



Sixth Semester B.E. Degree Examination, Dec.2024/Jan.2025
Software Testing

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is the necessity of software Testing? Which are the two fundamental approaches used to identify test cases. (10 Marks)
 b. Define the terms : i) Error ii) Fault iii) Failure iv) Incident v) Test case. (10 Marks)

OR

- 2 a. Explain structured implementation of a triangle problem with a neat dataflow diagrams. (10 Marks)
 b. With a neat diagram, explain currency converter system and Saturn windshield wiper. (10 Marks)

Module-2

- 3 a. Explain Boundary value Analysis, what are the limitations of BVA. Derive testcases for triangle problem using BVA. (10 Marks)
 b. Describe Weak Normal, Strong Normal, Weak Robust and Strong Robust equivalence class testing in detail. (10 Marks)

OR

- 4 a. Write a note on : i) Fault – Based Testing ii) Mutation analysis. (10 Marks)
 b. Briefly explain decision table approach. Derive the testcases for triangle problem using decision table approach. (10 Marks)

Module-3

- 5 a. Explain the following :
 i) Data flow testing ii) Scaffolding iii) Define use testing iv) Path testing v) Test oracles. (10 Marks)
 b. Define program graph? Draw program graph for the commission program and discuss the same in detail. (10 Marks)

OR

- 6 a. What is DD – Path? Explain basis-path testing with suitable example. (10 Marks)
 b. Write a note on : i) Statement Testing ii) Slice based Testing. (10 Marks)

Module-4

- 7 a. Explain any five principles of software testing. (10 Marks)
 b. Discuss on dependability properties. (10 Marks)

OR

- 8 a. Write a note on : i) Risk planning ii) Planning and Monitoring the process iii) Analysis Testing iv) Improving the process. (10 Marks)

- b. With a neat diagram, explain clean room process model and software reliability engineered testing (SRET). (10 Marks)

Module-5

- 9 a. Explain integration testing strategies along with different integration faults. (10 Marks)
 b. Write a note on :
 i) system testing ii) Usability iii) Acceptance testing iv) Regression testing (10 Marks)
- 10 a. Explain code based regression test selection and control flow and data flow regression test selection. (10 Marks)
 b. Discuss traditional view of testing levels and alternative life cycle models. (10 Marks)
