

JOB ROLE – WIREMAN-CONTROL PANEL

Sector – Electronics
(Qualification Pack Code: ELE/Q7302)



PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462013 , Madhya Pradesh, India

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UNIT 6: ELECTRICAL SAFETY

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Unit Objectives

The student will be able to:

- Describe the need of electrical safety,
- Demonstrate the use of safety material and equipment in electrical system,
- Demonstrate safety instructions.

Introduction

It is important to follow occupational health and safety standards while dealing with electrical components and appliances. Electrical safety at workplace is regulated by health and safety regulations, which state that all the employers are responsible for ensuring that all employees are safe from injuries and other risks at the workplace.



Need of Electrical Safety

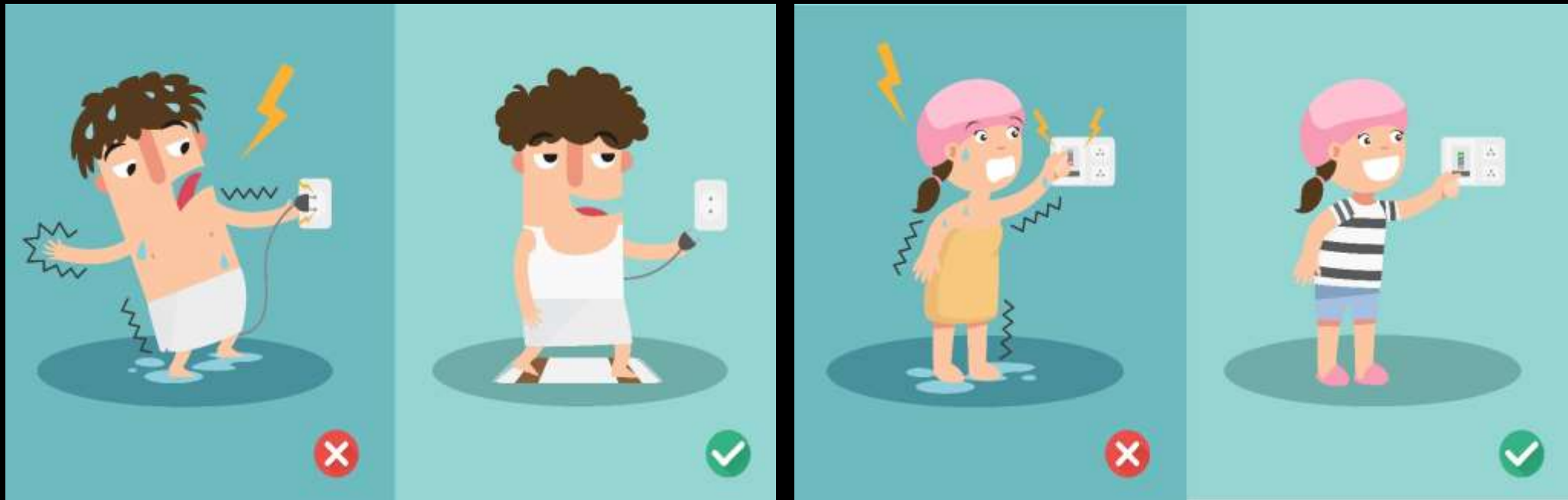
- Why it is **risky** to operate the **electrical equipment** in **wet area**?



It will **result** to an **electric shock**, if electrical safety is not correctly followed.

Electrical Safety

- **Electrical safety** is the **safety procedure and practices** use in electrical system.



Electrical Safety

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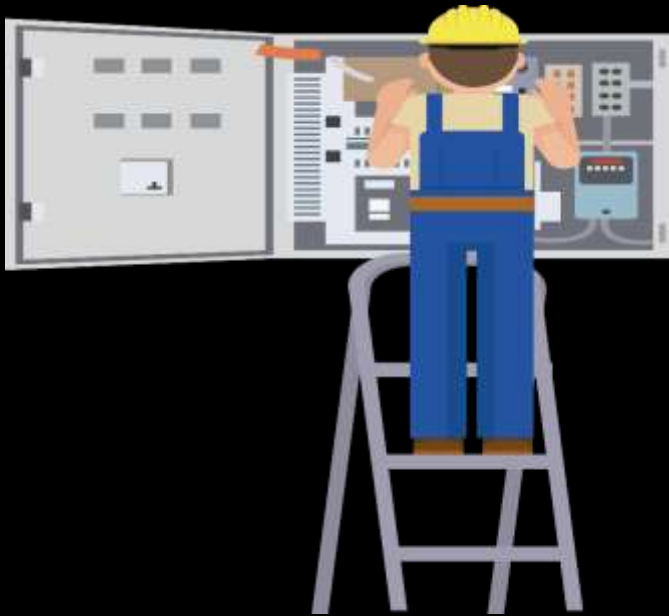
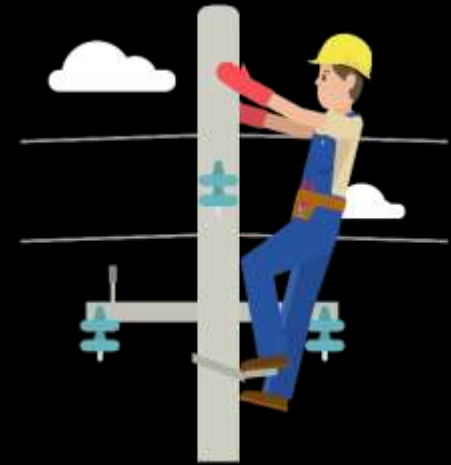
Safety rules and regulations are monitor

under following acts:

➤ Electrical Act, 2003

➤ Factories Act, 1948

➤ Workman's Compensation Act, 1923

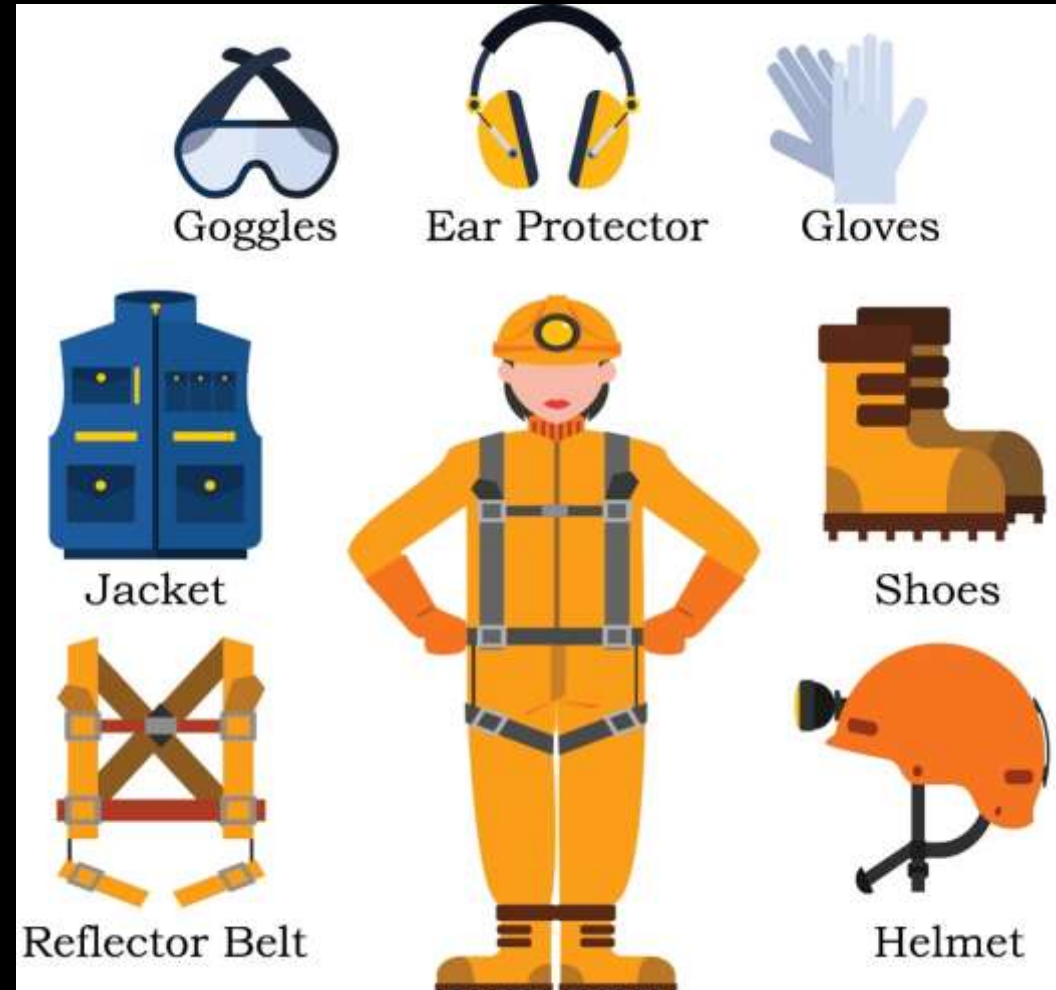


Different working positions of wireman

Safety Materials and Equipment

Common safety gears at workplace are:

- Gloves,
- Helmet,
- Goggles,
- Safety Boots,
- Hearing Protector,
- Safety Jacket,
- Reflector Belt.



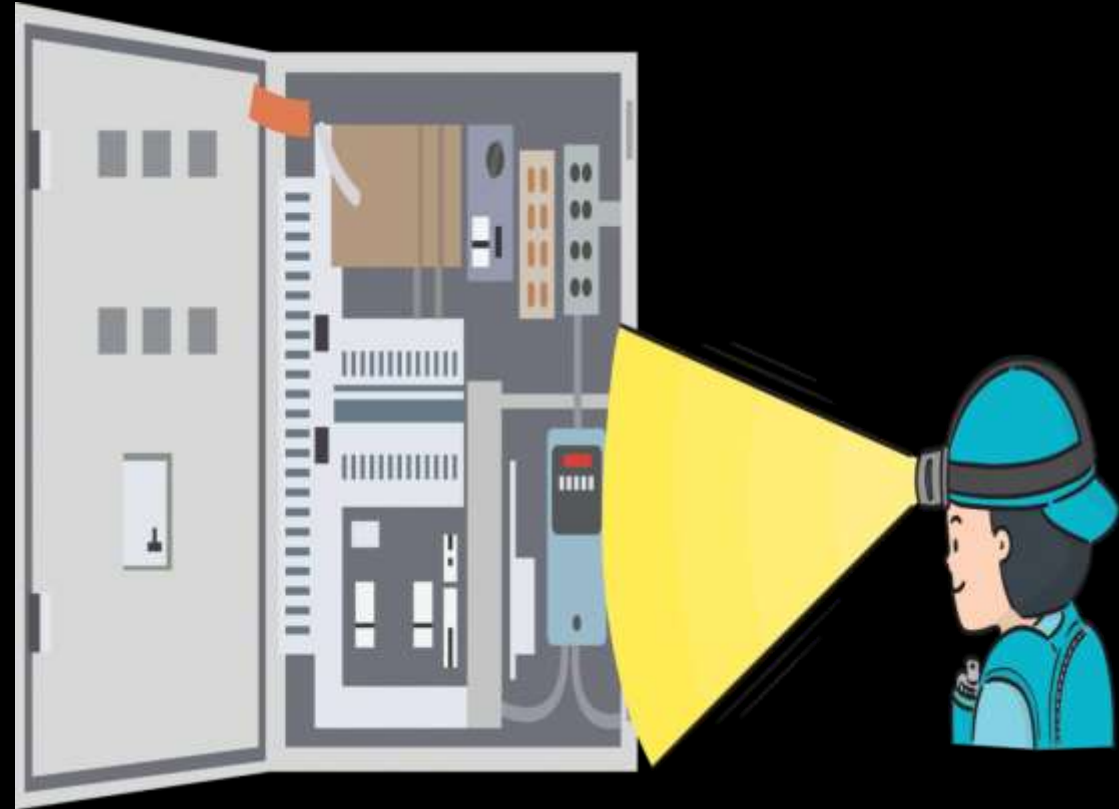
Safety Instructions

- Electrical safety is an important aspect, while working in electrical system.
- Turn off the power supply and cross check the power in the panel or appliance using phase tester.



Wireman working in control panel

- Always keep the flash light or torch near the control panel or wear the light on safety helmet.



Wireman having torch on helmet

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- Never work in wet location.



- Always wear the rubber shoes.



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- Mark the danger sign on the control panel.



- Use wooden ladder for electrical fitting.









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- Use circuit breaker for the safety of appliance.

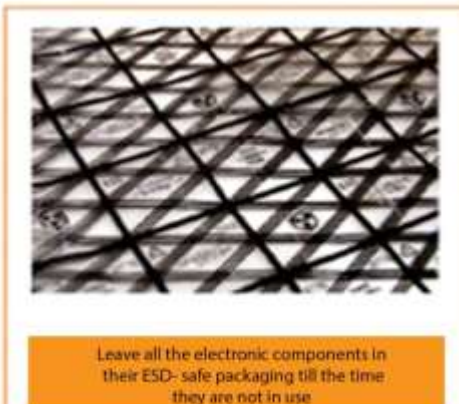
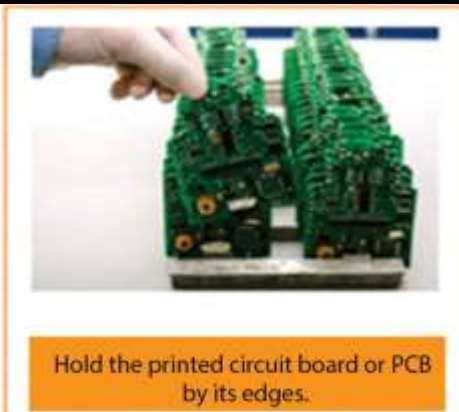


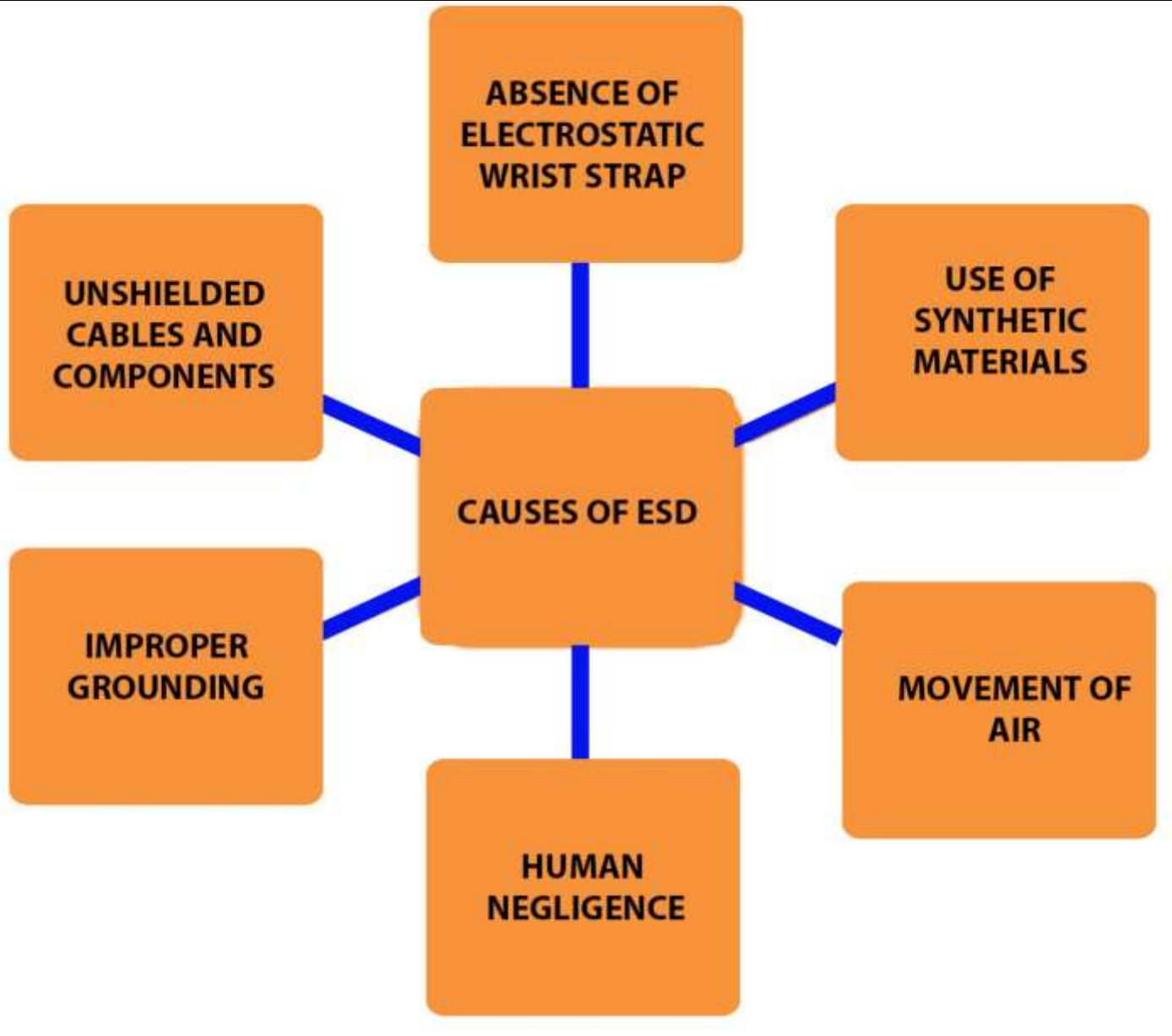
- Use the appropriate size of wire as per the load.

3 Gauge		100 amps
6 Gauge		65 amps
8 Gauge		50 amps
10 Gauge		30 amps
12 Gauge		20 amps
14 Gauge		15 amps

Electrostatic Discharge

- It is a sudden flow of charges between two charged objects.





Summary

- Electrical safety must be the priority for the technician.
- Common safety materials are Gloves, Shoes, Helmet, Goggles, Safety Boots, Hearing Protector, Safety Jacket, Reflector Belt.
- Follow the safety procedure at the workplace.
- Electrostatic Discharge is the sudden flow of charges between charged objects.

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