

Assignment IA 1- (Marks 15) To be submitted by 29th Jan, 2024

Note – Answer five questions from each Unit. In total answer fifteen questions. Make a pdf and upload on classroom.

Unit-1

1. What is quality? Definitions of quality from different perspectives- customer based, Manufacturing based, product based, value based. (Topic 1.3)
2. Continuous and continual improvement process.
3. Different Quality View's- (Topic 1.6)
 - a. Customer's view of quality
 - b. Supplier's view of quality
 - c. User's gap / Requirements Gap
4. Financial aspects of quality - (Topic 1.7)
 - a. Cost of manufacturing Cost of Quality -
 - i. Cost of prevention - Green Money,
 - ii. Cost of Appraisal - Blue Money and
 - iii. Cost of failure - Red Money
5. Principles of TQM - Total Quality MAnagement (Topic 1.11)
6. PDCA Cycle (Topic Topic 1.14)
7. Requirements of a Product (Topic 2.5)
 - a. Stated/Implied
 - b. General/Specific
 - c. Present/ Future
 - d. Must/Must Not
 - e. Should be/ Should not be
 - f. Could be/ could not be
8. Quality culture in 'Q' and 'q' organizations.
9. S/w Development Process
 - a. Waterfall
 - b. Iterative
 - c. Spiral
 - d. Prototype
 - e. Agile etc...
10. Problematic areas of software development life cycle. (Topics 2.11)
11. Relationship between Vision, Mission, Policies, Objectives, strategies , goal and values (topic- 2.14)
12. Explain generic Quality Management System Structure. (topic - 2.15)
13. Pillars of Quality Management System (topic - 2.16)
14. What problems are posed by the requirement stage?
15. Characteristics of good requirements.

Unit-2

1. Historical perspective of testing-

- a. Debugging oriented testing
 - b. Demonstration -oriented testing
 - c. Destruction oriented testing
 - d. Evaluation oriented testing
 - e. Prevention oriented testing
2. Approaches of testing- (topic 3.4)
 - a. Big Bang approach of testing
 - b. TQM as against Big Bang
3. TQM - Cost perspective (topic 3.4.4)
4. Characteristics of Big-Bang Approach (3.4.5)
5. What is testing? Managers view of S/W testing, tester's view of S/W testing, Customers view of s/w testing
6. Testing during development life cycle.(3.6)
 - a. Requirement testing
 - b. Design testing
 - c. Code testing
7. Requirement traceability matrix (Advantage and disadvantage)(topic- 3.7)
 - a. Horizontal traceability ,
 - b. Bidirectional traceability
 - c. Vertical traceability
8. Work bench (topic- 3.9)
 - a. Tester's workbench (topic- 3.9.1)
9. Principles of S/W testing (3.12)
10. Salient features of good testing (3.13)
11. Verification and validation (table 3.4)
12. Testing process and no of defects found in testing (topic- 3.17)
13. Test Team efficiency (topic - 3.18)
14. Mutation Testing(3.19)
15. Reasons for deviation of test team efficiency from 100% (3.19.1)
16. Test team approach(3.21)
 - a. Independent test team
 - b. Test team reporting to development managers
 - c. Domain experts doing testing
17. Cost aspect of testing(topic 3.23)
18. Categories of defects. (3.27)
19. Test methodologies /Approaches (topic- 3.33)
 - a. Black BOx
 - b. White Box
20. Skill required for tester. (topic - 3.36)

Unit-3

1. Boundary Value TEsting for a function of 2 variables
 - a. Normal Boundary Value
 - b. Robust Boundary Value

- c. Worst-case Boundary value
 - d. Robust worst-case boundary value
- 2. Examples of BVA-given in manual testing and PPT. For example -triangle problem, next date problem etc..
- 3. Equivalence class testing -with example
 - a. Weak normal
 - b. Strong normal
 - c. Weak Robust
 - d. Strong Robust
- 4. Single fault / multi fault assumption
- 5. Decision table concept and examples
- 6. Path testing concepts and examples
- 7. Cyclomatic complexity, and flow graph
- 8. All the problems given in assignments