Register No.:　.................................. 　Name:　...

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SIXTH SEMESTER B.TECH DEGREE EXAMINATION (R), MAY 2024

(2020 SCHEME)

Course Code:　　**20CST382**

Course Name:　　**Introduction to Software Testing**

Max. Marks:　　**100**　　　　　　　　　　　　　　**Duration: 3 Hours**

PART A
(Answer all questions. Each question carries 3 marks)

1. Differentiate between software fault and software failure?
2. What are the levels of testing process?
3. Give an account of the functionalities of a test driver and stub?
4. What is mutation testing?
5. Differentiate node coverage and edge coverage.
6. Define touring, side trips and detours.
7. Write a short note on input space partitioning?
8. List out the four key concepts of functional testing?
9. What is grey box testing? What are its advantages?
10. Briefly explain is regression testing?

PART B
(Answer one full question from each module, each question carries 14marks)

MODULE I

11. a) Differentiate between verification and validation. (6)
    b) Explain the following types of testing. i)Unit testing ii) Integration testing iii)System testing iv) Acceptance testing (8)

OR

12. a) Differentiate between black box and white box testing. (6)
    b) What is a test case? Write test cases for an ATM Machine? (8)

MODULE II

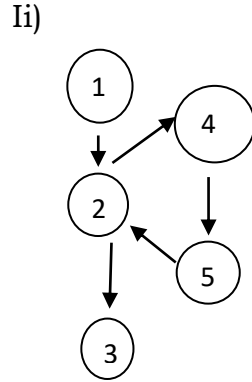13. Explain static unit testing and dynamic unit testing in detail? (14)
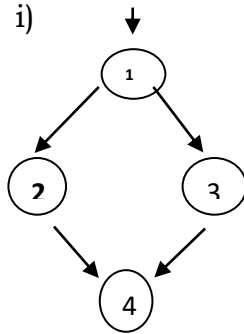
OR

14. a) Explain JUnit test framework? (6)
    b) Explain the concept of control flow testing? (8)

MODULE III

15. a) Draw the CFG for i) if else ii) while iii) for iv)do while   (8)
    b) Explain the concept of i)call graph ii)inheritance testing   (6)

OR

16. a) Explain the Data flow graph coverage?   (8)
    b) Explain the prime path coverage for the following CFG's.

    i)   Ii)

                                                                                     (6)

MODULE IV

17. a) What are the different approaches of input domain modeling?   (8)
    b) Explain the following terms.
        i)   All combinations coverage
        ii) Each choice coverage   (6)
        iii) Pair wise coverage

OR

18. Explain the different types of functional testing?   (14)

MODULE V

19. Explain the various techniques of grey box testing?   (14)

OR

20. a) Explain the concept of Symbolic execution?   (6)
    b) Explain parameterized unit testing?   (8)

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