TIME: 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
 a. List out the different stakeholders w.r.t. quality view. Write a short note on supplier's view of quality.
 b. Write in detail about user's gap and producer's gap.
 c. Write a comparative note on continuous and continual improvement and also quote PDCA life cycle.
 d. Write a short note on financial aspect of quality.
 e. Define : (i) vision (ii) mission (iii) policy (iv) objectives (v) strategy
 f. Explain the quality management system structure (temple structure).

2. Attempt *any three* of the following: 15
 a. Write a short note on TQM cost triangle and also define Red, Blue and Green money.
 b. Write a short note on Requirement Traceability Matrix.
 c. What is Workbench? Write in detail about Tester's workbench using a suitable block diagram.
 d. What is the formula to measure test team efficiency? Explain the reasons for deviation of test team efficiency from 100%.
 e. Briefly write about the testing skills required by a tester.
 f. Write any two advantages and any two disadvantages for each of the below scenarios:
  (i) Developers becoming testers
  (ii) Domain experts doing software testing.

3. Attempt *any three* of the following: 15
 a. Explain Boundary Value Testing using suitable example.
 b. Explain Decision Table – based testing using a suitable example.
 c. Define: (i) Robust boundary value testing (ii) Worst case boundary value (iii) Random testing (iv) Traditional equivalence class testing.
 d. What is a DD-Path? Quote the five cases of nodes in a program graph using a suitable example.
 e. Write a short note on Cyclomatic complexity and McCabe's basis path method using a suitable example.
 f. Define: (i) Def. node (ii) Use node (iii) P-use node (iv) du-path (v) dc-path

4. **Attempt _any three_ of the following:** 15
   a. Write about the different types of reviews on the basis of stage/phase.
   b. List and explain different methods of verification.
   c. Write about the different phases of inspection.
   d. Discuss testing procedures during the requirements phase.
   e. In the design phase testing what are the aspects to be checked? Briefly explain.
   f. Write a short note on coverages w.r.t requirements, functionality and feature.

5. **Attempt _any three_ of the following:** 15
   a. Write about the below in integration testing:
      (i) Bottom-up approach
      (ii) Modified top-down approach
      (iii) Sandwich approach
   b. Write a short note on security testing.
   c. Write about performance testing, volume testing and stress testing.
   d. Define : (i) Smoke testing (ii) Sanity testing (iii) Monkey testing
   e. List out all the risks associated with new technologies.
   f. Write about the testing approach of web application

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