4	L2
		OR			
9	a	Explain Software implementation of State Graphs.	05	CO4	L2
	b	Draw State Graph that detects the Character Sequence "ZCZC" and Explain.	05	CO4	L2
10	a	Explain about Node Reduction Algorithm.	05	CO5	L2
	b	Explain the different Windows that are available in Win Runner and their usage in Testing Applications.	05	CO5	L2
		OR			
11	a	Write about Equivalence Relation and Partial Ordering Relation.	05	CO5	L2
	b	Can you provide an overview of the Features present in Jmeter Testing Environment?	05	CO5	L4

CO : Course Outcomes

BL : Bloom's Taxonomy Levels **L 1 : Remembering** **L 2 : Understanding** **L 3 : Applying** **L 4 : Analysing** **L 5 : Evaluating** **L 6 : Creating**

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Note

i. This Question paper contains Part- A and Part- B.
ii. All the Questions in Part A are to be answered compulsorily.
iii. All Questions from Part B are to be answered with internal choice among them.

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PART-A

10 X 02 = 20 Marks

			Marks	CO	BL
1.	a	What is testing?	2	CO1	1
	b	Contrast the modularity and efficiency?	2	CO1	2
	c	What is meant by transaction and give an example.	2	CO2	1
	d	Give an example for transaction flow.	2	CO2	1
	e	What is meant by path? Give example of it.	2	CO3	1
	f	Give an example for Structured flow graph Transformations	2	CO3	1
	g	What is state? Give an example.	2	CO4	1
	h	Give an example for State Table	2	CO4	1
	i	What is meant by Tool Building	2	CO5	1
	j	What is meant by Graph matrix	2	CO5	1

PART- B

5 X 10 = 50 Marks

			Marks	CO	BL
2.	a	Compare Testing and Debugging	5	CO1	2
	b	Describe the phases in the testers mental life	5	CO1	1
		OR			
3	a	Interpret the flow graph elements by using symbols.	5	CO1	2
	b	Describe the concept of path testing	5	CO1	2
4	a	Design the forgiving data flow anomaly state graph.	5	CO2	6
	b	Elaborate the strategies in data flow testing.	5	CO2	6
		OR			
5	a	Interpret the Nice and Ugly domains	5	CO2	2
	b	Demonstrate the testing of two-dimensional domains	5	CO2	2

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6	a	Infer the Maximum Path Count Arithmetic with an example	5	CO3	2
	b	Exemplify the Reduction procedure algorithm with an example.	5	CO3	2
		OR			
7	a	Write a short note on Regular expressions and Flow anomaly detection.	5	CO3	1
	b	Illustrate the Kv charts for the function of two variables	5	CO3	2
8	a	Outline the State Graphs	5	CO4	2
	b	Discuss the i)Equivalent states ii) Transition bugs	5	CO4	6
		OR			
9	a	Analyse the principles of state testing	5	CO4	4
	b	Assess the Limitations and Extensions of State testing	5	CO4	5
10	a	Identify the Problems with Pictorial Graphs, Give brief view on those.	5	CO5	2
	b	Inference the matrix of a graph along with example	5	CO5	2
		OR			
11	a	Infer the i)Symmetric relations ii) Asymmetric relations	5	CO5	2
	b	Outline the i)Equivalence relation ii)Partial ordering relation	5	CO5	2

CO : Course Outcomes

BL : Bloom's Taxonomy Levels **L 1 : Remembering** **L 2 : Understanding**

L 3 : Applying **L 4 : Analysing**

L 5 : Evaluating **L 6 : Creating**

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