

DEPARTMENT OF EDUCATION- NATIONAL CAPITAL REGION
SCHOOLS DIVISION OF PASAY CITY

MODULE IN TLE 9 (Computer System Servicing)
First Grading / Week 2 / Day 3

Name of Student: _____ Grade and Section: _____
Name of Teacher: _____

- Objectives:**
Assemble computer hardware in accordance with established procedures and system requirements.
- *Distinguish safety precautions and personal protective equipment in assembling computer hardware.*
 - *Classify precautionary measures in assembling computer hardware*
 - *Express ideas and opinion about the importance of using safety precautionary measures observed in assembling computer hardware.*



Lesson: Safety Precautions/Personal Protective Equipment (PPE) **WHAT TO KNOW**

The definition of safety precaution in the dictionary is a precaution that is taken in order to ensure that something is safe and not dangerous.

Personal Protective Equipment. It refers to protective clothing, helmets, goggles, or other gear designed to protect the wearer's body or clothing from injury by electrical hazards, heat, chemicals, and infection, for job-related occupational safety and health purposes.



- PPE can also be used to protect the working environment from pesticide application, pollution or infection from the worker.
- It is important that students and teachers during their laboratory period should be required to use personal protective equipment. Here are some examples of PPE:

PERSONAL PROTECTIVE EQUIPMENT



Goggles A large spectacles, with shields around the rims, for protecting the eyes from dust, excessive light, wind, etc.



Apron A garment worn over the front of the body as a protection for one's cloth.



Gloves The covering material with a separate sheath for each finger used for hand protection.



Rubber Sole A special type of shoes used to prevent electrical shock and for waterproofing and insulating purposes.



Face Mask A covering for the face to prevent the inhaling or absorbing dust and other chemicals.



Anti-Static and Safety Precautions

The little shock you experience while you are walking across a carpeted floor or when you touched a door knob, table, counter or even another person is a result of static electricity. Static electricity is the discharge of electricity between two objects with different electrical potential. Humans can't feel a static shock until it is several thousand volts strong, but it takes less than 30 volts to fry a sensitive computer component, such as a stick of RAM or a processor.

REFERENCES FOR FURTHER ENHANCEMENT

- Book/Module: TLE ICT Computer Hardware Servicing 9, page 65
- YouTube: <https://www.youtube.com/watch?v=g2yAHDkC6Nw>
<https://www.youtube.com/watch?v=XVNMj0ZxZsl>

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TAKE NOTE

Most of the computer technicians and home computer builders have to guard their computers against the deadly ravages of static electricity, as well as take steps to avoid injury.

Safety and Anti-Static Rules

- Always use an anti-static wrist strap when working on a computer (except when working on monitors)
- Always disconnect a computer from the AC power and from any powered peripherals while you are working on it.
- Always grasp a metal part of the computer chassis with your bare hand before you touch anything inside. Do this even if you are wearing an anti-static wristband.
- Always handle electronic components by a non-conducting (non-metallic) edge. Don't touch the pins or other connectors.
- Never plug an ATX power supply into AC power unless it is connected either to a computer's motherboard or to a dummy test load.
- Always use a UL-approved surge protector or an Uninterruptible Power Supply that incorporates surge and spike protection.
- Never eat, drink, or smoke while working on a computer

WHAT TO PROCESS



EXERCISE 1: IDENTIFY

Directions: Read the following sentences below and identify what is being described on each item.

- _____ 1. It is taken in order to ensure that something is safe and not dangerous.
- _____ 2. It refers to protective clothing, helmets, goggles, or other gear designed to protect the wearer's body or clothing from injury by electrical hazards, heat, chemicals, and infection, for job-related occupational safety and health purposes.
- _____ 3. A large spectacle, with shields around the rims, for protecting the eyes from dust, excessive light, wind, etc.
- _____ 4. A special type of shoes used to prevent electrical shock and for waterproofing and insulating purposes.
- _____ 5. A garment worn over the front of the body as a protection for one's cloth.
- _____ 6. A covering for the face to prevent the inhaling or absorbing dust and other chemicals.
- _____ 7. The covering material with a separate sheath for each finger used for hand protection.
- _____ 8. It can be used to protect the working environment from pesticide application, pollution or infection from the worker.
- _____ 9. This tool is use once handling computer parts to prevent grounding/electric shocks.
- _____ 10. It is the discharge of electricity between two objects with different electrical potential.

EXERCISE 2: TRUE OR FALSE

Directions: Read carefully each statement below. Place T on the line if the statement is TRUE. Place F if the statement is FALSE.

- _____ 1. Always disconnect a computer from the AC power and from any powered peripherals while you are working on it.
- _____ 2. Always grasp a metal part of the computer chassis with your bare hand before you touch anything inside. Do this even if you are wearing an anti-static wristband.
- _____ 3. Always handle electronic components by a non-conducting (non-metallic) edge. Don't touch the pins or other connectors.
- _____ 4. Always use a UL-approved surge protector or an Uninterruptible Power Supply that incorporates surge and spike protection.
- _____ 5. Never use an anti-static wrist strap when working on a computer (except when working on monitors)
- _____ 6. Everyone is allowed to eat, drink, or smoke while working on a computer.
- _____ 7. Never plug an ATX power supply into AC power unless it is connected either to a computer's motherboard or to a dummy test load.
- _____ 8. Static electricity is the discharge of electricity between two objects with different electrical potential.
- _____ 9. Apron is a garment worn over the front of the body as a protection for one's cloth.
- _____ 10. PPE can also be used to protect the working environment from pesticide application, pollution or infection from the worker.

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EXERCISE 3: INSIGHT

Directions: Express your insights or opinion about the following questions. Write your answers after each question.

1. Why do you need to make sure the cleanliness of work environment or workplace?

2. Why do you need to use personal protective equipment in our workplace environment?

THINGS TO REMEMBER!

Safety Precautions/Personal Protective Equipment (PPE)

- 1. Personal Protective Equipment (PPE) refers to protective gear designed to protect the wearer's body or clothing from injury by electrical hazards, heat, chemicals, and infection, for job-related occupational safety and health.
- 2. Examples of PPE: Goggles, Gloves, Facemask, Rubber Sole and Apron
- 3. Static electricity is the discharge of electricity between two objects with different electrical potential.
- 4. Most of the computer technicians and home computer builders have to guard their computers against the deadly ravages of static electricity, as well as take steps to avoid injury.



EVALUATION: MULTIPLE CHOICE

Directions: Read each question carefully and choose the letter of the best answer.

- 1. It refers to the discharge electricity between two objects with different electrical potential.
a. Kinetic b. Potential c. Resistance d. Static Electricity
- 2. A measure taken in advance to prevent something dangerous, unpleasant, or inconvenient from happening.
a. Ignorance b. Laxity c. Lack of caution d. Precaution
- 3. It refers to protective clothing, helmets, goggles, or other gear designed to protect the wearer's body or clothing from injury by electrical hazards, heat, chemicals, and infection, for job-related occupational safety and health purposes.
a. CSS b. OHS c. PPE d. None of the above
- 4. It is a garment worn over the front of the body as a protection for one's cloth.
a. Apron b. Face Mask c. Gloves d. Goggles
- 5. It is a covering for the face to prevent the inhaling or absorbing dust and other chemicals.
a. Apron b. Face Mask c. Gloves d. Goggles
- 6. This tool is use once handling computer parts to prevent grounding/electric shocks.
a. Anti-Static Wrist Trap c. Pliers
b. Compress Air d. Tweezers
- 7. A special type of shoes used to prevent electrical shock and for waterproofing and insulating purposes.
a. Black Shoes b. Crepe Sole c. Rubber Sole d. Sport Shoes
- 8. A large spectacle, with shields around the rims, for protecting the eyes from dust, excessive light, wind, etc.
a. Apron b. Face Mask c. Gloves d. Goggles
- 9. This is use to incorporates surge and spike protection.
a. Breaker c. Uninterruptible Power Supply
b. Extension Wire d. None of the above.
- 10. It is a covering for the hand protection against cold or dirt and typically having separate parts for each finger and the thumb.
a. Apron b. Face Mask c. Gloves d. Goggles

Prepared by:

JONALYN O. ROSARIO
Pasay City North High School
Tramo Campus

Name of Student: _____
Name of Teacher: _____

Grade and Section: _____

ANSWER KEY

EXERCISE 1: IDENTIFY

- 1. Precaution
- 2. PPE (Personal Protective Equipment)
- 3. Goggles
- 4. Rubber sole
- 5. Apron
- 6. Face mask
- 7. Gloves
- 8. PPE
- 9. Anti-static wrist strap
- 10. Static electricity.

EXERCISE 2: TRUE OR FALSE

- 1. T
- 2. F
- 3. T
- 4. T
- 5. F
- 6. F
- 7. T
- 8. T
- 9. T
- 10. T

EXERCISE 3: INSIGHT

1. Why do you need to make sure the cleanliness of our work environment or workplace?

Answers may differ due to personal Insight and opinion.

2. Why do you need to use personal protective equipment in our workplace environment?

Answers may differ due to personal Insight and opinion.

EVALUATION: MULTIPLE CHOICE

Directions: Read each item carefully. Choose the letter that corresponds to the correct answer in the space provided.

- 1. D
- 2. D
- 3. C
- 4. A
- 5. B
- 6. A
- 7. C
- 8. D
- 9. C
- 10. C