Exam Report: 3.6.5 Practice Questions

Date: 3/6/2020 7:09:04 pm
Time Spent: 8:12

Candidate: Garsteck, Matthew
Login: mGarsteck

Overall Performance

Your Score: 64%

Passing Score: 80%

View results by: Objective Analysis Individual Responses

Individual Responses

Question 1: Correct

A few of your employees have complained that their computers sometimes shut down spontaneously. You have noticed that these employees all work in a part of the building where the air condition does not adequately cool the room. These employees also use CPU-intensive programs. You suspect that the spontaneous shutdowns are caused by overheating.

Which of the following is the SIMPLEST way to monitor the temperature of the computer's CPU?

- Touching the PCs with your hand or fingers.
- Placing a thermostat on the PC at the warmest location.
- Viewing the temperature from within the BIOS.
- Placing a thermostat on the CPU.

Explanation

An easy way to check the temperature of your computer's CPU is to boot to the BIOS and locate the hardware monitor section. Different BIOS programs have different section labels. Some of the more common labels are H/W Monitor, Status, and PC Health. From within this section, you can view the temperature of your CPU.

The other methods listed will not give you an accurate CPU temperature.

References

TestOut PC Pro - 3.6 Processor Troubleshooting
[e_processor_pro6_exam.xml Q_TRB_PROC_01]

Question 2: Correct

Since it has no moving parts, a CPU will usually work properly for several years.

Which of the following is a common factor that MIGHT cause a CPU to fail prematurely?

- High CPU usage
- Electromagnetic interference
- Unsupported memory modules
- Electrostatic discharge (ESD)
- Magnetic field

Explanation

Electrostatic discharge is the only listed factor that can cause a CPU to fail prematurely. Be careful while working on your CPU to avoid ESD by working on a static mat grounded with a wrist strap.

References

TestOut PC Pro - 3.6 Processor
Troubleshooting [e_troubleshooting_pp6_exam.xml Q_TRB_PROC_02]

Question 3: Correct

Zoey has brought her computer in for servicing. When she dropped off her computer, she mentioned that her computer will sometimes spontaneously reboot and freezes occasionally.

Which of the following is the MOST likely cause of this problem?

- Overheated CPU
- Failed UPS
- Failing drive
- Bad network card

Explanation

An overheated CPU will cause a spontaneous reboot or intermittent system crashes. A spontaneous reboot can also be caused by a bad power supply or device driver. A clicking noise when reading or writing data from the hard disk is an early sign of a failing drive. A failed UPS (or failed battery in the UPS) would result in a complete loss of power to the computer if the outlet (or wall) power was lost. A system notification would indicate whether there is a failed drive, as it would not allow reading or writing.

References

TestOut PC Pro - 3.6 Processor
Troubleshooting [e_troubleshooting_pp6_exam.xml Q_TRB_PROC_03]

Question 4: Incorrect

To improve system performance, you have configured a motherboard to run with a higher multiplier than what the CPU is specified to use. Since doing this, the system has become unstable and crashes frequently.

To restore system stability, which of the following should be completed?

- Make sure the switch on the power supply is set to the correct voltage.
- ~~Make sure the BIOS firmware supports the overclocking settings you're using.~~
- Back off on the overclocking settings until the system runs in a stable manner.
- Replace the CMOS battery to make sure the real-time clock has the correct time.

Explanation

Configuring a motherboard to run with a higher multiplier than what the CPU specifies is called overclocking. If the system becomes unstable and crashes frequently, the multiplier may be set higher than the CPU can handle. To resolve this issue, lower the multiplier until the system becomes stable again.

The real-time clock on the motherboard is not a factor in this scenario and has no role in overclocking. If the power supply is set to the wrong voltage, system components can be damaged, but not cause the behavior described in the scenario. BIOS firmware is not a factor in overclocking issues.

References

TestOut PC Pro - 3.6 Processor
Troubleshooting [e_troubleshooting_pp6_exam.xml Q_TRB_PROC_04]

Question 5: Incorrect

You have just upgraded the CPU on your computer. You consulted the motherboard documentation to make sure the CPU is compatible with the motherboard. However, when you turned the system on, it locks up shortly after startup.

While troubleshooting this issue, which of the following are the BEST steps to try first? (Select TWO).

- [ ] Test the power supply using a multimeter.
- [x] Make sure the CPU is seated properly, oriented properly, and locked into the socket.
- [x] ~~Make sure the power cord is plugged in and the power supply switch is in the On position.~~
- [ ] Look for something that could be causing the new CPU to overheat.
- [ ] Replace the CMOS battery.

Explanation

The most common issues that occur when a new CPU has been installed are:

1. The system locks up because it gets too hot. You should check for the following:
   - The heatsink and fan are not placed correctly or are in poor condition
   - Thermal paste or the thermal pad have not been used between the processor and the heatsink
   - The heatsink is not firmly attached to the processor

2. The system locks up because the CPU is not properly seated or is oriented incorrectly.

References

TestOut PC Pro - 3.6 Processor Troubleshooting [e_proctsh_pp6_exam.xml Q_TRB_PROC_05]

Question 6: Correct

After working without problems for a couple of years, your computer has begun to lock up. You suspect that it is a thermal issue, but you can't find any component that is not functioning correctly. You have not replaced the CPU or installed any new devices. The CPU cooling fan and the power supply fan are working properly. The lock-ups are happening with increasing frequency.

Which of the following is the MOST common condition that might explain these symptoms?

- ( ) The internal temperature sensor is beginning to malfunction intermittently.
- ( ) The BIOS has never been flashed and has gotten more and more out of date.
- ( ) The power supply has been switched to the wrong voltage setting.
- (•) An accumulation of dust has gradually built up.

Explanation

Over time, an accumulation of dust can gradually build up and cause significant overheating by constricting airflow through the system case. Vent holes and heatsink fins can become clogged with dust, which prevents heat dissipation. Remove the dust with compressed air or an anti-static vacuum.

The BIOS should be flashed when firmware updates are available, but failing to do this will not lead to system overheating. Switching the power supply to the wrong voltage can damage system components, but this would not lead to the system locking up more frequently over time--the damage would happen immediately. A malfunctioning heat monitor could cause the system to lock up, but the frequency is likely to be intermittent, not consistently increasing in frequency.

References

TestOut PC Pro - 3.6 Processor Troubleshooting [e_proctsh_pp6_exam.xml Q_TRB_PROC_06]

Question 7: Incorrect

Your system crashes at various times: sometimes on startup, sometimes when running a software application, sometime when a certain group of applications is running. You suspect a malfunctioning CPU,

but none of the common issues seem to be present. You have not configured overclocking. There is no overheating. The CPU is seated correctly and the CPU is not socket.

What can you do to definitively determine if the CPU is causing the system crashes?

- Replace the suspect CPU with a known good CPU of the same make and model.
- Throttle the processor to reduce the operating frequency and minimize power consumption.
- ~~Switch to a comparable CPU from a different manufacturer.~~
- Downgrade to a CPU that has fewer cores and is less demanding on your system resources.

Explanation

Replacing the suspect CPU with a known good CPU of the same make and model is the best way to determine if the CPU is the problem. There is only one variable in this test. If the system stops crashing after the CPU was replaced, it is safe to assume that the suspect CPU was not functioning properly.

Any other course of action introduces more variables to the environment. If intermittent problems continue to occur, you are no closer to finding the cause.

References

TestOut PC Pro - 3.6 Processor
[e_troubleshooting_pro6_exam.xml Q_TRB_PROC_07]

Question 8: Incorrect

Lately, your computer is spontaneously shutting down after only a few minutes of use. What is the likely cause? (Select TWO).

- [ ] The power connector for the fan was not connected to the motherboard.
- [x] The heat sink and fan were not installed correctly.
- [ ] Someone unplugged the computer without performing a proper shutdown first.
- [ ] The CPU is not supported by the BIOS.
- [x] ~~The CPU is bad.~~

Explanation

An improperly installed fan or heat sink may cause overheating of the CPU, which would likely cause the computer to shut down shortly after power-on. Dust buildup and improper ventilation in the computer can also cause CPU overheating.

A bad CPU or a CPU not supported by the BIOS can cause the computer to display a blank screen when trying to power on, which would prevent even a few minutes of use. Although you should always shutdown your computer using the proper steps, it is unlikely that this would cause the computer to shut down after a few minutes of use.

References

TestOut PC Pro - 3.6 Processor
[e_troubleshooting_pro6_exam.xml Q_TRB_PROC_08]

Question 9: Correct

You have just finished upgrading the CPU in your desktop system. After running for about 15 minutes, the system spontaneously shuts down.

Which steps should you take to begin troubleshooting the issue? (Select TWO).

- [ ] Check the power supply voltage switch.
- [ ] Remove any unnecessary components and run the system.
- [x] Check the CPU fan power.

- [x] Check the thermal shutdown threshold in the BIOS.
- [ ] Replace the power supply.

Explanation

Because you have just replaced the processor, the most likely cause of the problem is related to the CPU. System lockups and restarts can be caused by an overheated processor. Make sure that the CPU fan is running and that you have used thermal paste between the CPU and the heat sink. Also, check to see what the thermal shutdown rating is for the new CPU and verify that the thermal shutdown threshold is set in the BIOS accordingly.

References

TestOut PC Pro - 3.6 Processor
Troubleshooting
[e_processor_pp6_exam.xml Q_TRB_PROC_10]

Question 10: Correct

You work at a computer repair store. You just upgraded the processor (CPU) in a customer's Windows-based computer. The customer purchased the latest AMD Phenom II processor, and you installed it in the computer. When you power the computer on, you only see a blank screen.

Which of the following is MOST likely causing the computer displaying a blank screen? (Select TWO).

- [ ] The heat sink and fan were not installed correctly.
- [x] The CPU is not supported by the BIOS.
- [ ] Someone unplugged the computer without performing a proper shutdown first.
- [ ] The power connector for the fan was not connected to the motherboard.
- [x] The CPU is bad.

Explanation

A bad CPU or a CPU not supported by the BIOS can cause the computer to display a blank screen when trying to power on. If the processor is not supported by the BIOS, you might be able to perform a BIOS update to make it recognize the new processor. However, you would need to install a supported processor first, flash the BIOS, and then re-install the new processor.

An improperly installed fan or heat sink may cause issues shortly after power-on, but will not initially cause the computer to boot to a blank screen. Although you should always shutdown your computer using the proper steps, it is unlikely that this would cause the computer to boot to a blank screen.

References

TestOut PC Pro - 3.6 Processor
Troubleshooting
[e_processor_pp6_exam.xml Q_TRB_PROC_11]

Question 11: Correct

Steve, a computer technician, received a helpdesk ticket for a computer that will not start. When Steve powered the computer on, there was one long and two short beeps. Which of the following programs is reporting this error condition?

- ( ) initramfs
- ( ) ESP
- ( ) CMOS
- (•) POST

Explanation

The Power on Self Test (POST) is a software process initiated by the BIOS during the boot process that

verifies that computer hardware works properly. When a device has failed, a series of beeps indicate the type of problem. In this case, one long and two short beeps typically indicates a failed video card.

initramfs is used as the first root filesystem that your machine has access to. It is used for mounting the real rootfs, which has all of your data.

Complementary Metal-oxide Semiconductor (CMOS) is a technology for constructing integrated circuits that refers to the system configuration stored in a battery-powered memory chip used on computers.

Extensible Firmware Interface Partition (ESP) is a partitioning scheme used by UEFI. ESP is the format used for the boot sector where the operating system and utilities for starting a computer are stored.

References

TestOut PC Pro - 3.6 Processor Troubleshooting [pcpro_pp6_exam.xml Q_TRB_PROC_12]