21IS63

(10 Marks)

## Sixth Semester B.E. Degree Examination, June/July 2024 Software Testing

Max. Marks: 100 Note: Answer any FIVE full questions, choosing ONE full question from each module. Module-1 What is Software Testing? Differentiate between functional testing and structural testing 1 with an example. b. Demonstrate the triangle problem statement along with a flowchart for traditional implementation. (10 Marks) OR 2 With a neat diagram, explain the SATM. (10 Marks) Classify the types of faults and explain each with an example. b. (10 Marks) Module-2 3 Examine boundary value analysis with the test cases using a triangle problem. a. (10 Marks) Examine the equivalence class testing. Examine the equivalence class test cases for the nextnate function. (10 Marks) What are the limitations of boundary value analysis and examine the test cases using boundary value analysis testing for commission problem. (10 Marks) b. Explain the format of the decision table. Build a decision table for a simple version of the triangle problem. (10 Marks) Define a program graph. Draw a program graph of the commission problem. 5 (10 Marks) Define DD-path. Explain basis path testing with a suitable example. (10 Marks) OR a. Define predicate node, du-paths, dc-path. Give du-path for lock, stock and sales for commission problem. (10 Marks) b. Explain slice-based testing with an example. (10 Marks) Module-4 Examine the traditional view of testing levels, alternate life cycle model. (10 Marks) Compare top-down and bottom-up integration strategies. (10 Marks) OR Formulate call graph based integration with the help of : i) Pairwise Integration 8

Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8=50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. 2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50. will be

Define the SAJM system. Demonstrate the entity/relationship model of the SATM system.

ii) Neighborhood integration.

## Module-5

9 a. Explain the basic concepts of requirement specification.

(10 Marks)

b. Define the process of ASF testing and illustrate it with an example using the next date function.

(10 Marks)

## OR

10 a. Describe the context of interaction in software testing.

(10 Marks)

b. What is the taxonomy of interaction? Explain the static interaction in a single process.

(10 Marks)