**Birla Institute of Technology & Science, Pilani**

**Work Integrated Learning Programmes Division**

**Second Semester 2023-2024**

**Comprehensive Examination**

**(EC-3 Regular)**

Course No. : SE ZG501

Course Title : Software Quality Assurance and Testing

Nature of Exam : Open Book

Weightage : 40%

No. of Pages = 2

# No. of Questions = 2

Duration : 2 ½ Hours

Date of Exam : 17/05/2024 (AN)

Note to Students:

1. Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
2. All parts of a question should be answered consecutively. Each answer should start from a fresh page.
3. Assumptions made if any, should be stated clearly at the beginning of your answer.
4. Explain the similarities and differences between Walkthrough, Inspection and Audits. Explain in detail how each of these work. **Marks - 8**
5. What do you mean by Baseline. What is the significance of Baseline. When can a Baseline be created. How can Baseline be changed. **Marks - 6**
6. Give different branching strategies for Source code. Explain how these work, giving examples. In which scenario these strategies work well. **Marks – 6**
7. What do you mean by Alpha Testing, Beta Testing and Regression Testing. How can one choose Test Cases in Regression Test Pass. Explain in detail. (Give scenarios/examples when regression testing will be needed and how test cases can be chosen efficiently in each case)

**Marks – 6**

1. A product was tested for a period of 5 months (Assume all months have 30 Days). The total number of defects found were 120. Assume that product is live for 24 Hrs a day. On an average the time required to fix the defect was 20 Hrs. Find availability of the Product. What can be done to improve the availability by 20%. Assume that incoming bug rate cannot be changed since product is already delivered.

**Marks – 6**

1. In a train reservation system, the coach is given by two characters. A text box can take two characters as input such that
2. First Character can be F or S
3. Second character can be M or W
4. If First character is A, message displayed “First AC”.
5. If First character is B, message displayed “Second AC”.
6. If First character is not A or B, message displayed “General Coach”
7. If Second character is M, message displayed “Men”.
8. If Second character is W, message displayed “Women”.
9. If Second character is not M or W, message displayed “Both”.
10. Final Message will be combination of message based on First and Second character (First message followed by Second.

Use Decision Table technique so as to find the Test Cases for this problem. Give the message displayed for each Test Case.

**Marks – 8**