Practical 1 : Design test cases for purchase order management based on system specifications.

☆ Test cases :

ID	Test Case	Steps	Expeded	Actual	Outcome
01	Test if user is able to login.	Enter correct ID & Password.	User must be logged in.	User is logged in.	Pass.
02	Test if user is able to shop by category.	1) Click Home. 2) Click on left top to get options	Shop by category scroll bar must show up	Shop by category scroll bar is visible.	Pass.
03	Test if user is able to search item.	1) Click on Search 2) Type item you want to Search.	A list of items must be displayed	A list of items is displayed.	Pass.
04	Test if user can filter the Search list.	Click on 'All' and select the category from which you want	Only that particular category item must show.	Only that particular category's item are shown	Pass.
05	Test if user is able to view details about the item.	Click on item after searching it.	All item details must be available.	All item details are available.	Pass.

ID	Test Case	Steps	Expected	Actual	Result
06	Test if user can get a variety of ways to pay	Click on payment details after clicking on item.	All the available options must be displayed.	All the available options are displayed.	Pass.
07	Test if user can view inventory.	1) Go to home page. 2) Click on 'Cart' option.	Inventory must be displayed.	Inventory is displayed.	Pass.
08	Test if user can change its address of delivery.	1) Go to Home. 2) Click on delivery details 3) Click on change address.	New address input option must be available.	New address input option is available	Pass.
09	Test if user can view his coupon list.	1) Go to Home 2) Click on Coupons.	Available Coupons must be displayed.	Available Coupons are displayed	Pass.
10	Test if user can logout	1) Goto Home 2) Click on logout on top left.	User must logout. and return to login page.	User is logged out and returns to login page	Pass.

★ Practical Related Questions :

1. What are the objectives of Software Testing ?

→ The objectives of Software Testing :

1. Finding defects which may get created by the programmer while developing the software.

2. Gaining confidence in customer and providing information about the level of quality.

3. To prevent defects.

4. To make sure that the end result meets the business and user requirements.

5. To ensure that it satisfies the BRS that is Business Requirement specification and SRS that is System Requirement Specifications.

6. To gain the confidence of the customer by providing them a quality product.

2. How can we design the test cases from requirements?

→ Requirement based testing :

Requirement based testing is a testing approach in which test cases, conditions and data are derived from requirements. It includes functional test and non-functional attributes such as performance reliablity or usability.

• Stages in requirement based testing :

1. Defining test completion criteria —
   Testing is completed only when all the functional and non-functional testing is completed.

2. Design Test Cases —
   A test case has five parameters, namely pre-condition, ID, inputs, expected and actual outcome.

3. Execute Tests —
   Execute the test cases against the system and document the results.

4. Verify the test results :-
   Verify if the expected and actual result match each other.

5. Verify test coverage -
   Verify if the test covers both the functional and non-functional aspects of the requirement.

6. Track and manage defects -
   Any defects detected during the testing process goes through the defect life cycle and are tracked to resolution. Defects statistics are maintained which will give us the overall status of the project.

3. Compare static and Dynamic testing.

→ Difference between Static & Dynamic Testing -

Static Testing	Dynamic Testing
1. Testing is done without execution of program.	1. Testing is done by executing the program.
2. Static Testing does Verification process.	2. Dynamic Testing does Validation process.
3. Static Testing is about prevention of defects.	3. Dynamic Testing is about finding and fixing defects.
4. Static Testing gives an assessment of code and document.	4. Dynamic Testing gives bugs in the software system.
5. Static Testing can be performed before compilation.	5. Dynamic Testing is performed after compilation.
6. Cost of finding and fixing defects is low.	6. Cost of finding and fixing defects is high.

☆ Exercise :-

1. Identify the situation when to start and stop software testing.

→ • When to Start Testing –

An early start of testing reduces the cost and time to rework and produce error-free software that is delivered to client. Software Development Life Cycle Testing can be started from requirement gathering phase and continued till deployment.

It also depends on the development model that is being used.

• When to Stop Testing –

It is difficult to determine when to stop testing, as testing is a never ending process and no one can claim that a software is 100% tested.

1. Testing Deadlines.
2. Completion to test case execution.
3. Management decision.

3. In white Box Testing identify the parameters to verify.

→ <u>Parameters for White Box Testing</u> :

1. Internal Security holes.

2. Broken or Poorly structured paths in the coding process.

3. The flow of specific inputs through the code.

4. Expected outcome.

5. The functionality of conditional loops.

6. Testing of each statement, object and function on an individual basis.