

WORKSHOP TECHNOLOGY II (ELECTRICAL)

Introduction

This module unit covers the following areas: safety regulations, hand tools and equipment, machine tools, diesel and petrol engines and water pumps. It is designed to equip the trainee with: knowledge, skills and attitudes that enable him/her to perform basic workshop tasks.

General Objectives

By the end of the module unit, the trainee should be able to:

- understand safety regulations in the workshop
- identify tools to be used in a conventional workshop
- understand the operations of petrol and diesel engines as well as pumps
- understand fundamentals of electrical installation
- understand fundamentals of building trades

Module Unit Summary and Time Allocation – (33 Hours)

Code	Sub-Module Units	Content	Total Hours
21.2.1	Electrical Installation	<ul style="list-style-type: none">Sources of electrical power supplySafe methods of electrical power supplyI.E.E. regulations on electrical installation	33
Total			33

ELECTRICAL INSTALLATION

Theory

- 21.2.01T0 *Specific Objectives*
By the end of the sub-module unit, the trainee should be able to:
- describe the sources of electrical power supply
 - explain the safe methods of supplying electrical power to electrical circuits
 - discuss the I.E.E regulations on electrical installation

- 21.2.01C *Competence*
The trainee should have the ability to safely supply electrical power to an electrical circuit

Content

- 21.2.01T1 Sources of electrical power supply
21.2.01T2 Safe methods of electrical power supply
21.2.01T3 I.E.E regulations on electrical installation

Practice

- 21.2.01P0 *Specific Objectives*
By the end of the sub-module unit, the trainee should be able to:

- select suitable source of electrical power supply
- safely apply power to electrical circuits
- interpret electrical circuits
- select electrical materials
- estimate electrical materials
- prepare electrical materials for installation
- lay conduits for electrical circuits
- apply I.E.E. regulations on electrical installations

- 21.2.01P1 Sources of electrical power supply
21.2.01P2 Electrical power supply
21.2.01P3 Interpretation of electrical drawings
21.2.01P4 Selection of electrical materials
21.2.01P5 Material estimation
21.2.01P6 Material preparation and fabrication
21.2.01P7 Application of I.E.E. regulations on electrical installations
21.2.01P8 Use material appropriately

- Suggested Teaching/Learning Methods*
- Demonstrations
 - Practical exercises

- Field trips

Suggested Teaching/Learning Resources

- Working drawings
- Text books
- Tools
- I.E.E regulations book

Suggested Assessment Methods

- Practical exercises
- Practical tests

Tools and Equipment

- Generators
- Transformers
- Solar panels
- Petrol engines
- Diesel engines
- Pumps
- Pliers
- Spanners
- Testing wires
- Insulating tapes
- Screw drivers
- Spirit levels
- Ball pein hammer
- Hacksaw
- Pipe wrench
- Stock and die
- Cold and hot chisel

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