CBCS SCHEME

USN | | | | | | | | | | 15IS63

Sixth Semester B.E. Degree Examination, Aug./Sept.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? Why it is so important in SDLC? **(08 Marks)**
b. Explain error and fault taxonomies. **(05 Marks)**
c. Briefly explain testing using Venn Diagram. **(03 Marks)**

OR

2 a. Explain the two fundamental approaches used to identify test cases. **(06 Marks)**
b. Explain various Test Metrics that exists in software testing. **(06 Marks)**
c. Explain with a neat diagram Saturn wind shield wiper controller. **(04 Marks)**

Module-2

3 a. Explain the usage of Boundary value analysis for a function of two variables and highlight the limitations of Boundary value analysis. **(08 Marks)**
b. Explain weak normal, weak robust, strong normal and strong robust equivalent class testing, considering example of next date problem. **(08 Marks)**

OR

4 a. Explain decision table and its technique to solve commission problem. **(06 Marks)**
b. What is fault based testing? Explain the assumptions of fault based testing. **(06 Marks)**
c. Explain terminologies of mutation based testing. **(04 Marks)**

Module-3

5 a. Explain: i) Statement testing ii) Branch testing iii) Path testing. **(06 Marks)**
b. Define predicate node, du-paths and dc-paths. Give du-paths for lock, stock, total barrel, sales and commission for commission problem. **(10 Marks)**

OR

6 a. Explain slice based testing with an example. **(06 Marks)**
b. What is scaffolding? Explain the purpose of scaffolding. **(04 Marks)**
c. What is test Oracle? With a neat diagram explain self-check oracle. **(06 Marks)**

Module-4

7 a. List and explain 6 principles of analysis and testing. **(07 Marks)**
b. Briefly discuss dependable properties with a neat diagram in process framework. **(09 Marks)**

OR

8 a. Discuss basic elements of analysis and test plan. **(08 Marks)**
b. Explain clean-room process with a neat diagram. **(08 Marks)**

Module-5

9 a. Explain alternative life-cycle model. **(08 Marks)**
b. Describe Top-down and Bottom-up Integration strategies. **(08 Marks)**

OR

10 a. Explain call graph based integration with the help of
i) Pairwise Integration ii) Neighbourhood Integration **(10 Marks)**
b. Define Regression and Progression testing. **(06 Marks)**

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