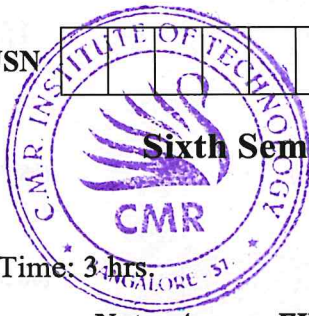


# CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

15IS63



Sixth Semester B.E. Degree Examination, Jan./Feb. 2021

## Software Testing

Time: 3 hrs

Max. Marks: 80

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

### Module-1

- 1 a. Discuss the quality attributes briefly associate with software quality. (08 Marks)
- b. Explain types of test metrics used in software testing and their relationships. (08 Marks)

OR

- 2 a. How we can identify test case using functional and structural testing? Also explain their differences. (08 Marks)
- b. State and explain the next date function with a generalized pseudocode. (06 Marks)
- c. Explain Saturn windshield wiper controller. (02 Marks)

### Module-2

- 3 a. Explain the usage of boundary value analysis with a function of 2 variables. Also explain robust and worst case boundary value testing. (08 Marks)
- b. Explain the concept of equivalence class analysis and its types. (08 Marks)

OR

- 4 a. What is fault based testing? Explain its terminologies. (06 Marks)
- b. Explain mutation analysis terminologies and write a sample set and mutation operators. (07 Marks)
- c. Explain variations in mutation analysis. (03 Marks)

### Module-3

- 5 a. Explain statement and block coverage testing with an example using a simple program. (08 Marks)
- b. Explain McCabe's basis path method and essential complexity by using saturated programming constructs. (08 Marks)

OR

- 6 a. What is data flow testing? Define all the definitions involved in data flow testing. (08 Marks)
- b. Write a short note on the following : i) Scaffolding ii) Test oracles. (08 Marks)

### Module-4

- 7 a. List and explain basic principles of analysis and testing. (10 Marks)
- b. Explain briefly dependability properties and relationship among them. (06 Marks)

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 treated as malpractice.

OR

- 8 a. Explain risk planning and risk management in quality planning. (08 Marks)  
b. Write a short note on the following :  
i) Organizing documents (08 Marks)  
ii) Test design specification documents.

**Module-5**

- 9 a. Explain integration testing strategies. (08 Marks)  
b. Explain the following :  
i) System testing and acceptance testing (08 Marks)  
ii) Regression testing.

OR

- 10 a. With a neat diagram, explain the traditional view of testing levels of waterfall life cycle and rapid prototyping life cycle. (08 Marks)  
b. With an example, explain top-down and bottom-up integration testing. (08 Marks)

\*\*\*\*\*