Shunt-Wound Motors are type of motor which runs practically at constant speed, regardless of the load. It is the type generally used in commercial practice and is usually recommended where starting conditions are not usually severs. Speed of the shunt-wound motors may be regulated in two ways: first, by inserting resistance in series with the armature, thus decreasing speed: and second, by inserting resistance in the field circuit, the speed will vary with each change in load: in the latter, the speeds is practically constant for any setting of the controller.
Separate terminals of Armature and Field windings are brought out on a terminal box fitted on top of the Motor so that one can connect them separately to the panel and can perform experiment correspondingly.
The trainer thus provides explicit understanding of the subject. All protection devices are in built so there is almost no chance of fault or danger to user

Experiment:

01 To Study the working of DC Shunt Motor Coupled with Alternator using a Load.
02 Study of Earth Fault and other Fault Switches.

Features :

01 Stand alone operation
02 Exclusive and rugged designed panel
03 High quality meters
04 Standard BS-10 safety terminals
05 Designed by considering all the safety precautions
06 Diagrammatic representation for the ease of connections.

Technical Specifications:

(A) Control Panel Components:-

01 2 Pole Mains MCB
02 DC On LED Indicator.
03 DC Multifunction Meter shows Voltage, Ampere, Watt.
04 AC Multifunction Meter shows 3phase values.
05 A Fault Buzzer for fault Indication.
06 An ELCB (Earth Fault) is provided.
07 A DC Ampere Volt Meter for measuring Alternator Field Excitation Voltage.
08 A Variac range from 0-270V DC used for providing Alternator Field Excitation.

Note: Specifications are subject to change.

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09 A Motor Protection Device is used as Protection Relay.
10 A 3 Point Starter.
11 A 3 Way selector switch.
12 4 Selector switches for each R, Y, B, N phase.
13 A Toggle Switch for Earth Fault.
14 4 Banana terminals for DC Shunt Motor connection (A1, A2, F1, F2).
15 6 Banana terminals for Alternator Connection (R, Y, B, N, F1, F2).
16 5 Banana terminals for External Load connection (R, Y, B, N, E).
17 2 Banana terminals for DC Output connection (+ve, -ve).
18 3 Banana terminals for 3-point Starter Connection (L, A, F).
19 The Control panel is having 2 cords on its back side. One cord with 3pin plug is the one which should be connected to single phase 230VAC. The Second cord has 2 wires (red and black), this is the DC Power Input to the panel and these 2 wires are to be connected across the Auto Transformer output "+" and "–"

(B) 2HP DC Shunt machine :-

01	Rating (kw)	:	2HP
02	Base speed (RPM)	:	1500
03	Rated Armature Voltage	:	230VDC
04	Armature Current at Full load (Amps)	:	8A
05	Excitation type	:	Shunt; Separately excited
06	Excitation Voltage	:	230V DC
07	Yoke	:	Solid
08	Mounting	:	B3
09	Duty Type	:	S1
10	Insulation	:	Class B
11	Direction of rotation	:	Bi Directional

(C) 1KVA AC SYNCHRONOUS ALTERNATOR

01	Frame	:	90
02	Rating (kw)	:	1KVA
03	Base speed (RPM)	:	1500
04	Rated Output Voltage	:	415V AC
05	Armature Current at Full load (Amps)	:	1A
06	Excitation type	:	Separate
07	Excitation Voltage	:	230V DC
08	Yoke	:	Solid
09	Mounting	:	B3
10	Duty Type	:	S1
11	Insulation	:	Class F
12	Direction of rotation	:	Bi Directional

List of Accessories :

01 Shourded Patch Cord 4mm Length 50/100cm Red - 10nos.
02 Shourded Patch Cord 4mm Length 50/100cm Yellow - 3nos.
03 Shourded Patch Cord 4mm Length 50/100cm Blue - 3nos.
04 Shourded Patch Cord 4mm Length 50/100cm Black - 9nos.
05 External Load as Bulb – Order Code - 69713
06 Auto Transformer (Output : 0-270V DC)

Note: Specifications are subject to change.

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