R20 Regulation *Subject code: 3E7HF*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Regular Examinations, November 2023

SOFTWARE TESTING METHODOLOGIES

CSE (Data Science)

Maximum Marks: 70 Date:12.12.2023 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

	Part-A	
All the following questions carry equal marks	(10x2M=20 Marks)	Bloom Tx
1	Compare static testing and dynamic testing.	L3
2	Define debugging.	L1
3	List the various types of loops.	L1
4	Give an example of forgiving Data Flow anomaly state graph.	L3
5	List the uses of domain testing.	L1
6	How a nice domain differs from ugly domain?	L1
7	Write the limitations of path testing?	L1
8	State the use of regular expressions in software testing.	L1
9	Define good state and bad state graphs.	L1
10	Give examples for usage of node reduction algorithm.	L3
	Part-B	
Answer All the following questions	(5X10M=50Marks)	
11	a) List the elements of flow graph and explain each element with suitable diagram. [5] b) What is path testing? Give a note on path selection and predicates. [5]	L1 L3
	OR	
12	What is the purpose of the testing and add a note on the principles of test case design. [10]	L1
13	a) Explain data-flow testing with an example. Explain its generalizations and Limitations. [5] b) Explain the terms Dicing, Data-flow and Debugging. [5]	L2 L2
	OR	
14	Explain how transaction flow occurs. Illustrate with examples and add a note on Inspections, reviews and walkthroughs in ensuring error free transactions. [10]	L2
15	a) State and explain various restrictions at domain testing processes. [5] b) With a neat diagram, explain the schematic representation of domain testing. [5]	L1 L2
	OR	
16	Analyze the Interface testing, Interior Point, Boundary Point, Extreme Point & on-point. [10]	L4

17	Explain basic concept of path expression with examples. [10]	L2
	OR	
18	Give an account of the usage of regular expression in flow anomaly detection. [10]	L3
19	a) Elaborate node reduction algorithm with an example. [5] b) Explain good state graph with suitable example. [5]	L2 L2
	OR	
20	Explain state testing and software implementation issues in state testing in a detailed manner. [10]	L2