[5461] - 599

B.E. (Computer Engg.)

SOFTWARE TESTING AND QUALITY ASSURANCE

(2015 Course) (End Sem.) (Semester - I) (Elective - IV)

Time : 2½ Hours]   *[Max. Marks :70*

Instructions to the candidates:

1) *Assume Suitable Data if necessary. Mention your assumptions.*
2) *Right indicates the full marks and Bifurcation for sub questions.*
3) *Draw suitable diagrams and tables if necessary.*

Q1) a)   What is bug; defect, error & failure give an example of each?   **[6=3+3]**

b)   Differentiate between software testing tools and techniques.

<div align="center">OR</div>

Q2) a)   What is impact of defect in different phases of software development?

[6=3+3]

b)   What is bug tracking, bug fixing & bug verification.

Q3) a)   What is mutation testing? Give an example.   **[7=3+4]**

b)   Why independent testing team is required in organizations?

<div align="center">OR</div>

Q4) a)   What are the skill set required by software tester?   **[7=3+4]**

b)   With the suitable sample, explain requirement traceability matrix.

Q5) a)   What are the selection criteria of automated testing tool?   **[7=3+4]**

b)   What are the difference in testing automation in agile and waterfall model?

<div align="center">OR</div>

Q6) a)   Discuss "automation in extreme programming".   **[7=3+4]**

b)   What are some of the challenges in automating the testing of GUI portions of an application? How do these compare with the automation of back-end testing?

<div align="right">***P.T.O.***</div>

Q7) a) What is Selenium? What are the different Selenium components?

[16=6+5+5]

b) What are the limitations of Selenium?

c) Why one should select selenium as a test tool?

OR

Q8) a) Describe selenium Web Driver architecture with the help of neat diagram.

[16=6+5+5]

b) What is Selenium? What are the different features of it?

c) Enlist and explain the components of selenium tool.

Q9) a) What does SQA ensure? What are the goals of SQA? [17=6+6+5]

b) State & explain Principles of Quality management.

c) What is ISO standard? What are its advantages?

OR

Q10) a) What is Six Sigma? Explain the terms DMAIC & DMADV.

[17=6+6+5]

b) Define Software Quality & Software Quality Assurance. List the various objectives of SQA.

c) How cost and risk factors are affecting software quality.

Q11) a) Enumerate Ishikawa's seven basic quality tools. Explain any two in detail.

[17=6+6+5]

b) Describe key elements of Total Quality Management.

c) Explain with example Product Quality Metric.

OR

Q12) a) Write short note on Total Quality Management (TQM). [17=6+6+5]

b) Explain following terms (any two)

Pareto Chart

Scatter Diagrams

Cause and effect diagrams.

c) Describe in detail Defect Removal Effectiveness.