Reg. No. :

Question Paper Code: 99812

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Elective

Information technology

19UIT912- SOFTWARE TESTING

(Regulations 2019)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Differentiate Validation from Verification.   CO1-U

2. List out the activities performed by a tester at the time of development of a   CO1-U
    project.

3. What is cyclomatic complexity?   CO1-U

4. A program computes ab where a lies in the range [1, 10] and b within [1, 5].   CO2- App
    Design the test case using BVC method.

5. What is driver module in unit testing?   CO1-U

6. Define integration testing and its types   CO1-U

7. Suppose you are working in the testing group of a company. Identify your role   CO2- App
    in the testing group hierarchy. What are the major duties performed by you
    there?

8. In a module implementation of a project, there are 17 unique operators, 12   CO2- App
    unique operands, 45 total operators, and 32 total operands appearing in the
    module implementation. Calculate its Halstead effort.

9. Mention the criteria for selecting test tool.   CO1-U

10. List the different types of metrics.   CO1-U

PART – B (5 x 16= 80 Marks)

11. (a) Illustrate with neat diagram for Software Testing Methodology.   CO1- U   (16)

Or

(b) Illustrate the verification and validation activities in software testing with neat diagram. CO1- U (16)

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

Or

(b) A program calculates the total salary of an employee with the conditions that if the working hours are less than or equal to 48, then give normal salary. The hours over 48 on normal working days are calculated at the rate of 1.25 of the salary. However, on holidays or Sundays, the hours are calculated at the rate of 2.00 times of the salary. Design test cases using decision table testing and explain in detail. CO2- App (16)

13. (a) Write the unit test case procedure for below bank application UI design and explain in detail.
Note: FAN - From account number and TAN – To account number. CO2- App (16)

Or

(b) Write the Integration test case procedure for below gmail application UI design and explain in detail. CO2- App (16)

14. (a) Suppose you are developing an online system for a specific vendor   CO2- App   (16) of electronic equipment with all the necessary features to run the shop. Write down a detailed test plan by including the necessary components.

<div align="center">Or</div>

  (b) Assume you are working in an on-line fast food restaurant system.   CO2- App   (16) The system reads customers' orders, relays orders to the kitchen, calculates the customer's bill and gives change. Write down a detailed test report by including the necessary components.

15. (a) Discuss the challenges in automation and Requirements for a Test   CO1- U   (16) Tool.

<div align="center">Or</div>

  (b) What are metrics and measurements? Illustrate the types of   CO1- U   (16) product metrics.

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