

(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**

- Define the term quality and elaborate different views on quality.
- Explain the lifecycle of quality improvements
- What are the quality principles of Total Quality Management (TQM)?
- Explain the structure of quality management system.
- How the quality and productivity are related with each other?
- Write a short note on continual improvement cycle.

2. Attempt any three of the following:**15**

- Explain the lifecycle of software testing.
- Write a note on requirement traceability matrix.
- State and explain any 5 principles of software testing.
- Explain the relationship between error, defect and failure with a proper example.
- Discuss the challenges in software testing.
- Describe the structure of a testing team.

3. Attempt any three of the following:**15**

- Explain boundary value testing and its guidelines.
- Write a note on improved equivalence class testing.
- Describe the decision table testing technique in detail.
- Write a note on DD path testing.
- Explain the concept and significance of cause and effect graphing technique.
- Compare weak robust and strong robust equivalence class testing.

4. Attempt any three of the following:**15**

- Explain different methods of verification.
- Explain the steps involved in management of verification and validation.
- Describe the benefits of review technique.
- List and explain how the formal review is carried out.
- Explain the VV model of testing.
- What are the roles and responsibilities of a reviewer

5. Attempt any three of the following:**15**

- What is integration testing? Explain the Big bang approach.
- What is the need of a Security Testing?
- What is performance testing? List different types of performance testing.
- Explain the concept of inter system testing and its Importance.
- Explain the significance of Usability testing.
- Explain Commercial off-the-shelf software testing.