

**END TERM EXAMINATION - January-2023**

**SEMESTER -VII**

(B. Tech.)

Subject Code: CS4033

Subject: Software Testing

Duration: 3 hours

Max. Marks: 100

**Instructions**

- All Questions are compulsory
- The Question paper consists of 2 sections - Part A contains 10 questions of 2 marks each. Part B consists of 5 questions of 16 marks each.
- There is no overall choice. Only Part B question include internal choice.

**PART - A**

(2 \* 10 = 20 Marks)

1. Why software testing is important?
2. Explain the term functional and non-functional testing.
3. How to perform Risk Analysis?
4. What is Cyclomatic Complexity?
5. List the factors considered while requirements based prioritization.
6. Discuss at least two advantages and two disadvantages of unit testing.
7. List the process steps of Stress testing.
8. Discuss the concept of load testing?
9. Explain bug life cycle.
10. Discuss the benefits of static testing.

11. a) Discuss the steps process of software testing and also explain each one in detail.

**OR**

b) What is the difference between a Defect, Error, Failure, Fault, and Mistake?

12. a) Explain the concepts of White-Box and Black-Box testing and also explains their types.

**OR**

b) Next Date is a function of three variables: month, date and year. It returns the date of the day after the input date. The month, date and year variables have integer values subject to these conditions:

$C1 \ 1 \leq \text{month} \leq 12$ ,  $C2 \ 1 \leq \text{day} \leq 31$ ,  $C3 \ 1812 \leq \text{year} \leq 2012$

Generate the test case for Boundary Value Analysis and Robustness Testing.

13. a) Why regression testing is important in software's and how to perform it discuss?

**OR**

b) What are the main objectives of unit testing and also explain the types of unit testing?

14. a) Differences between Verification and Validation testing.

**OR**

b) Discuss Stress testing and its types in details.

15. a) Explain Static and Dynamic testing in detail, also discuss advantages and disadvantages for both.

**OR**

b) What are the major characteristics of testing modern tools and also discuss any two types of modern tools?