



COMPUTER SYSTEM SERVICING 10
QUARTER 3–WEEK 7: Testing Installed Devices and Stress Test

Name of Learner: _____
Grade & Section: _____

Date: _____
Teacher: _____

MOST ESSENTIAL LEARNING COMPETENCY (MELC):

- Burning or testing installed equipment/devices
- Stress test

Objectives:

1. Determine the role of bur-in test in system unit
2. Conduct stress test for processor, memory and hard disk
3. Value the importance of burning and testing devices and stress testing.



TEACH ME

Learning Task 1:

Guess the terms using the alphabet. A as number 1 up to Z as number 26. After guessing the term search for the meaning of each term. Write your answer on a piece of paper.

1. **B 21 R 14 – I 14 T 5 S 20 S**
2. **P 18 O 3 E 19 S 15 R**
3. **C 15 M 16 U 20 E 18**

Learning Task 2:

Computers are developed in normal operating conditions. In computer testing, a burn-in test is used to run for an extended length of time in order to identify any potential problems. Thus, even if a limit is crossed, errors are negligible if the system undergoes stress testing during development.

Burn-in tests are usually performed on hardware devices and equipment within the manufacturing facility. They enable the detection of any problems before the device is released to the open market or for consumers.

Burn-in testing enables you to run test scripts and to create new scripts. The Diagnostics main menu provides two burn-in selections, Immediate Burn-In Testing and Deferred Burn-In Testing. Immediate Burn-In enables to run an existing script and to select configuration options. Deferred Burn-In enables to create a new script.

Standard Scripts

Sun provides three ready-made scripts designed to test the general health of the devices on your system. These scripts include:

- quick.tst

This script performs a series of tests that require the user to interact with the test software. When they require a user interaction, they stop and do not time out. These tests are faster than the full.tst but they are less thorough.

- full.tst

This script performs a detailed and comprehensive test on all hardware components, including those that require user input. It includes external port tests and requires loopback connectors on COM ports, parallel ports, and USB ports. It must interact with the test utility to progress through these interactive tests.

- noinput.tst

This script performs a non-detailed test of most hardware components, excluding those components that require user input (keyboard, mouse, sound, and video). This test does not require user input. It is normally the first test performed for hardware-related problems.

How to perform immediate burn-in testing

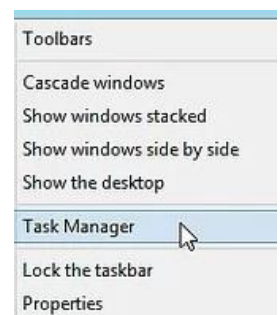
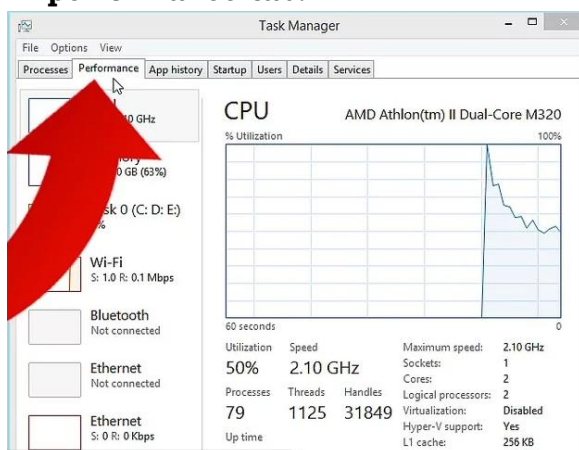
1. From the Diagnostics main menu, select Immediate Burn-In Testing. The screen displays a list of settings shown in Table below and a Burn-In menu.
2. From the menu, select Load Burn-In Script. A text box appears.
3. Type the name of the script you want to run, for example quick.tst, noinput.tst, or full.tst.
4. To change any of the options, select Change Options at the bottom of the screen.
5. This opens the Burn-In Options menu, which enables you to modify the options listed in Table below for the currently loaded test script.
6. Select Perform Burn-In Tests. The diagnostics software executes the test script as configured.

Option	Default - General	Default using quick.tst, noinput.tst, or full.tst Script	All Possible Choices
Pass Control	Overall Time	Overall Passes	Individual Passes, Overall Passes, or Overall Time
Duration	01:00	1	Enter any number to choose the time duration of the test
Script File	N/A	quick.tst, noinput.tst, or full.tst	quick.tst, noinput.tst, or full.tst
Report File	None	None	User defined
Journal File	None	D:\noinput.jrl, D:\quick.jrl, or D:\full.jrl	User defined
Journal Options	Failed Tests	All Tests, Absent Devices, and Test Summary	Failed Tests, All Tests, Absent Devices, and Test Summary
Pause on Fail	N	N	Y or N
Screen Display	Control Panel	Control Panel	Control Panel or Running Tests
POST Card	N	N	Y or N
Beep Codes	N	N	Y or N
Maximum Fails	Disabled	Disabled	1-9999

Stress testing refers to the testing of software or hardware to determine whether its performance is satisfactory under any extreme and unfavorable conditions, which may occur as a result of heavy network traffic, process loading, underclocking, overclocking and maximum requests for resource utilization. It is the process of determining the ability of a computer, network, program or device to maintain a certain level of effectiveness under unfavorable conditions.

How to Stress Test a Computer

1. Close all open programs.
2. Right click the bottom bar (taskbar) on a windows computer and select task manager.
3. If you have a slow internet connection and are looking to test a network intensive program, use the networking tab info; otherwise select the **performance tab**.



Tips

- Adding more RAM will help your speed. This is because if the processor has more RAM to work with, it can work faster. Adding RAM is usually the first thing you want to do to speed up your computer.

Stress testing is used in the following contexts:

1. Software

Stress testing emphasizes availability and error handling under extremely heavy loads to ensure software does not crash due to insufficient resources. It focuses on identified transactions to break transactions, which are heavily stressed during testing, even when a database has no load. The stress testing process loads concurrent users beyond normal system levels to find the system's weakest link.

2. Hardware

Stress testing ensures stability in normal computing environments.

3. Websites

Stress testing determines the limitations of any of the site's functionalities.

4. CPU

Stress testing modified as overvolting, undervolting, interlocking and overlocking are verified to determine whether they can withstand heavy loads by running a CPU-intensive program to test for system crashes or hangs. CPU stress testing is also known as torture testing.



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Learning Task 3:

Directions: TRUE or FALSE: Draw is the statement is correct and if not.

- _____ 1. There are three Standard Scripts for Burn-in Test.
- _____ 2. quick.tst script performs a series of tests that require the user to interact with the test software.
- _____ 3. noinput.tst script performs a detailed and comprehensive test on all hardware components, including those that require user input.

- _____4. Stress testing for Websites determines the limitations of any of the site's functionalities.
 _____5. Adding more RAM will help to speed up the computer.

Learning Task 4:

Direction: Using a bond paper and coloring materials, make an illustration on how to Stress Test a Computer. Follow the step-by-step procedure of it.



EVALUATE NOW

IV. SUMMATIVE ASSESSMENT:

A. WRITTEN TASK:

Directions: Rearrange or unscramble the jumbled letters and use the given clue to form a proper word.

SSSERT STTENIG

_____1. It is a process of determining the ability of a computer, network, program or device to maintain a certain level of effectiveness under unfavorable conditions?

AEEIIDMMT IUBNNR

_____2. It enables to run an existing script and to select configuration options.

EEEDDFRR IUBNNR

_____3. It enables to create a new script.

IUBNNR ESSTT

_____4. It usually performed on hardware devices and equipment within the manufacturing facility.

AEOFRSTW

_____5. The context of Stress testing focuses on identified transactions to break transactions, which are heavily stressed during testing, even when a database has no load.

Directions: Matching Type: Match Column A to Column B. Write the letter of the correct answer.

Column A	Column B
1. It ensures stability in normal computing environments	A. CPU stress Testing
2. It processes loads concurrent users beyond normal system levels to find the system's weakest link.	B. Hardware Stress Testing
3. It modified as overvolting, undervolting, interlocking and overlocking	C. Software Stress Testing
4. It determines the limitations of any of the site's functionalities.	D. Stress Testing
5. It refers to the testing of software or hardware to determine whether its performance is satisfactory under any extreme and unfavorable conditions.	E. Websites Stress Testing

B. PERFORMANCE TASK

(For MDL Learners) Direction: Read and accomplish the table based on performing immediate burn-in testing. Use a separate sheet of paper if needed.

(For ODL Learners) Direction: Fill-in the table with the correct response on performing immediate burn-in testing. (Use jam board in execution of the performance task)

OPTION	DEFAULT GENERAL	DEFAULT USING SCRIPTS	ALL POSSIBLE CHOICES
Pass control			
Script File			
Screen Display			
Journal Option			

References:

<https://www.techopedia.com/definition/30201/burn-in-test>

<https://www.techopedia.com/definition/15310/stress-testing>