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| DISCIPLINE | SEMESTER | Name of the teaching faculty- Chinmaya Patra |
| SUB-UEET | 5th | Semester From Date-October 2021 to February 2022 |
|  | 4days/week | No of Weeks-15 |
| 1st | 1st | Ch-1 Electrolytic process |
| 2nd | Definition and basic principle of electro deposition |
| 3rd | Important terms regarding electrolysis |
| 4th | Faraday’s law of electrolysis |
| 2nd | 1st | current efficiency, energy efficiency |
| 2nd | Principle of electro deposition, and factors affecting the amount of electro deposition |
| 3rd | Factors governing the electro deposition |
| 4th | Simple example related to extraction of metals |
| 3rd | 1st | Application of electrolysis |
| 2nd | Ch-2 Advantage of electrical heating |
| 3rd | Mode of heat transfer and stephen’s law |
| 4th | Principle of resistance heating(direct , indirect) |
| 4th | 1st | working principle of direct Arc furnace and indirect arc furnace |
| 2nd | Principle of induction heating |
| 3rd | Working principle of direct core type vertical core type and indirect core type induction furnace |
| 4th | Principle of coreless induction furnace and skin effect |
| 5th | 1st | Principle of dielectric heating and application |
| 2nd | Principle of Microwave heating and its application |
| 3rd | Ch-3 explain principle of arc welding |
| 4th | D.C and A.C arc phenomena |
| 6th | 1st | D.C and A.C arc welding plants of single type |
| 2nd | D.C and A.C arc welding plants of Multi operation type |
| 3rd | Types of arc welding |
| 4th | Principle of resistance welding |
| 7th | 1st | Descriptive study of different resistance welding methods |
| 2nd | Ch-4 illumination, nature of radiation and its spectrum |
| 3rd | Luminous intensity, lumen , intensity of illumination, MHCP,MSCP, MHSCP, brightness, solid angle  Luminous efficiency |
| 4th | Inverse square lawand the cosine law |
| 8th | 1st | Polar curves |

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|  | 2nd | Describe light distribution and control panel |
| 3rd | Ch-6 maintenance factor and depreciation factor, simple lighting schemes and lighting factor |
| 4th | Constructional feature and working of filament lamps, effect of variation of voltage on working of  filament lamps |
| 9th | 1st | Discharge lamps |
| 2nd | Constructional features ofand operation of fluorescent lamp |
| 3rd | Sodium vapour lamp, high pressure mercury vapour lamps |
| 4th | Neon sign lamp , |
| 10th | 1st | High lumen output& low consumption fluorescent lamp |
| 2nd | Ch-5 industrial drive , group and individual drive |
| 3rd | Methods of choice of electric drive |
| 4th | Starting and running characteristics of DC and AC motor |
| 11th | 1st | Application of DC motor,3-ph induction motor |
| 2nd | Application of 3-ph synchronous motor, |
| 3rd | Application 1-ph induction motor,series motor , |
| 4th | Application universal motorand repulsion motor |
| 12th | 1st | Ch-6 Electric traction |
| 2nd | System of traction |
| 3rd | System of tracking electrification |
| 4th | Running characteristics of DC traction motor |
| 13th | 1st | Running characteristics of AC traction motor |
| 2nd | Control of motor |
| 3rd | Tapped field control |
| 4th | Rheostatic control |
| 14th | 1st | Series parallel control |
| 2nd | Metadyne control |
| 3rd | Braking |
| 4th | Magnetic braking |
| 15th | 1st | Braking with 1-ph series motor |
| 2nd | Regenerative braking |
| 3rd | Numerical practice |
| 4th | Overall discussion |