Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   **Total No. of Pages :02**

Total No. of Questions :18

B.Tech.(CSE/IT) (2012to 2017 E-II) (Sem.–7)
SOFTWARE TESTING AND QUALITY ASSURANCE
Subject Code :BTCS-905
M.Code :71897

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Answer briefly :

1. What is software testability?

2. What is unit testing? Explain.

3. What are the software quality assurance metrics?

4. What do you mean by Software Validation?

5. What is data-flow testing? Explain.

6. How is beta testing useful?

7. List the various testing techniques.

8. Define Random Testing.

9. What are the issues in object-oriented testing?

10. Discuss the steps used for testing real time systems.

SECTION-B

11. Discuss the benefits of validation and verification in a project.

12. Why do we need integration testing? Explain various approaches in integration testing.

13. Discuss the random and partition testing for classes.

14. Distinguish between alpha and beta testing. How are test cases designed for these tests? Are the test cases for these types of tests necessarily identical? Explain your answer.

15. Describe the major software quality assurance activity and indicate their importance.

SECTION-C

16. Differentiate between following:

    a) Equivalence partitioning and Boundary value analysis methods   3

    b) Verification and Validation   3

    c) White-Box and Black-Box Testing   4

17. What do you mean by ISO quality models? Explain SEJ-CMM and ISO 9000 certification. Also explain their relevance in detail.   10

18. a) What is object-oriented testing? Explain the various object-oriented testing strategies and issues in detail.   5

    b) Discuss the Design Phase and Program Phase testing.   5

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.