What are the health and safety precautions that need to be taken before you start and during the practical test?

Health and safety precautions that need to be taken include; checking the surrounding area for any spills or loose caballing. Ensuring that you Earth yourself to prevent electrostatic discharge. Make sure the power cable is unplugged on both ends, and any other cables are unplugged and out of harm’s way.

What preparation is required prior to the system build?

Prior to the system build, ensure that the machine you are using is fully functional. Follow the health and safety precautions above. Once you have verified that the system is fully functional, unplug everything, and set the tower on a flat surface. Ensure that everything has been taken out of the computer. Start with unscrewing and removing the power supply, and end with unscrewing and removing the motherboard. You are free to take out the other components in any order you desire, but make sure that the power supply is removed first and the motherboard is removed last. Also ensure that you know where everything goes and where the screws are inserted. Do not lose any screws by either setting them down on sticky tape, or placing them in their holders from the previously removed device. If needed, you can draw out where everything goes as you go along with the system build.

Describe the steps taken to build the system unit correctly?

When the system is empty, place the motherboard in first. Put the screws in the correct slots and hand tighten them, going diagonally from screw to screw, then tighten them a bit more with a screwdriver. Once the motherboard is securely in the system unit, slot the RAM into the appropriate slot and the CPU into the appropriate slot. These next components can go into the system in any order you wish. Place the hard drive into the internal slot and screw it in, once again hand tightening the screws first and then use the screwdriver. Place the CD/DVD drive into the appropriate location, and again, hand tighten the screws and then use the screwdriver, and again, follow the same procedure for the floppy disk drive. Place the fan in followed by the heat sink and tighten the screws with the screwdriver. Finally, put the power supply in and once again, hand tighten, then tighten the screws with a screwdriver. Connect the IDE cable from the hard drive to the motherboard and the same for the CD/DVD drive. Connect the power supply to the motherboard and CD/DVD drive. Ensure all connections for the fan, CPU power and main power button are all connected to the motherboard before booting up the system unit.

If any difficulties or problems occurred, describe how they were resolved?

When setting up the system unit, one of the screws for the motherboard was not there, this was easily resolved with a replacement screw. Another problem that occurred with setting up the system unit was an error with the RAM. When loading up the machine, the RAM could not be found, this was because it was placed in the RAM slot the wrong way and was an easy fix.

Describe the main steps taken to install the operating system?

Before installing the operating system, set the boot order for the computer to boot from a CD instead of from the hard drive. This will load the operating systems setup files before the computer boots to its originally installed operating system. Through the BIOS, in the boot menu set the CD/DVD drive as the first boot device. When this is done, insert the operating system – for my setup, I used Windows XP, insert the CD into the drive and press any key, this will load up the set up files. When the set up files are loaded, press enter to install Windows XP onto the system unit. Agree to the licensing and delete any old partitions that may exist on the machine by pressing D, and then pressing L to confirm the deletion. Create a new partition and press enter. Format the partition using the NTFS File System (Quick). Allow the operating system to setup and install, and when prompted too, change the language region to Ireland. Enter the product key and set the computer name. Select the correct time zone and choose typical settings for the network settings. When this is all done, simply wait for the installation to finalise.

To add a user to the computer, ensure that you are logged in as the admin. When logged in on the admin account, click start and right click on My Computer and select Manage. Expand Local Users and Groups and double click on the Users. Right click and select New User. Set the username (JosephTierney) and enter the accounts full name below. Set the account password to Password1, and uncheck the “User must change password at next logon” box. Select create and the user will be added to the computer.

If any difficulties or problems occurred, describe how they were resolved?

While setting up the operating system, a problem I ran into was the computer booting up the old operating system and thus not letting me install a fresh version. This was resolved by simply going into the BIOS and changing the BOOT Sequence in the BOOT Menu to boot up the machine from a CD before the hard drive.

Describe the steps required to set up a periphery device.

To set up a periphery device, more specifically, a printer, click start and search for control panel. Click into view devices and printers. Right click and select add devices and printers. Select HP Deskjet 800. When it has been added, right click the new printer and set as the default printer. Right click again on the new printer and select printer properties. In printer properties, go to the security tab, to get the security tab, select view tools and uncheck simple file sharing. Select the user you have created. For this user, check print and manage documents, and make sure everything else is unchecked.

How would you complete the process more effectively in the future?

To complete this process more effectively in the future I would bring a drawn out version of the inside of a system unit. This would help with timing and knowing exactly where to put everything without the fear of forgetting and messing up the building process. I would also use some sort of container or sticky tape to hold the screws that come out of the machine in order to prevent losing any of them.