TITLE : CONDUIT WIRING FOR LIGHTING AND AIR CONDITIONER CIRCUIT

OBJECTIVES

1. Introducing the concepts and functions of one-way with regulator, dimmer switch and air conditional starter.
2. Able to carry out wiring work according to wiring drawing and IEE regulations.
3. Practice conduit wiring.
4. Learn to do fixing and fitting of components and accessories in the final sub circuits.
5. Know how to carry out testing of electrical installation and inspection.

FINAL SUB-CIRCUITS 'LIGHTING CIRCUIT & AIR CONDITIONER '

Dimmer Switch

Dimmers are devices used to vary the brightness of a light. By decreasing or increasing the RMS voltage and, hence, the mean power to the lamp, it is possible to vary the intensity of the light output. Although variable-voltage devices are used for various purposes, the term dimmer is generally reserved for those intended to control resistive incandescent, halogen and more recently compact fluorescent (CFL) lighting. When you're furnishing a home, light is everything. The light level in a room dictates what you can and can't do, and it has a huge effect on how you feel. You can't read very easily by a single candle. Dimmer switch circuit is normally used to control one lighting point with one handy electrical component that lets you adjust light levels from nearly dark to fully lit by simply turning a knob or sliding a lever.

Door Bell Switch

The A doorbell is a signaling device typically placed near a door. Most doorbells emit a ringing sound to alert the occupant of the building to a visitor's presence, when the visitor presses a button. Many modern doorbells are electric — they are actuated by an electric switch. In most wired systems, a button, located around the height of the doorknob, activates a signaling device (usually a chime, bell, or buzzer) inside the building. This single-pole, single-throw (SPST) switch momentarily closes the doorbell circuit.

Air conditioner Starter

Air conditioner starter (and lots of other electrical motors) include a capacitor in the start circuit to help get the motor spinning in compressor. A starter (capacitor) can be put into the "run" circuit of the motor as well to increase motor efficiency. The starter (capacitor) gives extra torque or boost to get a motor spinning in the right direction by providing about double that nominal system voltage. Once the motor has started, in some designs a run capacitor may be used to help the motor retain full power, providing 1.5 x the nominal system voltage and varying as needed depending on the load on the motor. In some old-school class views adding a run capacitor is similar to making two-phase out of one-phase electricity and is a common practice on air conditioners.

TOOLS AND COMPONENTS

Hand tools :

1. Hammer
2. Plier
3. Screw driver
4. Wire cutter
5. Wiring nails and screw
6. PVC clips with saddle
7. PVC Conduit junction box and accessories
8. Multimeter

Components :

1 .1 units of one way switch with adjustable
2. 1 units of batten holder
3. Distribution board (DB) with complete accessories
4. 1.5 mm^2 cables (red, black, green)
5. Electric bulb.
6. 1 unit dimmer switch
7. 1 unit door bell (after finish)

PROCEDURE

1. Interpret the wiring circuit diagram shows in Figure 3 and visualize the layout to the work place.
2. Mark position of cable route. components and accessories.
3. Select tools needed and prepare conduits, conduit's junction, and conduit's clips. Layout the conduits and prepared for installation.
4. Read the wiring diagram and prepare cable and conduits pvc accessories.
5. lnstal1 accessories fixing blocks and terminate cables into the accessories
6. Perform visual inspection on the completed installation. Check and test the installation using appropriate meters.
7. Maintain all tools and equipments.