Total No. of Questions : 10]

SEAT No. :

P3348

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[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;
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 shot 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]**