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|  | **BAHRIA UNIVERSITY, (Karachi Campus)**  *Department of Software Engineering*  **Quiz 1 - Spring 2023** |  |



COURSE TITLE: **SOFTWARE QUALITY ENGINEERING** COURSE CODE: **SEN-321**

Class: **BSE-6 (B)** Shift: **Morning**

Course Instructor: Sohaib ur RehmanTime Allowed:  **20 min.**

Date: 9th June 2023Max. Marks: **2.5 Marks**

**Question No. 1 [CLO4: 2.5 Marks]**

**Solve the following question with the help of the below data**

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| **S. No.** | **Testing Metric** | **Data retrieved during test case development & execution** |
| **1** | **No. of requirements** | 10 |
| **2** | **Avg. no. of test cases written per requirement** | 5 |
| **3** | **Total no. of test cases written for all requirements** | 45 |
| **4** | **Total no. of test cases executed** | 40 |
| **5** | **No. of test cases passed** | 25 |
| **6** | **No. of test cases failed** | 15 |
| **7** | **No. of test cases blocked** | 2 |
| **8** | **No. of test cases unexecuted** | 5 |
| **9** | **Total no. of defects identified** | 15 |
| **10** | **Critical defects count** | 5 |
| **11** | **High defects count** | 5 |
| **12** | **Medium defects count** | 3 |
| **13** | **Low defects counts** | 2 |

1. What is the percentage of test cases passed?
2. What is the percentage of test cases blocked?
3. What is the defect density?
4. What is the defect leakage?
5. What is the test case defect density?

**Solution:**

1. What is the percentage of test cases passed?

Percentage of test cases passed = (No. of test cases passed / Total no. of test cases executed) \* 100

= (25 / 40) \* 100

= 62.5%

Therefore, approximately 62.5% of the test cases were passed.

2. What is the percentage of test cases blocked?

Percentage of test cases blocked = (No. of test cases blocked / Total no. of test cases written) \* 100

= (2 / 45) \* 100

= 4.44%

Therefore, approximately 4.44% of the test cases were blocked.

3. What is the defect density?

Defect Density = (Total no. of defects identified / Total no. of test cases executed)

= 15 / 40

= 0.375 defects per test case executed

Therefore, the defect density is approximately 0.375 defects per test case executed.

4. What is the defect leakage?

Defect Leakage = (Total no. of defects identified outside test execution / Total no. of defects identified)

= (15 - 40) / 15

= -1.67 or -167%

The negative value indicates that more defects were identified outside of the test execution phase than within it. However, the percentage is not applicable in this case due to the negative value.

5. What is the test case defect density?

Test Case Defect Density = (Total no. of defects identified / Total no. of test cases written)

= 15 / 45

= 0.333 defects per test case written

Therefore, the test case defect density is approximately 0.333 defects per test case written.

Note: The answers provided above are based on the calculations using the given data. Make sure to double-check the calculations and provide appropriate units and precision when presenting the answers in your assignment.