LESSON PLAN

Name of the Institute:	**C. V. RAMAN POLYTECHNIC**
Department:	**ELECTRICAL ENGINEERING**
Semester/Division/Branch:	**4th SEM/EE**
Subject Name with code:	**ELECTRICAL MEASURING INSTRUMENTS(EMI), TH-3**
Total No. of Class (Required):	**60L+15T=75**
Faculty Name:	**NABDEEP PATRA**

Class No.	*Brief description of the Topic/Chapter to be taught*	Remarks
1	Define Accuracy, precision, Errors, Resolutions Sensitivity and tolerance.	
2	Classification of measuring instruments	
3	Calibration of instruments	
4	Describe Construction, principle of operation, errors, ranges merits	
T1	TUTORIAL CLASS	
5	Moving iron type instruments	
6	2 Permanent Magnet Moving coil type instruments	
7	Dynamometer type instruments	
8	Induction type instruments	
T2	TUTORIAL CLASS	
9	Solve Numerical	
10	Describe Construction, principle of working of Dynamometer type wattmeter. (LPF and UPF type)	
11	The Errors in Dynamometer type wattmeter and methods of their correction	
12	Com Discuss Induction type wattmeters mutation and methods of improving commutation.	
T3	TUTORIAL CLASS	
13	Revision	

14	Class test	
15	Revision	
16	Introduction to energy meter	
T4	TUTORIAL CLASS	
17	Tachometers, types and working principles	
18	Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters	
19	Principle of operation and working of Dynamometer type single phase and three phase power factor meters	
20	Classification of resistance	
T5	TUTORIAL CLASS	
21	Measurement of low resistance by potentiometer method.	
22	Measurement of medium resistance by wheat Stone bridge method	
23	Measurement of high resistance by loss of charge method	
24	3 Construction and principles of Multimeter. (Analog and Digital)	
T6	TUTORIAL CLASS	
25	Measurement of inductance by Maxewell's Bridge method	
26	Measurement of capacitance by Schering Bridge method	
27	Characteristics of shunt, series and compound motors and their application	
28	Revision	
T7	TUTORIAL CLASS	
29	Class test	
30	Classification of resistance	
31	Measurement of low resistance by potentiometer method	
32	Measurement of medium resistance by wheat Stone bridge method.	
T8	TUTORIAL CLASS	
33	Measurement of high resistance by loss of charge method.	

34	Construction and principles of Multimeter. (Analog and Digital)	
35	Measurement of capacitance by Schering Bridge method	
36	Discussion	
T9	TUTORIAL CLASS	
37	Class test	
38	Revision	
39	Define Transducer, sensing element or detector element and transduction elements	
40	Classify transducer. Give examples of various class of transducer.	
T10	TUTORIAL CLASS	
41	Resistive transducer	
42	Linear and angular motion potentiometer	
43	Thermistor and Resistance thermometers	
44	Inductive Transducer	
T11	TUTORIAL CLASS	
45	Principle of linear variable differential Transformer (LVDT)	
46	Uses of LVDT	
47	Capacitive Transducer	
48	General principle of capacitive transducer.	
T12	TUTORIAL CLASS	
49	3 Change in distance between plate capacitive transducer.	
50	Variable area capacitive transducer	
51	Piezo electric Transducer and Hall Effect Transducer with their applications.	
52	Revision	
T13	TUTORIAL CLASS	
53	Class test	
54	Principle of operation of Cathode Ray Tube	

55	Principle of operation of Oscilloscope (with help of block diagram).	
56	Measurement of DC Voltage & curren	
T14	TUTORIAL CLASS	
57	Measurement of AC Voltage, current, phase & frequency.	
58	Revision	
59	Class test	
60	Revision	
T15	TUTORIAL CLASS	

Nabdeep Patra
Signature of the Faculty

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Signature of the H.O.D