IT6004 – SOFTWARE TESTING

S.No **QUESTION BANK**

UNIT -1

2 MARK QUESTIONS

1. **Differentiate** verification and validation.
2. **Define** software process.
3. **Discuss** the role of process in software quality.
4. **List** the people who are associated with testing.
5. **Give** the information about the test case .
6. How would you **classify** the types in defect classes?
7. How would you **classify** different levels in TMM? Also mention the key activities in each of the levels.
8. **Summarize** the major components in software development process.
9. **Define** fault and failure.
10. **compare** the process of testing and debugging.
11. **List** the objective of software testing and write its scope.
12. Compare activities, tasks and responsibilities (ATR). How this three are **integrated**?
13. **Describe** how the fault manifest itself as a failure?
14. **Tell** about test, test Oracle and Test Bed.
15. Identify and **Classify** the Quality Attribute.
16. **Discuss** about the approach tester support of developing a defect repository.
17. Can you **Classify** defect prevention strategies?
18. How would **formulate** the cost of defect ?
19. **Pointou**t the role of defect Repository.
20. **Predict** the approaches a tester should use to design effective test cases.

16 MARK QUESTIONS:

1 (i) **Explain** in detail about defect repository.(8)

(ii) **Analyse** tester's role in software development organization.(8)

2 (i) Compare and **contrast** terms errors, faults and failures using suitable examples(8)

(ii) **Discuss** about the different phases in testers mental model. (8)

3 (i) Discuss the origin of defects and **explain** defect classification in detail.(8)

(ii) Elaborate on the principles of software testing and **summarize** the tester role in software development organization.(8)

4 (i) **Describe** the various software testing activities.

(ii) **Define** correctness, reliability, integrity, interoperability. Discuss how these are related to testing.(8)

5 (i) Define defect and **illustrate** the various origins of defects.

(ii) What approach would you use to **solve** the concepts of defects with the coin problem?(8)

6 (i) Why it is important to meticulosly inspect test result?**illustrate** with example?(10)

(ii) **Discover** the drawbacks incase if you fail to inspect.(6)

7 (i) Why it is necessary to **develop** test cases for both valid and invalid input condition? (8)

(ii) How important to document a product? How will you test requirement and **design** document? (8)

8 (i) **Describe** about the components of software development process(8)

(ii) **List** and discuss the technological development that are causing organizations to revise their approach to testing.(8)

9 **Discuss** in detail about the testing axioms.

10 Write short notes on the **list** given below

(i) cost of defect (ii) Defect repository (iii) defect prevention strategies.

UNIT -2
2 MARK QUESTIONS

1 **List** some of the advantages of documentation testing and domain testing.

2 Which testing strategy is best to uncover the defect? **discuss**

3 **Pointout** the difference of static testing from structural testing.

4 How mutation testing helpful in **testing** the software?

5 **Create** the equivalence classes in testing the program for quadratic equation solution .

6 Write the two basic **testing** strategies used to design test cases.

7 **Show** the need of code functional testing in test case design.

8 Define code complexity testing .How it is **related** to testing?

9 **What do you Interpret** from the control graph?

10 **Discuss** about desk checking.

11 **List** the application scope of adequacy criteria.

12 **Classify** test adequacy criteria .

13 How would you **formulate** loop testing based on strategies?

14 How would you **calculate** cyclomatic complexity?

15 **Name** the rules-of-thumb.

16 **Tabulate** the black box methods and knowledge sources.

17 **List** white box knowledge source and testing methods.

18 **Tell** the steps involved in developing test cases with a cause-and-effect graph.

19 Can you **classify** the compatibility testing and explain?

20 **Give** the list of different types of testing .

16 MARK QUESTIONS

1 **Demonstrate** the various black box test cases using Equivalence class partitioning and boundary values analysis to test a module for ATM system(16)

2 **Summarize** the role of Oaths in white box testing and explain any two white box testing design .

3 (i)**Discuss** briefly about path and cyclomatic complexity.(8)
(ii) **Describ**e the test factors that are to be followed to design a customized test strategy.(8)

4 What approach would you use for testing strategies?Explain in detail. **Show** how black box testing is performed in

COTS components?(16)

5 Explain in detail about all additional white box test **design** approaches and how would you prioritize it.(16)

6 With suitable example **describe** how cause-and–effect graphing and state transition testing is done.(16)

7 (i) **Discuss** in detail about code coverage testing(8)
(ii) Explain with neat flowchart code complexity testing . (8)

8 What i**nference** can you make from random testing, requirement based testing and domain testing explain?(16)

9 Show and **tabulat**e the comparison between static testing Vs structural testing.(16)

UNIT -3

2 MARK QUESTIONS

1 **Name** the various skills needed by a test specialist.

2 **List** out the various tools avaliable for internalization.

3 **Define** unit Test.Give example.

4 Compare and **contrast** Alpha and Beta Testing.

5 **Define** test harness .

6 Can you **list** the levels of major phases of Testing .

7 **Summarize** the importance to design a test harness for reusability

8 **Give** the types of requirements.

9 Discuss about integration testing.

10 Based on what **plan** the scenario testing is done?

11 **Classify** the activities of defect bash.

12 **Compare** functional Testing from non-functional Testing.

13 Can you **judge** on the reason for system testing?

14 **Show** the test cases applied for acceptance testing.

15 How could you **classify** the methodology for performance testing?

16 **Analyse** on when to do the regression testing and smoke testing?

17 **Give** the most effective ad hoc testing techniques.

18 **List** out the objectives of configuration testing according to Beizer.

19 Can you **prepare** the role of test data generators in testing object oriented system.

Show the approaches you use to do website testing.

16 MARK QUESTIONS

1 State and **describe** different levels of Testing.

2 **Describe** in detail about scenario testing and performance testing.

3 **Describe** in detail about the internationalization testing and its designing and planning.

4 **Summariz**e the issues that arise in class testing and explain about compatibility and documentation testing.

5 How would you **classify** integration testing and system testing?

6 **Tabulat**e the key difference in integrating procedural oriented system as compared to object oriented systems.

7 Why is it so important to design a test harness for reusability and **show** the approach you used for running the unit test and recording the results?

8 **Differentiate** alpha testing from beta testing and discuss in detail about the phases in which alpha and beta testing is done ,In what way it is related to milestone and deliverable.

9 Determine and **prepare** the test cases for acceptance , usability and accessability testing.

10 How would you identify the hardware and software for configuration testing and **Explain** what testing techniques applied for website testing?

UNIT-4

2 MARK QUESTIONS:

1 **Identify** business impact of globalization.

2 **Show** test case specification.

3 **List** the various skills needed by a test specialist.

4 **Name** the test plan components.

5 **Give** the need of test plan components.

6 **Examine** purpose of Test Transmitted report and the test log.

7 **Classify** various approaches to test cost estimation.

8 **Pointout the** five stages in a test plan process.

9 **Analyse** the role of manager in support of test group.

10 **Show** the types of testing amenable to automation.

11 **List** test design specification.

12 How would you estimate the **measurements** for monitoring error ,faults and failures?

13 Can you **judge** the three essential elements of test infrastructure management?

14 Based on test case specification what should be **identifie**d in test process.

15 How would you **prepare** testing and development function?

16 **Summarize** the success factors for testing organization.

17 Can you **discuss** the role of manager in support of Test group?

18 **Analyse** on few typical resources that are considered when test planning .

19 Write the reason to **create** work break down structure.

20 Can you make a **distinction** between structures of single-product companies and multi-product?

16 MARK QUESTIONS

1 (i) **Describe** about the testing team structure for single product companies.(8)
(ii)What are the skills needed for a test specialist.(8)

2 (i) **Describ**e with example test people management.(8)
(ii)How will you build a testing group **discuss** with an example.(8)

3 (i) **Demonstrate** on various stages of test plan. (8)
(ii**) Illustrate** the role of testing.(8)

4 (i) **Develop** the challenges and issues faced in testing service organization also write how we can eliminate challenges.(8)
(ii) Can you list the components of test plan in detail.(8)

5 (i)Write the **list** of any four IEEE recommended test related documents in detail.(8)
(ii)**List** out the various technical skills needed by a test specialist.(8)

6 **Identify** the role user/client play in the development of **test** plan for a project? Should they be present at any of the test plan reviews. justify your answer.

7 **Discuss** on what is happening in test process(16)

8 (i**) Compare** and contrast the role of debugging goals and policies in testing(8)
(ii)What are the role of groups in policy development and test reporting (8)

9 **Demonstrate** the test management based on standards, infrastructure, people and product.

10 **Differentiate** between the effect of globalization and geographically distributed team in product testing?(16)

UNIT-5

2 MARK QUESTIONS:

1 **Tell** about test case execution productivity?

2 **Give** any two metrics.

3 **Define** test automation.

4 **Express** the framework for test automation.

5 **Classify** the skills needed for automation.

6 What to automate? **list** the scope of automation.

7 **List** out the types of testing amenable to automation.

8 **Express** the information in defect database contain.

9 What is the main **plan** of Test framework?

10 **Give** any two generic requirements for test tool and framework.

11 **Compare** product development and automation.

12 **Summarize** the reasons for selecting the test tool for automation.

13 **Name** the criteria's for selecting test tools.

14 **List** the challenges in automation.

15 **Discover** the objectives of testing.

16 **Distinguish** between milestone and deliverable.

17 **Classify** the types of test defect metrics.

18 Can you **show** on the reason why metrics in testing?

19 Can you make the **comparison** between metrics and measurement?

20 Give the **formula** for defects per 100 hours of testing.

16 MARK QUESTIONS

(i) Explain the design and architecture for automation(8).

1 (ii) **List** and discuss metrics that can be used for detection prevention and how.(8)

(i) List the requirements for test tool.E**xplain** with suitable examples.(8)

2 (ii)Why testing in metrics? **Analyse** about Productivity metrics(8)

Narrate and f**ormulate** about the metrics or parameters to be considered for evaluating the software

3 quality.

4 Explain in detail about skills needed for automation and **give**

its challenges.

5 Discuss the significance of various **measurements** in the testing process.

6 What is the purpose of progress metrics? **Describe** in detail.(16)

7 How would you classify the measurements in productivity metrics. **Summarize** it.

8 How metrics are classified ?**Demonstrate** project metrics.

(i) **List** out the generic requirements for Test

9 (ii) Outline the challenges in automation(8)

10 What are metrics and measurements? **illustrate** the types of product metrics.(16)