C 60103 (Pages : 3) Name...................................

Reg. No...............................

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2019

(CUCBCSS)

BCA

BCA 6B 18 (E3)—SOFTWARE TESTING AND QUALITY ASSURANCE

Time : Three Hours Maximum : 80 Marks

Part A

*Answer **all** questions.*

Each question carries 1 mark.

1. A system test should not be performed by ————.

2. Acceptance testing must occur at the ———— of the development process.

3. Black-box testing is a ————.

4. Which testing is the re-execution of some subset of tests that have already been conducted.

5. Testing based on the functionality of program is known as ————.

6. Regression testing is helpful in ————.

    (a) Detecting bugs.

    (b) Detecting undesirable side effects by changing the operating environment.

    (c) Integration testing.

    (d) All of the above.

7. Before we validate the entire software, ———— must be validated.

    (a) Modules.   (b) System.

    (c) Unit tests.   (d) All of the above.

8. Testing is the process of ———— errors.

    (a) Hiding.   (b) Finding.

    (c) Removing.   (d) None.

9. One fault may lead to :

    (a) One failure.   (b) No failure.

    (c) Many failures.   (d) All of the above.

10. Which of the following is true ?

    (a) Testing is performed after coding.

    (b) Testing is performed after the integration of modules.

    (c) Testing starts as soon as the SRS prepared.

    (d) None of the above.

$(10 \times 1 = 10$ marks)

Part B

Answer all questions.
Each question carries 2 marks.

11. What is the need of validation ?

12. Define regression testing problem.

13. What is the purpose of integration testing ?

14. Explain factors of performance testing.

15. Explain how to do acceptance testing ?

$(5 \times 2 = 10$ marks)

Part C

Answer any five questions.
Each question carries 4 marks.

16. Evaluate the benefits of verification in a project.

17. What is the need for minimizing the test cases in a project ?

18. What is the difference between alpha and beta testing ?

19. Explain different types of functional testing.

20. Explain the categories of test metrics.

21. Explain functional versus non-functional testing.

22. Define process for performance testing.

23. Write short notes on :

    (a) Project Metrics.   (b) Productivity Metrics.

    (c) Progress Metrics.   (d) Release Metrics.

$(5 \times 4 = 20$ marks)

Part D

Answer any **five** *questions.*

Each question carries 8 marks.

24. What is the difference between function testing and system testing ?

25. Discuss Black-box testing.

26. Explain regression testing and types of regression testing.

27. What is the difference between ?

      (a) Verification and Validation.

      (b) Static and Dynamic testing.

28. Explain how to do an acceptance testing, what is its use ?

29. Explain test metrics and measurements.

30. Explain life cycle models and its different phases.

31. What is top-down integration ? Explain steps for top-down integration.

$(5 \times 8 = 40$ marks)