Mumbai University

May - 2019

B.Sc.IT: Semester – VI

(Question Paper)

[CBCS – Choice Based]

Software

Quality

Assurance

Time: 2 ½ Hours   **Total Marks:** 75

NOTE:
  (1) *All questions (Q.1 to Q.5) are compulsory.*
  (2) *Figures on the right indicate total marks. All sub-questions carry equal marks.*
  (3) *Write the question numbers clearly as mentioned in the Question Paper.*
  (4) *Mixing of sub-questions is not allowed.*
  (5) *Draw diagrams and give examples whenever necessary.*
  (6) *Use of calculator or any other electronic gadget is not allowed.*

Q.1   ATTEMPT ANY THREE QUESTIONS: (15 MARKS)
  (A)   Define the term quality and elaborate different views on quality.   (5)
  (B)   Explain the Lifecycle of Quality Improvements.   (5)
  (C)   What are the Quality Principles of Total Quality Management (TQM)?   (5)
  (D)   Explain the Structure of Quality Management System.   (5)
  (E)   How the Quality and Productivity are related with each other?   (5)
  (F)   Write a short note on Continual Improvement Cycle.   (5)

Q.2   ATTEMPT ANY THREE QUESTIONS: (15 MARKS)
  (A)   Explain the Lifecycle of Software Testing.   (5)
  (B)   Write a note on Requirement Traceability Matrix.   (5)
  (C)   State and explain any 5 principles of Software Testing.   (5)
  (D)   Explain the relationship between Error, Defect and Failure with a proper example.   (5)
  (E)   Discuss the Challenges in Software Testing.   (5)
  (F)   Describe the structure of a Testing Team.   (5)

Q.3   ATTEMPT ANY THREE QUESTIONS: (15 MARKS)
  (A)   Explain Boundary Value Testing and its guidelines.   (5)
  (B)   Write a note on improved Equivalence Class Testing.   (5)
  (C)   Describe the Decision Table Testing Technique in detail.   (5)
  (D)   Write a note on DD Path Testing.   (5)
  (E)   Explain the concept and significance of Cause and Effect Graphing Technique. (5)
  (F)   Compare Weak Robust and Strong Robust Equivalence Class Testing.   (5)

Q.4   ATTEMPT ANY THREE QUESTIONS: (15 MARKS)
  (A)   Explain different methods of Verification.   (5)
  (B)   Explain the steps involved in Management of Verification and Validation.   (5)
  (C)   Describe the benefits of Review Technique.   (5)
  (D)   List and explain how the Formal Review is carried out.   (5)
  (E)   Explain the VV Model of Testing.   (5)

(F) What are the roles and responsibilities of a Reviewer? **(5)**

Q.5 **ATTEMPT ANY THREE QUESTIONS: (15 MARKS)**

(A) What is Integration Testing? Explain the Big Bang Approach. **(5)**
(B) What is the need of a Security Testing? **(5)**
(C) What is Performance Testing? List different types of Performance Testing. **(5)**
(D) Explain the concept of Inter System Testing and its Importance. **(5)**
(E) Explain the significance of Usability Testing. **(5)**
(F) Explain Commercial Off-The-Shelf Software Testing. **(5)**