Sixth Semester B.E. Degree Examination, June/July 2019
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? Why it is so important in SDLC life cycle. **(03 Marks)**
b. Explain the portrays of software testing life cycle. **(05 marks)**
c. List six types of faults and explain each with example. **(08 Marks)**

OR

2 a. Identify problem statement for a triangle with flowchart for traditional implementation. **(08 Marks)**
b. Describe the GUI application currency converter and embedded device Satrun wind shield wiper with diagram. **(08 Marks)**

Module-2

3 a. Explain the boundary value analysis and BVA robust in detail with function of two variables and show how to prepare test input sets. **(08 Marks)**
b. What is mutation? Explain variation on mutation in detail. **(08 Marks)**

OR

4 a. Explain different types of equivalence class testing in detail. **(08 marks)**
b. What is fault based testing? Define below with respect to fault based–testing :
i) Original Program ii) Program Location
iii) Alternate Expression iv) Alternate Program. **(08 Marks)**

Module-3

5 a. What is program graph? Draw program graph for triangle pseudocode. **(08 marks)**
b. Explain test execution technique test oracle in detail with neat diagram. **(08 Marks)**

OR

6 a. Illustrate structural testing with diagram. How to identify DD paths in the program graph? Explain with example. **(08 Marks)**
b. What is scaffolding? Explain application specific scaffolding capture and replay test execution techniques. **(08 Marks)**

Module-4

7 a. Explain any four basic principles in detail. **(08 marks)**
b. Explain the dependability properties. **(04 marks)**
c. Explain improving the process. **(04 Marks)**

OR

8 a. Write a short note on :
i) Quality process
ii) Planning and monitoring process
iii) Quality goals
iv) Risk planning. **(08 Marks)**

b. Explain clean room process model and software reliability engineered testing (SRET) approach. **(08 Marks)**

Module-5

9 a. With a neat diagram, explain alternate life cycle – specification based model in detail. **(08 Marks)**

b. In brief explain :
i) Unit testing
ii) System testing
iii) Acceptance testing
iv) Usability testing. **(08 Marks)**

OR

10 a. Explain the call graph–based integration with the help of :
i) Pair–wise integration
ii) Neighborhood integration. **(08 Marks)**

b. What is regression testing? Explain code–based regression test selection and control–flow and data flow regression test selection. **(08 Marks)**