

Program: T.Y.B.Sc.IT Semester: VI Program Code: 1S00256
 Course: Software Testing and Quality Assurance Course Code: USIT601
 Duration: 2 ½ Hours Examination Pattern: REV23- Autonomous - External Max. Marks: 75

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat diagrams wherever necessary.

Examination:
REGULAR

Q. 1 Attempt ANY THREE from the following: [15]

- a) What are the different views or perspectives of quality?
- b) Explain the process related to software quality.
- c) What are the costs associated with quality?
- d) How do clear requirements contribute to software quality?
- e) Explain how quality assurance is integrated into iterative development.
- f) What is the PDCA (Plan-Do-Check-Act) cycle, and how is it used for continuous improvement?

Q. 2 Attempt ANY THREE from the following: [15]

- a) Explain different approaches to testing in detail.
- b) Describe the role of testing during the development life cycle.
- c) Explain the importance of mutation testing.
- d) Explain test levels in software testing.
- e) Describe technical and non-technical skills required by a tester.
- f) Describe Grey Box Testing, highlighting its approach, advantages, and limitations.

Q. 3 Attempt ANY THREE from the following: [15]

- a) Explain Boundary Value Testing with a suitable example.
- b) What is Special Value Testing? Explain its importance in software testing.
- c) What is Decision Table Testing? Explain its need with an example.
- d) What is a Program Graph? Explain its use in structural testing.
- e) Explain Data Flow Testing in detail.
- f) Describe Improved Equivalence Class Testing in detail.

Q. 4 Attempt ANY THREE from the following: [15]

- a) Explain verification in detail, including its advantages, disadvantages, and methods.
- b) Explain types of reviews on the basis of stage or phase.
- c) Describe acceptance testing and its objectives.

- d) Explain management of verification and validation (V&V) in detail.
- e) Explain testing activities performed during the requirement stage.
- f) Describe critical roles and responsibilities in V&V model.

Q. 5 Attempt **ANY THREE** from the following:

[15]

- a) Describe sandwich testing with its purpose.
- b) Explain validation testing in detail as a level of testing.
- c) Explain sub-system testing and its objectives.
- d) Explain compatibility testing with examples.
- e) Explain error handling testing and its importance.
- f) Explain Graphical User Interface (GUI) testing in detail.

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