

Total No. of Questions : 10]

SEAT No. :

**P3348**

[Total No. of Pages : 2

**[5461]-610-A**

**B. E. (I. T.)**

**SOFTWARE TESTING AND QUALITY ASSURANCE (414457 C)  
(2015 Pattern) (Semester - I) (End Semester Exam) (Elective-II)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Answers Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q.10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume Suitable data if necessary.*

**Q1) a) What are various testing principles? [6]**

b) Explain white box testing and black box testing. [4]

OR

**Q2) a) What is six sigma? Explain its methodologies? [6]**

b) Explain tester's role in software development organization. [4]

**Q3) a) Explain different types of system testing. [6]**

b) Describe TQM for inventory management. [4]

OR

**Q4) a) Draw a control flow graph for the following code and clearly label each node so that it is linked to its corresponding statement. [6]**

```
int evensum (int i) {  
int sum = 0; [6]  
while (i <= 10) {if (i/2 == 0)  
sum = sum + i; i++;  
}  
return sum;  
}
```

b) Write a short note on FMEA. [4]

**P.T.O.**

- Q5) a)** Explain 7 QC tools in detail. [8]  
b) Explain planning for software quality assurance w.r.t. to your final year project. [8]

OR

- Q6) a)** Relate how components of SQA system can be applied for your final year project. [8]  
b) Explain product and process quality with an example. [8]

- Q7) a)** Explain Malcom Baldrige Model? [8]  
b) Draw and explain CMMI levels. [8]

OR

- Q8) a)** Write short note on following [8]  
i) CMM  
ii) SPICE  
b) Explain in detail ISO 9000 model for quality assurance. [8]

- Q9) a)** Write short note on: [10]  
i) OO Methodology  
ii) Walkthrough  
b) Explain Clean room methodology in detail along with diagram. [8]

OR

- Q10) a)** i) Explain Software project Internal Auditing and Assessments. [10]  
ii) Explain how different Case Tools affects on software Quality.  
b) Consider online banking system, state and inject 5 defect in the system which will cause flaw in the system and suggest it's preventive measures. [8]

