**M.C.A. (Mgmt. Faculty)**

**SOFTWARE TESTING AND QUALITY ASSURANCE**

*(Any One from 1 to 7)*

1. Prepare detail test plan for web based Jewelry shop having

following features :

a) Customer search with respect to Jewelry item, weight, length.

b) items availability and price information.

c) Online booking and cancellation of order.

system must ensure the security with reference to online transactions.

2. Prepare detail test plan for web based Book Purchase system having

following features :

a) Book information search with respect to book title, author and publication.

b) Book availability and price details.

c) Online booking and order cancellation of book.

system must ensure the security with reference to online transactions.

3. Prepare detail test plan for web based Railway reservation system having

following features :

a) Train information search with respect to train number, route.

b) Reservation availability and fair information.

c) Online booking and cancellation of tickets.

system must ensure the security with reference to online transactions.

4 a) An online railway booking system designed by XYZ software firm wants to

perform a complete testing for the booking module of the system to ensure

that :

i) System supports the booking and cancellation of tickets.

ii) General booking opens with 90 days in advance.

iii) System supports the tatkal booking prior to 3 days of journey excluding

the date of commencement of journey.

Prepare a test plan stating the scope, strategies, coverage, environment and

other desired details.

b) Differentiate functional and structural testing.

5. Write a detailed test plan for University result declaration system, which provides

the facility to view students result (sem/year) wise, system should have facility

to apply for rechecking/re-evaluation with payment. Your plan should include the

desired test documents, test cases and test strategies.

6. a) A train and air Reservation Agency is in process of implementing their newly

designed online reservation system. The system allows the user to login,

check the flight and train status, booking history, cancellation with due charges,

view the route, reservation availability, timings etc.

Design a test plan stating scope, strategies, risk, schedules, control procedures,

environment etc. and other desired details.

b) Design the test cases for all test Paths for a code to get the first 10 even

numbers.

7. a) Write a test plan with scope of testing, risk and contingencies, strategy,

schedule, deliverables, suspension and resumption criteria for web based job

portal.

b) Explain usability testing in detail.

Long questions (all compulsory)

1. What do you mean by structural testing ? How you can perform it using statement, code and branch coverage?

2. Explain testing life cycle in detail.

3. What do you mean by testing strategies? Explain each strategy in detail.

4. How inspection differs from Walk through? Explain the formal review process in detail.

5. Explain in detail V and V life cycle.

6. Define Product and Process Standards. Explain CMM in detail.

7. Define Testers Workbench. Explain 11 steps of testing life cycle in brief.

8. Write a 7-8 point checklist for testing non-functional aspects of on-line shopping website.

9. Explain in detail with suitable example about different White Box Testing

techniques.

10. What do you mean by testing strategies? Explain each strategy in detail.

11. Explain in detail the necessary requirements and steps involved for testing an

object oriented application.

12. Compare : a) Alpha Vs Beta testing

 b) Static Vs Dynamic testing

13. What do you mean by Black Box testing ? How you can perform it using Boundary Value Analysis and equivalence partitioning ?

14. Explain regression testing and installation testing with suitable example.

15. Write test cases for Mobile Tracking System.

16. Calculate cyclomatric complexity of code which accepts 3 integer values from

user as input and sort them in ascending order ? Find path and design test

cases.

17. An application receives an integer value as input between 6 and 50 (inclusive of 6 and 50). The application calculates the area of a circle, of an equilateral triangle and of a square and accordingly displays the message. Draw the flow graph, find the cyclometric complexity and design the test a cases for this code.

Short notes (all )

1. ISO
2. Verification techniques
3. Test automation
4. Testing of object oriented application
5. Usability testing.
6. Six sigma.
7. Cleanroom software engineering.
8. BVA.
9. Web Based Application Testing.
10. Quality Metrics.
11. SEI-CMM
12. Quality Factors
13. CAST
14. Static Testing
15. Black Box Testing.
16. Walkthrough
17. Statement coverage and Branch coverage
18. System Testing.
19. Formal Technical Review
20. Code Coverage