Bhubanananda Orissa School of Engineering
Lesson Plan

Discipline:AE&I	**Semester:6th**	**Name of the Teaching Faculty: Prafulla Kumar Panda**
Subject: **ICD&DA**	No of Days/per week class allotted:**5**	Semester from10.03 2022 to10.06.2022 **No of weeks:14**
Week No.	Class Day **MON,TUE,WED, THU,FRI,**	**Theory Topics**
1st	10-03-2022	Introduction of the Subject and Syllabus discussion.
	11-03-2022	**UNIT –I** 1. **Power semiconductor diode & transistors:** 1.1 Introduction to Power Electronics,
2nd	14-03-2022	Define Converter,
	15-03-2022	Inverter, Chopper,
	16-03-2022	Cycloconverter
	17-03-2022	AC Voltage Controllers
3rd	21-03-2022	1.2 Power diode
	22-03-2022	1.3 Power transistor
	23-03-2022	1.4 Power MOSFET.
	24-03-2022	1.5 IGBT.
	25-03-2022	1.6 MOS Control, Thermistor & Their Comparison.
4th	28-03-2022	1.7 UJT. (Basic Structure, symbol, Circuit Diagram, working principle, applications etc of all above devices)
	29-03-2022	**Chapter 1 Revision, Previous years questions discussion.**
	30-03-2022	**UNIT –II** 2. Thyristors& their characteristic:
	31-04-2022	2.1 SCR. (only construction & characteristics).
5th	4-04-2022	2.2 TRIAC. (Only construction & characteristics).
	5-04-2022	2.3 GTO. (Only construction & characteristics).
	6-04-2022	2.4 SCS. (Only construction & characteristics).
	7-04-2022	2.5 PUT. (Only construction & characteristics). - Heating, Cooling, Mounting.
	8-04-2022	2.6 SUS. (Only construction & characteristics).
6th	11-04-2022	2.7 Thyristor turn ON & turn OFF , gate characteristics.

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	12-04-2022	2.8 Triggering of thyristor through get current.
	13-04-2022	2.9 Firing circuit for thyristor.
	15-04-2022	2.10 Thyristor protection.
7th	18-04-2022	**Class Test -I**
	19-04-2022	2.11 Series & parallel operation.
	20-04-2022	**Chapter 2 Revision, Previous years questions discussion.**
	21-04-2022	**UNIT –III** 3. Application of an SCR : 3.1 Explain DC Motor using SCR (with variation in load and variation power supply).
	22-04-2022	3.2 Explain SCR drives only DC drive.
8th	25-04-2022	3.3 Explain SCR working of an SCR Illumation
	26-04-2022	3.4 Explain the function of SCS (SILICON CONTROLLED SWITCH).
	27-04-2022	**Chapter 3 Revision, Previous years questions discussion.**
	28-04-2022	**UNIT –IV** 4. SYNCHROS : 4.1 Define synchros System
	29-04-2022	4.2 Explain the operationsynchrons generator and Motor.
9th	02-05-2022	4.3 Explain the Reversing Motor and stator connection.
	03-05-2022	4.4 Explain the principle of differential synchros system.
	04-05-2022	4.5 Explain the differential synchros system for addition and subtraction.
	05-05-2022	4.6 Explain some application of synchros system
	06-05-2022	**Chapter 4 Revision, Previous years questions discussion.**
10th	09-05-2022	**UNIT –V** 5. Servo System : 5.1 Define servo Mechanism.
	10-05-2022	**Internal -I**
	11-05-2022	5.2 List the elements Servo Mechanism and explain general block diagram of Servo system
	12-05-2022	and different elements of servo system.
	13-05-2022	5.3 Explain the DC and AC servo system.
11th	16-05-2022	5.4 Explain working Principle of stepper Motor.
	17-05-2022	5.5 Discuss some application servo mechanism and in control

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		system.
	18-05-2022	**UNIT –VI** **6. AC voltage controllers:** 6.1 Types of A.C. voltage controller
	19-05-2022	6.2 Integral cycle control
	20-05-2022	6.3 Single phase voltage controllers. 6.4 Three phase voltage Controllers.
12th	23-05-2022	**Chapter 6 Revision, Previous years questions discussion.**
	24-05-2022	**UNIT –VII** **7. Cycloconverters:** 7.1 Definition of Cycloconverter& its operation.
	25-05-2022	7.2 Single phase Cycloconverters.
	26-05-2022	7.3 Bridge type Cycloconverters.
	27-05-2022	7.4 Three phase half wave Cycloconverter
13th	30-05-2022	7.5 Load commutated Cycloconverter.
	31-06-2022	**UNIT –VIII** 8. AC and DC Motor Control : 8.1 Discuss the types speed control mechanism DC and AC motor.
	01-06-2022	8.2 Explain the function of an SCR speed control and DC Motor circuit..
	02-06-2022	8.3 Explain AC drives and Frequency converter.
	03-06-2022	8.4 Microprocessor control of stepper motor.
14th	06-06-2022	**UNIT-IX** **9. Chopper & drives;** 9.1 Basic concept of choppers..
	07-06-2022	9.2 Control strategy of chopper.
	08-06-2022	9.3 Stepper chopper
	09-06-2022	9.4 Basic concept of single chopper drives
	10-06-2022	**OVERALL PREVIOUS YEARS QUESTIONS DISCUSSION**

Signature of Faculty

HOD, AE&I **Academic Coordinator** **Principal**