

Total No. of Questions : 12]

SEAT No. :

**P1090**

**[4458]-771**

[Total No. of Pages : 2

**B.E. (Computer Engineering)**  
**SOFTWARE TESTING AND QUALITY ASSURANCE**  
**(2008 Course) (Elective-II) (Semester-I) (410445)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:*

- 1) *Answers to the two sections must be written in separate answer books.*
- 2) *Solve question No. 1 or 2, 3 or 4, 5 or 6 from section-I.*
- 3) *Solve question No. 7 or 8, 9 or 10, 11 or 12 from section-II.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data whenever necessary.*

**SECTION-I**

- Q1)** a) What is test life cycle? Explain phases in test life cycle. [8]  
b) Explain IEEE standards for software test plan. [10]

OR

- Q2)** a) Explain the following terms with examples in software testing: [8]  
i) Defect  
ii) Fault  
iii) Mistake  
iv) Failure  
b) Explain defect cycle in the software testing for removing defect in the software system. [10]

- Q3)** a) What is requirement based testing? Explain different attributes of requirement based testing. [8]  
b) Why testing of the software is important in the software production system before releasing software to the customer? [8]

OR

- Q4)** a) Explain the state based testing with the suitable example. [8]  
b) Design at least four test cases for functional testing of the on line shopping cart application. [8]

**P.T.O.**

- Q5)** a) What is mutation testing? Explain the advantages and disadvantages of mutation testing. [6]  
b) What is regression testing? Explain test plan for regression testing. [10]

OR

- Q6)** a) Design test cases for unit testing of program written in object oriented programming language for finding given no is prime or non prime. [8]  
b) What is path testing? Prepare the test plan for path and branch coverage testing of the program for finding leap year. [8]

### **SECTION-II**

- Q7)** a) What is metric plan? Explain Goal question metric model for improving effectiveness of software testing and improve the productivity of the team. [6]  
b) What is GUI testing? Design test plan for GUI testing of the on line banking application. [10]

OR

- Q8)** a) Explain scenario Testing with the suitable example. [10]  
b) What are testing metrics? Explain with the examples. [6]

- Q9)** a) What are the different quality parameters to ensure quality of the software? [8]  
b) How to apply six sigma principles for improving the quality of software system. [8]

OR

- Q10)** a) What are the key elements of the total quality management? Explain in detail. [8]  
b) Explain ISO standards for software quality. [8]

- Q11)** a) What is QTP? Explain the test process in the QTP. [12]  
b) Explain the deployment testing. [6]

OR

- Q12)** a) Explain automated functional testing using rational Robot with suitable example. [10]  
b) What is load runner? How to test load on the software system using load runner. [8]

