PAPER ID-311788

Subject Code: KCA024

Roll No: | | | | | | | | | | | | | |

MCA

(SEM III) THEORY EXAMINATION 2023-24

SOFTWARE TESTING & QUALITY ASSURANCE

TIME: 3HRS **M.MARKS: 100**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

Q no.	Question	Marks	CO
a.	Define Faults, Errors and Failures.	2	1
b.	Define any two limitations of testing	2	1
c.	Explain and name all portions/partitions are available in a decision table.	2	2
d.	For a function of 'n' variables, boundary value analysis generates _____ combinations	2	2
e.	Determine the role of risk matrix for the reduction of test cases?	2	3
f.	If parents are [10111111] and [01000000] and k = 5, generate the offspring's (children) after the application of crossover operator.	2	3
g.	Examine different popular debugging approaches. Which one is more popular & why.	2	4
h.	Outline the key areas for testing a web application.	2	4
i.	Summarize User Interface Testing Checklist.	2	5
j.	When we can assure about the quality of a software.	2	5

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

a.	Illustrate class testing in detail? How Object-Oriented Integration Testing is different from normal Integration testing.	10	1
b.	Classify Black-box testing and White-box testing in detail.	10	2
c.	Identify the reasons which are responsible for changes in the software. Comment on the statement "change is inevitable."	10	3
d.	Discuss various types of functional testing techniques? Explain any one with the help of a suitable example.	10	4
e.	What is Defect Injection and prevention?	10	5

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

a.	Write a program to login a web page. Can we test the program completely? If so, how many test cases are required? Assume that each test case can be executed and analyzed in one second; how long would it take to execute all test cases	10	1
b.	Discuss the relevance of SDLC with STLC and also establish the relationship between its development and testing parts.	10	1

4. Attempt any *one* part of the following: **10 x 1 = 10**

a.	Explain cause-effect graphing technique and basic notations used in a cause effect graph.	10	2

QP24DP2_290 | 22-03-2024 13:28:38 | 117.55.242.132

PAPER ID-311788

Roll No: | | | | | | | | | | | | | |

MCA
(SEM III) THEORY EXAMINATION 2023-24
SOFTWARE TESTING & QUALITY ASSURANCE

TIME: 3HRS **M.MARKS: 100**

b.	Consider a program for the determination of the largest amongst three numbers. Its input is a triple of positive integers (say x, y and z) and values are from interval [1, 300]. Design the robust test cases and worst-case test cases for this program.	10	2

5. Attempt any *one* part of the following: 10 x 1 = 10

a.	Illustrate the various steps of the regression testing process. Which step is the most Important and why?	10	3
b.	Determine the difference between general test case prioritization and version specific test case prioritization? Discuss any prioritization technique with the help of an example	10	3

6. Attempt any *one* part of the following: 10 x 1 = 10

a.	Examine the features of static and dynamic test data generation.	10	4
b.	Demonstrate 7 QC Tools.	10	4

7. Attempt any *one* part of the following: 10 x 1 = 10

a.	Differentiate between PSP and TSP?	10	5
b.	What is the difference between quality assurance, quality control and testing?	10	5

QP24DP2_290 | 22-03-2024 13:28:38 | 117.55.242.132

QP24DP2_290 | 22-03-2024 13:28:38 | 117.55.242.132