



S.No	Topic	Proposed Date
Unit – 1		
1	Introduction	1/3/2024
2	Soft and hard water	2/3/2024
3	Estimation of hardness of water by EDTA Method	4/3/2024
4	Estimation of dissolved Oxygen	5/3/2024
5	Boiler troubles – Priming, foaming, scale and sludge	6/3/2024
6	Caustic embrittlement,	7/3/2024
7	Industrial water treatment	9/3/2024
8	Specifications for drinking water	11/3/2024
9	Bureau of Indian Standards (BIS) and World health organization (WHO) standards	12/3/2024
10	Ion-exchange processes -	13/3/24
11	desalination of brackish water	15/3/24
12	Reverse Osmosis, and electrodialysis.	16/3/24
UNIT-2		
13	Electrodes – electrochemical cell	18/3/24
14	Nernst equation, cell potential calculations	19/3/24
15	Primary cells – Zinc-air battery	20/3/24
16	Secondary cells – Nickel-Cadmium (NiCad) battery working principle of the batteries including cell reactions	22/3/24
17	lithium ion battery working principle of the batteries	23/3/24
18	including cell reactions	25/3/24
19	Fuel cells- Basic Concepts, the principle and working of hydrogen-oxygen Fuel cell.	26/3/24
20	Corrosion: Introduction to corrosion	27/3/24

21	Electrochemical theory of corrosion	29/3/24
22	Differential aeration cell corrosion, galvanic corrosion	30/3/24
23	Metal oxide formation by dry electrochemical corrosion	1/4/2024
24	Pilling Bedworth ratios and uses	5/4/2024
UNIT-3		
25	Introduction to polymers	6/4/2024
26	Functionality of monomers	19/4/24
27	Mechanism of chain growth, step growth polymerization.	24/4/24
28	Thermoplastics and Thermosetting plastics	22/4/24
29	Preparation, properties and applications of polystyrene, PVC, Nylon 6,6	23/4/24
30	Preparation, properties and applications of Bakelite	26/4/24
31	Elastomers- properties and applications of Buna S, Buna N, Thiokol rubbers	27/4/24
32	Fuels – Types of	29/4/24
33	Numerical problems based on calorific value	30/4/24
34	Analysis of coal (Proximate and Ultimate analysis),	1/5/2024
35	Liquid Fuels, refining of petroleum,	3/5/2024
36	Octane and Cetane number	3/5/2024
37	Alternative fuels- propane, methanol, ethanol and bio fuel- bio diesel.	4/5/2024
38	Test	4/5/2024
Unit -4		
39	Introduction	6/5/2024
40	Introduction to polymers, functionality of monomers	8/5/2024
41	Composites- Definition, Constituents, Classification	9/5/2024

42	Particle, Fiber and Structural reinforced composites, properties and Engineering applications	11/5/2024
43	Refractories- Classification, Properties, Factors	13/5/24
44	affecting the refractory material and Applications	15/5/24
45	Lubricants- Classification, Functions of lubricants, Mechanism	18/5/24
46	Properties of lubricating oils – Viscosity, Viscosity Index, Flashpoint, Firepoint, Cloudpoint, saponification and Applications.	20/5/24
47	Building materials- Portland Cement	21/5/24
48	Portland Cement, constituents	22/5/24
49	Setting and	24/5/24
50	Revision Class	27/5/2024
Unit-5		
51	Introduction to surface chemistry,	22/12/23
52	Colloids, micelle formation, synthesis of colloids (Bragg's Method),	23/12/23
53	Nanometals and Nanometal Oxides	27/12/23
54	Chemical and biological methods of preparation of nanometals	28/12/23
55	Stabilization of colloids materials by stabilizing agents,	29/12/23
56	Stabilization of nano materials by stabilizing agents,	30/12/23
57	Adsorption isotherm (Freundlich and Langmuir)	3/1/2024
58	BET equation (no derivation)	4/1/2024
59	Chemical and biological methods of preparation of Metal oxides	5/1/2024
60	Applications of colloids	6/1/2024
61	Applications of nanomaterials – catalysis, medicine, sensors, etc.	10/1/2024

62	Revision Class	11/1/2024
63	Test	12/1/2024