

## Badriprasad Institute of Technology, Sambalpur

### Lesson plan for Theory -4, Utilization of Electrical Energy & Traction

Semester & Branch : 5th Sem , Electrical Engineering

Total Periods-60

Name of the faculty : Rohit Meher

No of periods /week-4

WEEK	CLASS DAY	THEORY
1ST	1ST	PRINCIPLE OF ELECTRO DEPOSITION
	2ND	IMPORTANT TERM OF ELECTROLYSIS
	3RD	FARADAY'S LAWS OF ELECTROLYSIS
	4TH	DEFINATION OF CURRENT EFFICIENCY AND ENERGY EFFICIENCY
2ND	1ST	FACTOR EFFECTING ELECTRODEPOSITION
	2ND	FACTOR GOVERNING THE ELECTRODEPOSITION
	3RD	EXAMPLE OF EXTRACTION OF METALS
	4TH	APPLICATION OF ELECTROLYSIS
3RD	1ST	ADVANTAGES OF ELECTRICAL HEATING
	2ND	STEPHEN'S LAW
	3RD	PRINCIPLE OF RESISTANCE HEATING
	4TH	PRINCIPLE OF DIRECT ARC FURNACE
4TH	1ST	PRINCIPLE OF INDIRECT ARC FURNACE
	2ND	PRINCIPLE OF INDUCTION HEATING
	3RD	PRINCIPLE OF DIRECT CORE TYPE INDUCTION FURNACE
	4TH	PRINCIPLE OF VERTICAL CORE TYPE INDUCTION FURNACE
5TH	1ST	PRINCIPLE OF INDIRECT CORE TYPE INDUCTION FURNACE
	2ND	PRINCIPLE OF CORELESS INDUCTION FURNACE
	3RD	PRINCIPLE OF DIELECTRIC HEATING AND ITS APPLICATION
	4TH	PRINCIPLE OF MICROWAVE HEATING AND ITS APPLICATION
6TH	1ST	PRINCIPLE OF ARC WELDING
	2ND	DC AND AC ARC PHENOMENA
	3RD	DC AND AC ARC WELDING PLANT
	4TH	TYPES OF ARC WELDING
7TH	1ST	PRINCIPLE OF RESISTANCE WELDING
	2ND	DIFFERENT RESISTANCE WELDING METHODS
	3RD	NATURE OF RADIATION AND ITS SPECTRUM
	4TH	TERM USED IN ILLUMINATION
8TH	1ST	TERM USED IN ILLUMINATION
	2ND	TERM USED IN ILLUMINATION
	3RD	INVERSE SQUARE LAW
	4TH	COSINE LAW
9TH	1ST	PROBLEM RELATED TO INVERSE SQUARE LAW
	2ND	PROBLEM RELATED TO INVERSE SQUARE LAW
	3RD	PROBLEM RELATED TO INVERSE SQUARE LAW
	4TH	POLAR CURVES
10TH	1ST	LIGHT DISTRIBUTION AND CONTROL
	2ND	LIGHTNING SCHEME AND DEPRICIATION FACTOR
	3RD	WORKING OF FILAMENTS LAMP
	4TH	DISCHARGE LAMP
11TH	1ST	BASIC IDEA ABOUT GAS DISCHARGE LAMP
	2ND	OPERATION OF FLOURESCENT LAMP
	3RD	OPERATION OF SODIUM VAPOUR LAMP
	4TH	OPERATION OF HIGH PRESSURE MERCURY VAPOUR LAMP

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12TH	1ST	NEON SIGN LAMP
	2ND	GROUP AND INDIVIDUAL DRIVE
	3RD	METHOD OF CHOICE OF ELECTRIC DRIVE
	4TH	CHARACTERISTIC OF DC AND AC MOTOR
13TH	1ST	APPLICATION OF DC MOTOR
	2ND	APPLICATION OF THREE PHASE INDUCTION MOTOR
	3RD	APPLICATION OF THREE PHASE SYNCHRONOUS MOTOR
	4TH	APPLICATION OF SINGLE PHASE MOTOR
14TH	1ST	SYSTEM OF TRACTION
	2ND	SYSTEM OF TRAC ELECTRIFICATION
	3RD	RUNNING CHARACTERISTICS OF DC AND AC TRACTION MOTOR
	4TH	CONTROL OF MOTOR
15TH	1ST	CONTROL OF MOTOR
	2ND	CONTROL OF MOTOR
	3RD	REGENERATIVE BRAKING
	4TH	MAGNETIC BRAKING

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