

(2½ Hours)

[Total Marks: 75]

- N. B.: (1) All questions are compulsory.  
 (2) Make suitable assumptions wherever necessary and state the assumptions made.  
 (3) Answers to the same question must be written together.  
 (4) Numbers to the right indicate marks.  
 (5) Draw neat labeled diagrams wherever necessary.  
 (6) Use of Non-programmable calculators is allowed.

**1. Attempt any three of the following:**

15

- What is quality? Explain its core component.
- Differentiate between tools and techniques.
- Explain continual (continuous) improvement cycle.
- List and explain any five requirements of a product.
- Explain types of products based on criticality to the users.
- List and explain any five quality principles of Total Quality Management.

**2. Attempt any three of the following:**

15

- Explain salient features of good testing.
- Differentiate between verification and validation.
- List and explain any two approaches of software testing team with its advantages and disadvantages.
- What is test strategy? Explain different stages involve in process of developing test strategy.
- Explain gray box testing with its advantages and disadvantages.
- List and explain different testing skills required by tester.

**3. Attempt any three of the following:**

15

- What are cause-effect graphs? Explain with the help of an example.
- Define equivalence class. Explain systematic approaches for selecting equivalence classes.
- What is boundary value testing? Explain robust boundary value testing.
- Explain slice-based testing with an example.
- Explain DD-paths and basis path testing.
- Write a note on decision table technique.

**4. Attempt any three of the following:**

15

- Explain the concept of workbench.
- List all the methods of verification. Explain all.
- Discuss different types of reviews in verification.
- Explain V model for software.
- Describe V & V activities during designs.
- Explain different roles and responsibilities of development group.

**5. Attempt any three of the following:**

15

- Explain the characteristic of design testing.
- Discuss Bottom up and top down testing with an example.
- What is acceptance testing? Explain different forms of it.
- Explain GUI testing with its advantages and disadvantages.
- Write a short note on smoke testing.
- Explain compatibility testing in details.