Sixth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Software Testing

Time: 3 hrs. Max. Marks: 80

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

Module-1

1 a. What is software testing? Differentiate between functional testing and structural testing. **(06 Marks)**

b. Explain the triangle problem statement along with flowchart for traditional implementation. **(07 Marks)**

c. Explain several measures of software quality. **(03 Marks)**

OR

2 a. Define the terms : (i) error (ii) fault (iii) failure (iv) incident (v) test case **(05 Marks)**

b. With a neat diagram, explain the currency converter system. **(05 Marks)**

c. With a neat diagram, summarise several strategies for test generation. **(06 Marks)**

Module-2

3 a. Explain boundary value analysis and write the test cases using boundary value analysis testing for triangle problem. **(07 Marks)**

b. Write a short note on decision table with an example. **(05 Marks)**

c. Explain overview of assumptions in fault-based testing. **(04 Marks)**

OR

4 a. Explain weak normal, weak robust and strong robust equivalence class testing with next-date problem as an example. **(08 Marks)**

b. What are the limitations of boundary value analysis? **(04 Marks)**

c. Explain variations on mutation analysis. **(04 Marks)**

Module-3

5 a. Define DD-path. Draw DD-graph for triangle problem. **(04 Marks)**

b. Explain metric based testing. **(08 Marks)**

c. What is scaffolding? Explain. **(04 Marks)**

OR

6 a. What is cyclomatic complexity? Explain McCale's basis path method. **(06 Marks)**

b. Write a note on define/use testing. **(05 Marks)**

c. Explain: (i) Test oracles (ii) Capture and Replay **(05 Marks)**

Module-4

7 a. Write six principles which constitute the core of software testing. **(06 Marks)**

b. What are processed quality and analysis strategies in a brief note? **(06 Marks)**

c. Explain the features of test design specification documents. **(04 Marks)**

OR

8 a. Explain: (i) Risk planning (ii) Organizing documents (iii) Monitoring the process (iv) Test and analysis - Report. **(10 Marks)**

b. Briefly discuss the dependability properties in process framework. **(06 Marks)**

Module-5

9 a. Explain integration testing strategies. **(08 Marks)**

b. Draw the context diagram of the SATM system and explain the same. **(08 Marks)**

OR

10 a. Briefly describe about : (i) System testing (ii) Acceptance testing. **(06 Marks)**

b. Explain traditional view of testing levels, alternatives life-cycle models. **(10 Marks)**