LABORATORY 2

TITLE: Power Distribution

OBJECTIVES

1. To enable to identify one-way and two-way switches and socket outlets
2. To be able to connect the fusebox to the various switches and outlets

NOTES:

When electricity is generated, it is transmitted through cables and tansformers until it finally arrive farm. The farm will have a switch that connects it to the transformer serving that area. It is from the switch that electricity is distributed throughout the entire farmstead.

PROCEDURE

a) Fixing of fusebox

1. You are provided with a distribution board. Following the instructor
   instructions, connect fuse box with a cable (assumed to be coming directly
   from the meter)
2. Connect outlet cables to each of the fuses.
3. Draw your connections on paper

b) Outlet points

1. Describe the types of fuses in use for electrical installation and distribution.
2. What sort of care is necessary to avoid electric shock while connecting or disconnecting cables?

LABORATORY 3

TITLE: Specification and Maintenance of Electric Motors

OBJECTIVES:

1. Understanding of electric motor maintenance procedures
2. Understanding the information on motor name plate

NOTE:

Electric motors do not brake down very often especially when they are properly maintained. Cleaning of motor can be achieved by using solvent and brush on parts with no windings.

PROCEDURE:

A. Name plate information

Observe and record the following information if available on motor

Manufacturer – Insulation
Serial Number – Temperature rise
Hp – Service factor
RPM - phase
Voltage - Cycles
Amps - Code
Frame - Overload protector
Model – Any other information

B. Disassembly

1.Disassemble and clean the motor following the directions of instructor

3. Draw a schematic of the circuitry in the motor and assemble

c) Answer the following questions

1. What are the differences between single-phase and three – phase motors and under what circumstance are the latter used?
2. Explain, with diagrams, how the power factor of an induction motor can be corrected.