Question Paper Code: 99812

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Professional Elective

Computer Science and Engineering

19UIT912- SOFTWARE TESTING

(Regulations 2019)

Duration: Three hours   Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1. What are the factors for determining the limit of testing?   CO1 - U

2. What is the need for verification & validation?   CO1 - U

3. How many test cases are there in BVC if there are 5 variables in a module?   CO2 - App

4. What is the significance of cyclomatic complexity?   CO1 - U

5. What is the difference between alpha & beta testing?   CO1 - U

6   What are the difficulties occur in retesting?   CO1 - U

7   What are the benefits of measurement in software testing?   CO1 - U

8   Consider a project with the following distribution of data and calculate its   CO2 - App
    defect spoilage.

SDLC Phase	No. of defects	Defect age
Requirement specs	34	2
HLD	25	4
LLD	17	5
Coding	10	6

9   List out the requirements for a selecting a test tool.   CO1 - U

10 How verification can be performed using test automation tools?   CO1 - U

PART – B (5 x 16= 80 Marks)

11. (a) Explain the different stages of STLC?   CO1 - U   (16)

	(b)	What is the difference between a) Verification & Validation (4) b) Static & Dynamic hashing (4) c) Black box & White box testing (4) d) Manual & Automated testing (4)	CO1 - U	(16)

12. (a) A program reads an integer member within the range [1,100] & CO2- App   (16)
determines whether it is a prime number or not. Design test cases
for this program using BVC, robust& worst case testing methods.

    (b) A Program reads three numbers A, B and C within the range CO2-App   (16)
[1:50] and prints the largest number. Design test cases for this
program using BVC and robust testing methods.

13. (a) Explain in detail about top-down and bottom-up testing. CO1 - U   (16)

    (b) Define the following with problem : CO1 - U   (16)
        a) Regression test selection problem
        b) Coverage identification problem
        c) Test suite execution problem
        d) Test suite maintenance problem

14. (a) Suppose you are working in the testing group of a company. CO1 - U   (16)
Identify your role in the testing group hierarchy. What are the
major duties performed by you there?

                                Or

    (b) What is meant by testing group hierarchy? Explain the role of CO1 - U   (16)
each member in this hierarchy.

15. (a) Assume you are working in an on-line fast food restaurant CO2-App   (16)
system. The system reads customer orders. Relays orders to the
kitchen, calculates the customer's bill and give change. It also
maintains inventory information. Each wait person has a terminal.
Only authorized wait persons and a system administrator can
access the system. Describe the tests that are suitable to the test
the application.

    (b) Is a Single testing tool sufficient for all testing activities? Justify. CO2-App   (16)

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