

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2023-2024

Discipline: Electrical Engg. Semester: 5th

Subject: Utilisation of electrical energy and traction
(UEET)

Name of the Teaching Faculty: Dharmendra Kumar Dash

Subject: UET : _____ No. of Days/per week class allotted 04

Semester From Date : 01.08.2023 To Date : 30.11.2023 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
01	1	Definition and basic principle of electro deposition
	2	Terms regarding electrolysis
	3	Faraday's laws of electrolysis
	4	Mathematical problems regarding electrolysis
02	5	Current efficiency, Energy efficiency and principle of electrodeposition
	6	Factors of electrodeposition
	7	Factors governing the electrodeposition
	8	Example of metal extraction
03	9	Application of electrolysis
	10	Definition of electric heating and advantages of electric heating
	11	Modes of heat transfer and stefan's law
	12	Principle of resistance heating

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Subject: UGET No. of Days/per week class allotted 04

Semester From Date : 01.08.2023 To Date : 30.11.2023 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
04	13	Principle of arc furnace
	14	Principle of induction heating and its classification
	15	Principle of coreless induction furnace and skin effect
	16	Principle of dielectric heating and its application
05	17	Principle of microwave heating and its application
	18	Principle of arc welding
	19	A.C and D.C arc welding plants of single and multi operation type
	20	Types of arc welding
06	21	Principle of resistance welding
	22	Descriptive study and of different resistance welding methods
	23	Definition of light
	24	Nature of radiation and its spectrum

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Subject: UET No. of Days/per week class allotted 04

Semester From Date : 01.08.2023 To Date : 30.11.2023 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
07	25	Used Terms in illumination
	26	Laas of illumination
	27	Explain polar curves
	28	Lighting and control.
08	29	Filament lamps.
	30	Gaseous discharge lamps
	31	Fluorescent lamps
	32	Sodium Vapour lamps.
09	33	Neon lamps
	34	LED lamps.
	35	Definition of industrial drives.
	36	Industrial drives.

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Subject: NEET No. of Days/per week class allotted 04

Semester From Date : 01.08.2023 To Date : 30.11.2023 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
10	37	Group drives
	38	Starting characteristics of D.C motors.
	39	Starting characteristics of A.C motors
	40	Running characteristics of d.c motors
11	41	Running characteristics of A.C motors
	42	Application of d.c motors.
	43	Application of A.C. motors
	44	Definition of traction.
12	45	Traction systems
	46	Traction track electrification
	47	Starting characteristics of d.c traction motors
	48	Starting characteristics of a.c traction motors

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Subject: UCET No. of Days/per week class allotted 04

Semester From Date : 01.08.2023 To Date : 30.11.2023 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
13	49	Running characteristics of d.c. traction motors
	50	Running characteristics of A.C traction motors.
	51	Speed control of motors (d.c).
	52	Speed control of a.c motors.
14	53	Braking system of d.c motors
	54	Braking system of a.c motors.
	55	Metadyne speed control system
	56	Magnetic braking system
15	57	Series-parallel starting
	58	Notching
	59	Multiple unit control.
	60	Eddy current brakes.

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