

Reg. No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**Question Paper Code : 83333**

**M.E. DEGREE EXAMINATION, MAY/JUNE 2016**

**Elective**

**Computer Science and Engineering**

**CP 7026 – SOFTWARE QUALITY ASSURANCE**

**(Regulations 2013)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer ALL questions.**

**PART – A (10 × 2 = 20 Marks)**

1. Mention four topics addressed by ISO 9001:2000.
2. Differentiate verification and validation.
3. What are functional requirements ?
4. What are the advantages of software verification ?
5. What is boundary value analysis ? Give example.
6. Why is the decision table also referred to as the cause effect table ?
7. What are finite state models ?
8. What is data flow testing ?
9. Give an example for fault that is uncovered during security testing.
10. What is stress testing ?



**PART – B (5 × 16 = 80 Marks)**

11. (a) Explain about different software quality models. (16)

**OR**

- (b) Discuss how software quality assurance is ensured in a software development system.

12. (a) What are inspections ? List the characteristics of inspections. What are the different stages in the inspection process ? Discuss. (16)

**OR**

- (b) Tabulate the activities carried out during reviews and walkthroughs and discuss the same.

13. (a) Consider a ticketing system where children under age 6 are allowed to travel for free, people under 18 as well as senior people older than 64 pay ₹ 10 while adults need to pay ₹ 20. Design test cases for the ticketing system using equivalence partitioning and boundary value analysis.

**OR**

- (b) Explain the key idea and the steps in the category partition method with an example.

14. (a) Write a program to check if a number is prime. Find its basic blocks and compute defs, c-uses and p-uses and draw the def-use graph.

**OR**

- (b) With examples explain the basic idea of fault based testing and an application of fault based testing principles namely, mutation testing.

15. (a) How to prioritize a set of tests for regression testing ? Explain the methodology for regression testing. (16)

**OR**

- (b) Discuss about load, performance and usability test with suitable example. (16)