

① Describe the purpose of acceptance testing and explain the importance of test planning in the s/w testing life cycle.

### CSTLC

Ⓐ Acceptance Testing & Test planning.

- \* Acceptance testing ensures the s/w meets business needs before release.

- \* Test planning outlines scope, resources, schedule, and helps manage testing effectively in the STLC.

② Explain the topdown Approach and bottom-up Testing approaches and its advantages.

Ⓐ Topdown :- Test high-level module first; user stubs

Advantages:- Early validation of design.

Bottom up :- Test low-level modules first; user driven

Advantages:- Isolate defects in foundational components.

③ Describe Test planning and management and Apply test management tools to organize and control the testing process for a s/w release with example?

Ⓐ Test planning & management Tools.

Test planning: Defines strategy, resource timelines.

Tools: Test Rail, JIRA, Zephyr help tracker test and defects.

Example:- use Test Rail for organizing test cases in a web app, JIRA for bug tracking.

④ Develop a plan to move from one maturity level to the

the next in a SW testing maturity model for any application SW.

(A) maturity level transition plan:-

\* move from level 2 to 3; Define Standardized process role and training

Example : An LMS (Learning Mgmt System) adds formal test reviews and metrics.

(B) write short notes on their testing types : Gray box testing intuitive and expressive based testing in testing process.

(A) Gray Box :- Combines internal & external knowledge

Intuitive :- Based on gut feeling and logic

Experience Based :- Relies on testing part knowledge

(C) write a short notes on functional, non-functional and Structured testing strategy Analyse the impact of combining functional and structured testing and test coverage and defect detection.

(D) functional :- Test system behaviour Eg: Login

non functional :- Testing Speed, Security, Usability

Structural :- uses defined techniques like boundary testing.

\* Combining boosts coverage and defect detection.

(E) Explain the process how to evaluate the effectiveness of different test management tools in organizing and controlling the test process

(F) Evaluating Test management tools.

criteria :- usability integration, reporting, scalability  
steps :- Define → needs → compare tools → pilot test →

Review KPIs.

⑧ write a short note on the main challenges faced during the different stages of the SW testing process

(A) Ambiguous requirements.

- \* Time/resource limits
- + poor test data
- \* Tool integration issues.
- \* changing Spec.

⑨ compare the effectiveness of manual versus automated unit testing in given scenario.

(A) As manual vs Automated Testing

Manual :- Good for UI/UX testing.

Automated :- fast repeatable for logic testing

use both for full coverage.

⑩ Define Alpha and Beta testing explain relative metrics of alpha and Beta testing with respect to finding issues & the affect on user.

(A) Alpha vs Beta Testing

Alpha :- Internal testing finds bugs early

Beta :- Real user, find real-world issues

Beta better reflects user experience.