A brief report on training module of Electrical Machine laboratory I & II (During 1st December to 15th December 2020)

Day -1 (01/12/2020)/Electrical machine Lab-1/3EE4-22

- Introduction to the training module by Dr. Dhanraj Chitara in his cabin. He briefed about the purpose of this module and its usefulness.
- Distribution of files and handbooks to the attendees.
- Introduction to the schedule of the training module and explanation of **Experiment no 1.** ***(To perform O.C. and S.C. test on a 1-phase transformer and to determine the parameters of its equivalent circuit its voltage regulation and efficiency).***
- Experiment No. 1 is performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Explanation of **Experiment no 2.*****(To perform Sumpner's test on two identical 1-phase transformers and find their efficiency & parameters of the equivalent circuit).***
- Experiment No. 2 is performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -2 (02/12/2020)/Electrical machine Lab-1/3EE4-22

- Explanation of ***Experiment No. 3 and 5 (To determine the efficiency and voltage regulation of a single-phase transformer by direct loading)***and ***(To perform the parallel operation of the transformer to obtain data to study the load sharing),***performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -3 (03/12/2020)/Electrical machine Lab-1/3EE4-22

- Explanation of ***Experiment no 6. (Separation of no load losses in single phase transformer).***
- Experiment No. 6, performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -4 (05/12/2020)/Electrical machine Lab-1/3EE4-22

- Explanation of ***Experiment no 4. (To perform the heat run test on a delta/delta connected 3-phase transformer and determine the parameters for its equivalent circuit).***
- Experiment No. 4, performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -5 (07/12/2020)/Electrical machine Lab-1/3EE4-22

- Explanation of ***Experiment no 8 and 9. (Speed control of D.C. shunt motor by field current control method & plot the curve for speed verses field current and Speed control of D.C. shunt motor by armature voltage control method & plot the curve for speed verses armature voltage).***
- Experiment No. 8 and 9, performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -6 (08/12/2020)/Electrical machine Lab-1/3EE4-22

- Explanation of ***Experiment no 10. (To determine the efficiency at full load of a D.C shunt machine considering it as a motor by performing Swinburne's test).***
- Experiment No. 10, performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -7 (09/12/2020)/Electrical machine Lab-1/3EE4-22

- Explanation of ***Experiment no 7 and 11. (To study conversion of three-phase supply to two-phase supply using Scott Connection and To perform Hopkinson's test on two similar DC shunt machines and hence obtain their efficiencies at various loads).***
- Experiment No. 7 and 11, performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -8 (10/12/2020)/Electrical machine Lab-2/4EE4-21

- Explanation of ***Experiment no 7, 8 and 9. (To plot the O.C.C. & S.C.C. of an alternator, To determine Zs , Xd and Xq by slip test, Zero power factor (ZPF)/ Potier reactance method and To determine the voltage regulation of a 3-phase alternator by direct loading).***
- Performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Day -9 (11/12/2020)/Electrical machine Lab-2/4EE4-21

- Explanation of ***Experiment no 11 and 12. (To study effect of variation of field current upon the stator current and power factor of synchronous motor andPlot V-Curve and inverted V-Curve of synchronous motor for different values of loads and To synchronize an alternator across the infinite bus and control load sharing).***
- Performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

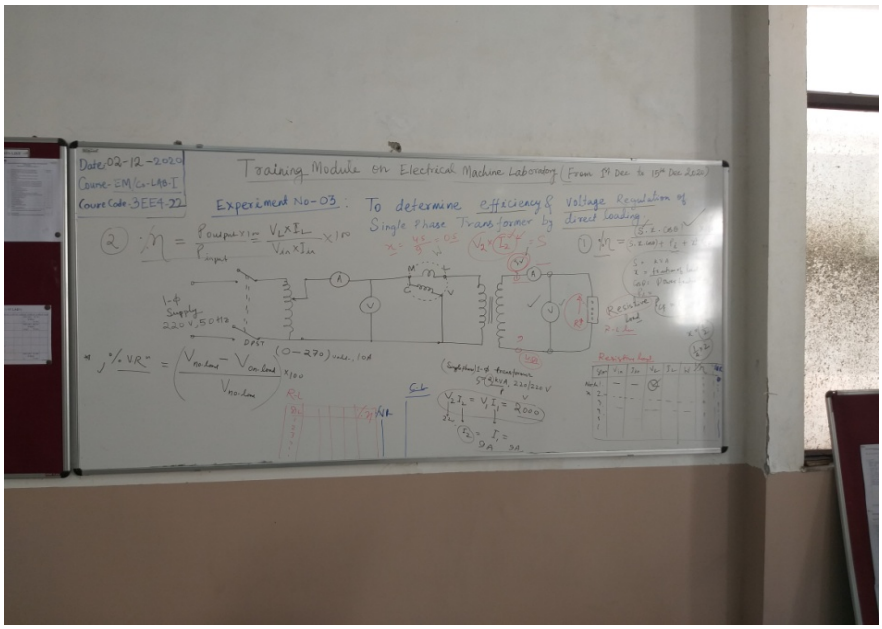
Day -10 (12/12/2020)/Electrical machine Lab-2/4EE4-21

- Explanation of ***Experiment no 1, 3, 4 and 5. (To study various types of starters used for 3 phase induction motor, To perform load test on 3-phase induction motor and calculate torque, output power, input power, efficiency, input power factor and slip for various load settings, To***

perform no load and blocked rotor test on a 3-phase induction motor and determine the parameters of its equivalent circuits and Draw the circle diagram and compute the following (i) Max. Torque (ii) Current (iii) slips (iv) p. f. (v) Efficiency).

- Performed by all the attendees in the presence of Mr. Satyam Pandya and other Instructors.
- Calculations done as per the lab manuals and checked by instructors.

Some Images showing the training programe:


Training Module on Electrical Machine Laboratory (From 1st Dec to 15th Dec 2020)
Date 02-12-2020
Course-EM/Ci-LAB-I
Course Code-3EE4-22
Experiment No-03: To determine efficiency & Voltage Regulation of Single Phase Transformer by direct loading
1-ϕ Supply 220 V, 50 Hz
DPST
(0-270) var. load
Resistive load

Attendance sheet_Training Module of Electrical Machine Laboratory_01.12.20 to 15.12.20

Name of Trainee	01/12		02/12		03/12		05/12		07/12		08/12		09/12		10/12	
	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)	(1-3) pm	(3:15 to 5:30 pm)
Mr. Mahesh Kr. Rathodiya	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Mrs. Reshma Sharma	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Mr. PremPrakash Sharma	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P
Mr. BansiLal	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Mr. Kulwant Singh	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P
Mrs. Anita Bagaria	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P