Unit 1: Get a Refresh on Testing

Learning Objectives

After completing this unit, you'll be able to:

- Describe the use cases for invoking anonymous code and the differences between invoking Apex in execute anonymous vs. unit tests.
- Write and execute tests for triggers, controllers, classes, flows, and processes using various sources of test data.

Key Topics

This unit prepares you for the Testing, Debugging, and Deployment section of the Platform Developer I exam, which makes up 17% of the overall exam. This section of the exam tests these topics.

- Testing frameworks and requirements
- Test data
- Executing a test
- Test considerations

This unit provides a number of interactive, real-world, scenario-based questions that are a lot like the ones you can encounter as a Salesforce developer. Looking at these scenarios helps prepare you to take the testing section of the Platform Developer I exam. As you tackle the practice questions, you get immediate feedback on your answers, along with detailed information on why your answers are correct (or incorrect).

The unit also contains interactive flashcards to help you prepare for this section of the exam.

Download the Guide

Would you like a hard copy of the contents in these modules? Each module includes a link to a printable version you can download. Download the Platform Developer I Certification Prep: Testing, Debugging and Deployment guide.

Exam Practice Questions

Ready to jump in? The sample tool below is not scored—it's just an easy way to quiz yourself. To use it, read the scenario and click the answer you think is correct. Some questions may have more than one correct answer. Click **Submit** and you get a popup telling you whether the answer you chose is correct or incorrect, and why; if there's a longer explanation, click  and then click anywhere in the window to close it. When you reach the end you can review the answers or retake the questions.

Scenario 1

A developer creates a new Visualforce page and Apex extension, and writes test classes that exercise 95% coverage of the new Apex extension. Change set deployment to production fails with the test coverage warning: "Average test coverage across all Apex classes and triggers is 74%, at least 75% test coverage is required." What can the developer do to successfully deploy the new Visualforce page and extension?

ANSWER	FEEDBACK
A. CREATE TEST CLASSES TO EXERCISE THE VISUALFORCE PAGE MARKUP.	Incorrect. Test classes can cover only Apex classes, not Visualforce pages.
B. SELECT FAST DEPLOYMENT TO BYPASS RUNNING ALL THE TESTS.	Incorrect. The correct wording is “quick deployment”, but the developer still wants to make sure all tests pass, so running a quick deployment is not enough.
C. SELECT 'DISABLE PARALLEL APEX TESTING' TO RUN ALL THE TESTS.	Incorrect. Disabling parallel Apex testing does not change the 75% code coverage requirement.
D. ADD TEST METHODS TO EXISTING TEST CLASSES FROM PREVIOUS DEPLOYMENTS.	**Correct. This increases the code coverage on the rest of the Apex classes in the org.**

Scenario 2

Which is an accurate statement about creating unit tests in Apex?

ANSWER	FEEDBACK
A. INCREASED TEST COVERAGE REQUIRES LARGE TEST CLASSES WITH MANY LINES OF CODE IN ONE METHOD.	Incorrect. The number of lines of code in the test class does not matter, what matters is the amount of lines that the unit test covers.
B. TRIGGERS DO NOT REQUIRE ANY UNIT TESTS IN ORDER FOR YOU TO DEPLOY THEM FROM SANDBOX TO PRODUCTION.	Incorrect. Triggers need to be covered by unit tests as well in order to be deployed.
C. UNIT TESTS WITH MULTIPLE METHODS RESULT IN ALL METHODS FAILING WHEN ONE METHOD FAILS.	Incorrect. When one method fails, the other test methods can still succeed.
D. SYSTEM ASSERT STATEMENTS THAT DO NOT INCREASE CODE COVERAGE CONTRIBUTE IMPORTANT FEEDBACK IN UNIT TESTS.	**Correct. Tests should assert your application's behavior to ensure quality of code and verify expected results.**

Scenario 3

What is the proper process for an Apex unit test?

ANSWER	FEEDBACK
A. CREATE DATA FOR TESTING. CALL THE METHOD BEING TESTED. VERIFY THAT THE RESULTS ARE CORRECT.	**Correct. Creating your own data makes the method independent of the data in your org. Doing this helps to avoid errors when moving your code from one org to another. To verify that the method works as expected call it using different inputs based on the data that was created.**
B. QUERY FOR TEST DATA USING SEEALLDATA=TRUE. CALL THE METHOD BEING TESTED. VERIFY THAT THE RESULTS ARE CORRECT.	Incorrect. SeeAllData=true should only be used in specific scenarios when the data cannot be created on the test class.
C. CREATE DATA FOR TESTING. EXECUTE RUNALLTESTS(). VERIFY THAT THE RESULTS ARE CORRECT.	Incorrect. unAllTests() executes all the methods in the test class.
D. QUERY FOR TEST DATA USING SEEALLDATA=TRUE. EXECUTE RUNALLTESTS(). VERIFY THAT THE RESULTS ARE CORRECT.	Incorrect. SeeAllData=true should only be used in specific scenarios when the data cannot be created on the test class.

Scenario 4

A developer has a single custom controller class that works with a Visualforce wizard to support creating and editing multiple sObjects. The wizard accepts data from user inputs across multiple Visualforce pages and from a parameter on the initial URL. Which three statements are necessary inside the unit test for the custom controller?

ANSWER	FEEDBACK
A. TEST.SETCURRENTPAGE(PAGEREF);	**Correct. You need to set the current page to make sure you get the initial URL parameter.**
B. STRING NEXTPAGE = CONTROLLER.SAVE().GETURL();	**Correct. This statement instantiates a new controller with all parameters in the page.**
C. APEXPAGES.CURRENTPAGE().GETPARAMETERS().PUT('INPUT', 'TESTVALUE');	**Correct. This line is used to inject the query parameter** `?input=TestValue` **in the URL for the page.**
D. PUBLIC EXTENDEDCONTROLLER(APEXPAGES.STANDARDCONTROLLER CNTRL) { }	Incorrect. This is the declaration of the constructor for a controller extension. This is not needed in the test class.

Scenario 5

An org has different Apex classes that provide account-related functionality. After a new validation rule is added to the Account object, many of the test methods fail. Which two actions will resolve the failures and reduce the number of code changes needed for future validation rules? (Select two answers.)

ANSWER	FEEDBACK
A. CREATE A METHOD THAT CREATES VALID ACCOUNT RECORDS, AND CALL THIS METHOD FROM WITHIN TEST METHODS.	**Correct. In test classes, the developer needs to first create the test records.**
B. CREATE A METHOD THAT QUERIES FOR VALID ACCOUNT RECORDS, AND CALL THIS METHOD FROM WITHIN TEST METHODS.	Incorrect. The developer needs to create the test records before querying them.
C. CREATE A METHOD THAT LOADS VALID ACCOUNT RECORDS FROM A STATIC RESOURCE, AND CALL THIS METHOD WITHIN TEST METHODS.	**Correct. In test classes, the developer needs to first populate the test records.**
D. CREATE A METHOD THAT PERFORMS A CALLOUT FOR A VALID ACCOUNT RECORD, AND CALL THIS METHOD FROM WITHIN TEST METHODS.	Incorrect. The developer needs to create the test records before validating them.

Scenario 6

When working in a sandbox environment, which two things should the developer use to verify the functionality of a new test class before the developer deploys that test class to production? (Select two answers.)

ANSWER	FEEDBACK
A. TEST MENU IN THE DEVELOPER CONSOLE	**Correct. In the Developer Console, you can execute some or all tests in specific test classes, set up and run test suites, or run all tests.**
B. RUN TESTS MENU PAGE IN SALESFORCE SETUP	Incorrect. There is not a page called Run Tests in Salesforce Setup.
C. REST API AND APEXTESTRUN METHOD	Incorrect. There is not a method called ApexTestRun.
D. APEX TEST EXECUTION PAGE IN SALESFORCE SETUP	**Correct. You can run unit tests on the Apex Test Execution page. The Apex Test Execution page refreshes the status of a test and displays the results after the test completes.**

Scenario 7

A developer has a block of code that omits any statements that indicate whether the code block should execute with or without sharing.

What will automatically obey the organization-wide defaults and sharing settings for the user who executes the code in the Salesforce organization?

ANSWER	FEEDBACK
A. APEX CONTROLLERS	Incorrect. Apex generally runs in system context; meaning the current user's permissions, field-level security, and sharing rules aren't taken into account during code execution. Apex controllers do not change this behavior.
B. APEX TRIGGERS	Incorrect. Apex generally runs in system context; meaning the current user's permissions, field-level security, and sharing rules aren't taken into account during code execution. Apex triggers do not change this behavior.
C. ANONYMOUS BLOCKS	**Correct. Anonymous blocks can execute existing Apex classes, not merely lines of code written in the anonymous block window. Anonymous blocks execute using the full permissions of the current user.**
D. HTTP CALLOUTS	Incorrect. Apex generally runs in system context; meaning the current user's permissions, field-level security, and sharing rules aren't taken into account during code execution. HTTP callouts do not change this behavior.

Exam Topic Flashcards

The following flashcards cover testing frameworks, executing tests, and test considerations. Use these interactive flashcards to brush up on some of the key topics you'll find on this part of the exam.

Read the question or term on each card, then click the card to reveal the correct answer. Click the right-facing arrow to move to the next card, and the left-facing arrow to return to the previous card.

Question/Term	Answer/Definition
A developer creates an Apex class that has private methods. What can the developer do to ensure that the test class can access the private methods?	Add the @TestVisible attribute to the methods.
A developer needs to ensure there is sufficient test coverage for an Apex method that interacts with Accounts. The developer needs to create test data. What can the developer use to load this test data into Salesforce?	Static resources
True or false: Loading test data in place of user input for Flows is valid for execution by unit tests.	True

Related Badges

Looking for more information? Explore these related badges.

Badge	Content Type
 Apex Testing	Module
 Developer Console Basics	Module
 **User Authentication**	Module

Congratulations! You've studied up on all things related to testing. Up next, let's dive in to the exam section on debugging and deployment. Let's go!

Unit 2: Review Debugging and Deployment

Learning Objectives

After completing this unit, you'll be able to:

- Describe the environments, requirements and process for deploying code.
- Describe the Salesforce Developer tools such as Salesforce DX, Salesforce CLI, and Developer Console, and when to use them.
- Describe how to approach debugging system issues, monitoring flows, processes, asynchronous and batch jobs.

Key Topics

This unit prepares you for the debugging and deployment topics in the Testing, Debugging, and Deployment section of the Platform Developer I exam. This section of the exam tests these topics.

- Deployment
- Debugging
- Salesforce DX
- Salesforce CLI
- Developer Console

Exam Practice Questions

Ready to jump in? The sample tool below is not scored—it's just an easy way to quiz yourself. To use it, read the scenario and click the answer you think is correct. Some questions may have more than one correct answer. Click **Submit** and you get a popup telling you whether the answer you chose is correct or incorrect, and why; if there's a longer explanation, click  and then click anywhere in the window to close it. When you reach the end you can review the answers or retake the questions.

Scenario 1

A developer created an Apex trigger using the Developer Console and now wants to debug code. How can the developer accomplish this in the Developer Console?

ANSWER	FEEDBACK
A. SELECT THE OVERRIDE LOG TRIGGERS CHECKBOX FOR THE TRIGGER.	Incorrect. There is no Override Log Triggers checkbox.
B. OPEN THE PROGRESS TAB IN THE DEVELOPER CONSOLE.	Incorrect. There is no Progress tab in the Developer Console.
C. OPEN THE LOGS TAB IN THE DEVELOPER CONSOLE.	**Correct. Use the Logs tab in the Developer Console to open debug logs.**
D. ADD THE USER NAME IN THE LOG INSPECTOR.	Incorrect. The Log Inspector tracks the logs; there is no way to add a user name to it.

Scenario 2

Which two types of information does the Checkpoints tab in the Developer Console provide? (Select two answers.)

ANSWER	FEEDBACK
A. NAMESPACE	**Correct. The Checkpoints tab displays a list of saved checkpoints that preserve a snapshot of the state of objects in memory at the time the checkpoint was reached. Each checkpoint displays the namespace of the package containing the checkpoint.**
B. EXCEPTION	Incorrect. The Checkpoints tab does not display exception information.
C. TIME	**Correct. The Checkpoints tab displays a list of saved checkpoints that preserve a snapshot of the state of objects in memory at the time the checkpoint was reached. Each checkpoint displays the date and time the checkpoint was reached.**
D. DEBUG STATEMENT	Incorrect. The Checkpoints tab does not display debug statement information.

Scenario 3

What are two valid source and destination pairs that can send or receive change sets? (Select two answers.)

ANSWER	FEEDBACK
A. DEVELOPER EDITION SANDBOX TO SANDBOX	Incorrect. Sending a change set between two orgs requires a deployment connection. Change sets can be sent only between orgs that are affiliated with a production org.
B. SANDBOX TO PRODUCTION	**Correct. Sandbox to production, production to sandbox, and sandbox to sandbox are all allowed as long as the developer creates sandboxes from the same production org and configures the orgs to accept incoming change sets.**
C. DEVELOPER EDITION ORG TO PRODUCTION	Incorrect. Change sets can only be sent between orgs that are affiliated with a production org.
D. SANDBOX TO SANDBOX	**Correct. Sandbox to production, production to sandbox, and sandbox to sandbox are all allowed as long as the developer creates sandboxes from the same production org and configures the orgs to accept incoming change sets.**

Scenario 4

Which two components can you deploy using Metadata API? (Select two answers.)

ANSWER	FEEDBACK
A. CONSOLE LAYOUT	Incorrect. You can't retrieve or deploy the Console Layout with the Metadata API. You must make changes to the Console Layout manually.
B. ACCOUNT LAYOUT	**Correct. You can deploy the Account Layout using the Metadata API.**
C. CASE FEED LAYOUT	Incorrect. You can't retrieve or deploy the Case Feed with the Metadata API. You must make changes to the Case Feed Layout manually.
D. CASE LAYOUT	**Correct. You can deploy the Case Layout using Metadata API.**

Scenario 5

Which two answers are true for a partial sandbox but do not apply to a full sandbox? (Select two answers.)

ANSWER	FEEDBACK
A. MORE FREQUENT REFRESHES	**Correct. Partial sandboxes refresh every 5 days, while full sandboxes refresh every 29 days.**
B. USE OF CHANGE SETS	Incorrect. Both partial sandboxes and full sandboxes use change sets.
C. LIMITED TO 5 GB OF DATA	**Correct. Partial sandboxes have a data storage limit of 5 GB, while full sandboxes match the production org.**
D. ONLY INCLUDES NECESSARY METADATA	Incorrect. Partial sandboxes include the metadata as well as sample data.

Exam Topic Flashcards

The following flashcards cover debug logs and the different environments used in the development and deployment process. Use these interactive flashcards to review some of the key topics you'll find on the exam.

Read the question or term on each card, then click on the card to reveal the correct answer. Click the right-facing arrow to move to the next card, and the left-facing arrow to return to the previous card.

Question/Term	Answer/Definition
In which Salesforce environment should a developer build a managed package?	Developer Edition
What is the minimum log level needed to see user-generated debug statements?	DEBUG

Related Badges

Looking for more information? Explore these related badges.

Badge	Content Type
 Asynchronous Apex	Module
 AppExchange App Deployment	Module

Great work! You've reviewed the testing, debugging, and deployment sections of the Platform Developer I exam.