A+ Guide to Hardware 9th edition Andrews Test Bank

SKU: 9781305266452-TEST-BANK

Chapter 2 Working Inside Desktop Computers and Laptops

TRUEFALSE

1.
When disassembling a computer, it's okay to stack circuit boards on top of each other as long as you follow ESD protection rules.

(A) True

(B) False

Answer : (B)

2.
Immediately after you unplug the computer from the power outlet, you're safe to begin working inside the case.

(A) True

(B) False

Answer : (B)

3.
The motherboard sits on elevated screw holes or spacers to keep it from touching the case.

(A) True

(B) False

Answer : (A)

4.
A system always needs the 4-pin auxiliary power connector, and sometimes needs the P1 connector as well.

(A) True

(B) False

Answer : (B)

5.
Some boards designed to support multiple PCIe video cards will have additional power connectors on the board to power wattage-hungry cards.

(A) True

(B) False

Answer : (A)

MULTICHOICE

6. Which statement is NOT a good practice when working inside a computer case?

(A) be sure to hold expansion cards by the edge connectors

(B) remove loose jewelry

(C) don't touch a microchip with a magnetized screwdriver

(D) don't touch the inside of a computer that is turned on

Answer : (A)

7. What is the second step in opening the case of a working computer?

(A) press and hold down the power button for a moment

(B) back up important data

(C) power down the system and unplug it

(D) open the case cover

Answer : (C)

8. What do you call a connector on a motherboard that consists of pins that stick up from the board?

(A) jumper

(B) socket

(C) pin array

(D) header

Answer : (D)

9. What are round plastic or metal pegs that separate the motherboard from the bottom of the case known as?

(A) header

(B) standoff

(C) insulator

(D) elevator

Answer : (B)

10. In what order should you install components into the case after disassembling a computer?

(A) power supply, drives, motherboard, cards

(B) drives, motherboard, cards, power supply

(C) cards, motherboard, power supply, drives

(D) motherboard, drives, cards, power supply

Answer : (A)

11. Which statement is true regarding the installation of the motherboard and connecting power?

(A) there are typically three screw sets that hold the motherboard to the case

(B) you can use an adapter to convert two 6-pin connectors to a PCIe connector

(C) the P1 connector is used for PCIe devices

(D) a 4-pin power cord supplies supplemental power to the processor

Answer : (D)

12. What type of connector is not typically found on the front panel header?

(A) Power SW

(B) HDD LED

(C) SATA controller

(D) Power LED+

Answer : (C)

13. What does a small triangle embedded on a connector signify?

(A) use caution when using the connector

(B) the wire nearest the triangle is pin 1

(C) the pin near the triangle should be matched with a circular pin

(D) the connector is optional and need not be attached

Answer : (B)

14. Where should you clip your ESD strap when opening a computer case?

(A) power supply

(B) computer case

(C) electrical outlet

(D) the floor

Answer : (B)

15. Most manufacturers or retailers of laptops offer a warranty that lasts for at least how long?

(A) 1 year

(B) 2 years

(C) 3 years

(D) 90 days

Answer : (A)

16. What diagnostic software is used by several manufacturers, and can run tests on keyboards, video, speakers, touchpad, optical drives, wireless LANs, motherboard, processor, ports, hard drive, and memory?

(A) PC-Fixit

(B) DiagNow

(C) PC-Doctor

(D) WinScan

Answer : (C)

17. If a ground strap is unavailable, what should be done to dissipate any ESD before working on a laptop?

(A) Touch any part of the laptop

(B) Wash your hands

(C) Move around prior to touching the device

(D) Touch a non-painted metallic surface on the laptop

Answer : (D)

18. What should be done after reassembling a laptop, but before installing the battery or AC adapter?

(A) Press the power button to drain any electricity in the system

(B) Attack ESD strap alligator clip to a different grounding source

(C) Gently shake the laptop to ensure nothing is loose inside of the case

(D) Remove the keyboard so that you can test proper voltage on the motherboard once the battery and/or AC adapter are reconnected.

Answer : (C)

19. Which component may be considered a field replaceable unit (FRU)?

(A) LCD screen

(B) power supply

(C) hard drive

(D) All of the above

Answer : (D)

20. Which of the following statements regarding working inside a laptop computer is true?

(A) When upgrading a laptop, you should use components that are the same brand as the laptop, or use only recommended components.

(B) If an internal component needs replacing, you should always replace the component rather than disable it.

(C) Repairing a laptop is always more cost effective than buying a new one.

(D) The LCD screen of a laptop is never considered to be a field replaceable unit.

Answer : (A)

21. When is it okay to touch the inside of a computer that is turned on?

(A) When disassembling the computer

(B) When using a multimeter to measure voltage output

(C) When reassembling the computer

(D) When a qualified electrician is present

Answer : (B)

22. A system will always require what power connector?

(A) 4-pin auxiliary

(B) 6-pin PCIe power connector

(C) P1 power connector

(D) 8-pin PCIe power connector

Answer : (C)

23. When removing screws while working on a laptop, what should be done with the screws?

(A) They should be disposed of

(B) They should be left inside the case of the laptop

(C) They should be stored or labeled

(D) They should be painted to indicate where they go

Answer : (C)

24. When handling motherboards, cards, or drives, which statement is NOT accurate?

(A) You should not touch chips on the device

(B) You should not hold expansion cards by the edges

(C) You should not touch any soldered components on a card

(D) You should not touch edge connectors

Answer : (B)

25. What is the very first step that should be taken when performing work with a computer?

(A) You should back up any important data

(B) You should ground yourself

(C) The components should be removed

(D) You should power down the system and unplug it.

Answer : (A)

26.
Sometimes a board may have an extra PCIe power connector. This connector comes in what two different pin numbers?

(A)

4-pin

(B)

6-pin

(C)

8-pin

(D)

8+1 pin

Answer :

27.
What are two resources that may be useful in disassembling a laptop computer?

(A)

Service manual

(B)

Part brochures

(C)

User manual

(D)

Diagnostic software

Answer :

28.
What two devices in a computer should be considered "black boxes", and should never be opened, due to risks involving charged capacitors?

(A)

monitor

(B)

power supply

(C)

hard drive

(D)

video card

Answer :

29.
What two laptop manufacturers provide their service manuals online free of charge?

(A)

HP

(B)

Sony

(C)

Lenovo

(D)

Dell

Answer :

30.

If the PC-Doctor software is installed on a computer's hard drive, what two different ways can the program be started?

(A)

Start menu shortcut

(B)

Command line utility

(C)

Load proper diagnostic CD

(D)

Press function key during startup sequence

Answer :

MATCH

31.
Match each item with a statement below.

ESSAY

32.
What items might be considered field replaceable units in laptop?

Graders Info :

Field replaceable units in a laptop can include the memory modules, hard drive, LCD panel, video inverter, keyboard, touch pad, processor, optical drive, DC jack, fan, motherboard, CMOS battery, Mini-PCIe card, wireless card, or speakers.

33.
What are three tips you should keep in mind before beginning work inside a computer case?

Graders Info :

Make notes as you work so that you can backtrack later if necessary.
Remove loose jewelry that might get caught in cables and components as you work.
To stay organized and not lose small parts, keep screws and spacers orderly and in one place, such as a cup or tray.
Don't stack boards on top of each other.

When handling motherboards, cards, or drives, don't touch the chips on the device.
Hold expansion cards by the edges.
To protect a microchip, don't touch it with a magnetized screwdriver.
Never ever touch the inside of a computer that is turned on.
Never remove the cover or put your hands inside a monitor or power supply.
As you work, remember to watch out for sharp edges on computer cases that can cut you.
In a classroom environment, after you have reassembled everything, have your instructor check your work before you put the cover back on and power up.

34.
What is the first step you should perform before working inside the case of a working computer?

Graders Info :

If you are starting with a working computer, make sure important data is first backed up. Copy the data to an external storage device such as a flash drive or external hard drive. If something goes wrong while you're working inside the computer, at least your data will be safe.

35.
What should you do after you unplug the computer to be sure the power supply is completely drained, before you enter a computer case?

Graders Info :

After you unplug the computer, press the power button for about three seconds to completely drain the power supply. Sometimes when you do so, you'll hear the fans quickly start and go off as residual power is drained. Only then is it safe to work inside the case.

36.
Why are motherboards installed in the case using spacers?

Graders Info :

A motherboard is installed so that the bottom of the board does not touch the case. If the fine traces or lines on the bottom of the board were to touch the case, a short would result when the system is running. To keep the board from touching the case, spacers or standoffs may be used.

37.
List and describe three front panel connectors you will likely see going from the front panel to the motherboard.

Graders Info :

Power SW. Controls power to the motherboard; must be connected for the PC to power up
HDD LED. Controls the drive activity light on the front panel that lights up when any SATA or IDE

device is in use (HDD stands for hard disk drive; LED stands for light-emitting diode)
Power LED+. Positive LED controls the power light and indicates that power is on
Power LED-. Negative LED controls the power light; the two positive and negative leads indicate that power is on
Reset SW. Switch used to reboot the computer

38.
What should be done if you are planning to remove several components from a computer?

Graders Info :

draw a diagram of all cable connections to the motherboard, expansion cards, and drives. You might need the cable connection diagram to help you reassemble. Note where each cable begins and ends, and pay particular attention to the small wires and connectors that connect the lights, switches, and ports on the front of the case to the motherboard front panel connectors. It's important to be careful about diagramming these because it is so easy to connect them in the wrong position later when you reassemble. If you want, use a felt-tip marker to make a mark across components, to indicate a cable connection, board placement, motherboard orientation, speaker connection, brackets, and so on, so that you can simply line up the marks when you reassemble. This method, however, probably won't work for the front case wires because they are so small. For these, consider writing down the color of the wires and their position on the pins.

39.
What should be done before a motherboard is removed from a case?

Graders Info :

Some processors have heavy cooling assemblies installed on top of them. For these systems, it is best to remove the cooler before you take the motherboard out of the case because the motherboard is not designed to support this heavy cooler when the motherboard is not securely seated in the case.

40.
What caution should be taken when working on a laptop or device that may be under a warranty?

Graders Info :

The warranty often applies to all components in the system, but it can be voided if someone other than an authorized service center services the laptop. Therefore, you, as a service technician, must be very careful not to void a warranty that the customer has purchased. Warranties can be voided by opening the case, removing part labels, installing other-vendor parts, upgrading the OS, or disassembling the system unless directly instructed to do so by the authorized service center help desk personnel. Before you begin servicing a laptop, to avoid problems with a warranty, always ask the customer, "Is the laptop under warranty?" If the laptop is under warranty, look at the documentation to find out how to get technical support. Options are chat sessions on the web, phone numbers, and email. Use the most appropriate option. Before you contact technical support, have

the laptop model and serial number ready. You'll also need the name, phone number, and address of the person or company that made the purchase. Consider asking the customer for a copy of the receipt and warranty so that you'll have the information you need to talk with support personnel.

41.
How does working on and supporting a laptop differ from a desktop?

Graders Info :

Laptops and their replacement parts cost more than desktop PCs with similar features because their components are designed to be more compact and stand up to travel. They use compact hard drives, small memory modules, and CPUs that require less power than regular components. Whereas a desktop computer is often assembled from parts made by a variety of manufacturers, laptop computers are almost always sold by a vendor that either manufactured the laptop or had it manufactured as a consolidated system. Factors to consider that generally apply more to laptop than desktop computers are the original equipment manufacturer's warranty, the service manuals and diagnostic software provided by the manufacturer, the customized installation of the OS that is unique to laptops, and the advantage of ordering replacement parts directly from the laptop manufacturer or other source authorized by the manufacturer.