SESSION: 2024-25

SUBJECT NAME : APPLIED CHEMISTRY

SUBJECT CODE: 2000278(011)

BRANCH- CIVIL / ELECTRICAL

S. NO.	UNIT NO.	SUB TOPIC TO BE COVERED UNDER THIS UNIT	PLANNED DATE	EXECUTION DATE	REMARK
1	1	1.1 Atomic structure	17/03/25	17/03/25	
2		Electronic structure of atoms,	18/03/25	18/03/25	
3		Discovery of electrons,protons,and neutrons.	20/03/25	20/03/25	
4		Rutherford model and bohr's-burry scheme of distributions of electrons	21/03/25	21/03/25	
5		Heisenber's uncertanity principle,	22/03/25	22/03/25	
6		Quantum numbers,sub energy level	24/03/25	24/03/25	
7		Distribution of electrons in sub shell and concept of electronic configuration of atoms	26/03/25	26/03/25	
8		Auffbaus's rule	27/03/25	27/03/25	
9		Pauli's exclusion principle.	28/03/25	28/03/25	
10		Hund's rule of maximum multiplicity.	29/03/25	29/03/25	
11		1.2 Chemical bonding	04/04/25	04/04/25	
12		Theory of chemical bonding,	11/04/25	11/04/25	
13		Types of bonds, Ionic or electrovalent bonds, Covlent bond	12/04/25	12/04/25	
14		Coordinate bond, Hydrogen bonding.	15/04/25	15/04/25	
15		2.1(A) Water treatment	16/04/25	16/04/25	
16		Types of hardness	17/04/25	17/04/25	
17		Determination of hardness using EDTA method	19/04/25	19/04/25	
18		2.2Hard water	22/04/25	22/04/25	
19		2.3 Boiler problems, Boiler corrosion	23/04/25	23/04/25	
20		Caustic embrittlement,Priming and foaming	24/04/25	24/04/25	
21		Scales and sludge	25/04/25	25/04/25	
22		2.4 Water softening	26/04/25	26/04/25	

23		Lime soda process,Hot lime soda process,Cold lime soda process.	30/04/25	30/04/25	
24	2	Zeolite process	01/05/25	01/05/25	
25		Ion-exchange process; Cation exchange,Anion exchange.	02/05/25	02/05/25	
26		2.5 Municipal water treatment, Sedimentation	03/05/25	03/05/25	
27		Coagulation,Filtration,Sterillization.	05/05/25	05/05/25	
28		2.6 BOD & COD	06/05/25	06/05/25	
29		2.0 (B) Polymer	08/05/25	08/05/25	
30		2.1 Classification of polymer,types of rubber	09/05/25	09/05/25	
31		Natural and synthetic rubber	13/05/25	13/05/25	
32		Processing of natural rubber & Synthetic rubber	14/05/25	14/05/25	
33		Properties and application of BUNA-N,	15/05/25	15/05/25	
34		Thiokol, Neoprene.	16/05/25	16/05/25	
35		3.0(A) Electrochemistry and Batteries	16/06/25	16/06/25	
36		3.1 Conductance ,Nature of solute & solvent	17/06/25	17/06/25	
37		Temperature, Concentration or dilution.	18/06/25	18/06/25	
38		3.2 Electrical conductance in metals and electrolytes,	19/06/25	19/06/25	
39		Specific conductance, Equivalent conductance	20/06/25	20/06/25	
40		Cell constant.	21/06/25	21/06/25	
41		3.3 Electrodes	23/06/25	23/06/25	
42		Hydrogen electrodes	24/06/25	24/06/25	
43		Calomel electrode,	25/06/25	25/06/25	
44		Glass electrodes.	26/06/25	26/06/25	
45	3	3.4 Conductometric titration	27/06/25	27/06/25	
46		3.5 Batteries, types of batteries with example	29/06/25	29/06/25	
47		Primary battery	30/06/25	30/06/25	
48		Secondary battery	04/07/25	04/07/25	
49		3.0(B) Electrical insulators and thermocouple alloys	05/07/25	05/07/25	
50		Classification and example of electrical insulators	07/07/25	07/07/25	
51		Thermocouple alloys	08/07/25	08/07/25	

53		Tungsten/ rhenium thermocouple alloys	08/07/25	08/07/25	
54		4.0(A) Metallurgy	09/07/25	09/07/25	
53		4.1 Mineral,Ore,	10/07/25	10/07/25	
54		Gangue,Flux,Slag	10/07/25	10/07/25	
55		4.2 Metallurgical process of iron	11/07/25	11/07/25	
		Metallurgical process of copper	11/07/25	11/07/25	
56		4.0(B) Metal alloys	11/07/25	11/07/25	
57		4.1 Properties of metals like copper,aluminium,	12/07/25	12/07/25	
58		Properties of metals like tungsten,platinum,nickel.	12/07/25	12/07/25	
59		4.2 Ferrous alloys	14/07/25	14/07/25	
60		Low carbon steel, Medium carbon steel	14/07/25	14/07/25	
61	4	High carbon steels	14/07/25	14/07/25	
62		4.3 Non-ferrous alloys	15/07/25	15/07/25	
		Brass	15/07/25	15/07/25	
63		Bronze	15/07/25	15/07/25	
64		Duralumin,	15/07/25	15/07/25	
65		Tinman solder,	15/07/25	15/07/25	
66		Woods metal	16/07/25	16/07/25	
67		4.0(C) Cement	16/07/25	16/07/25	
68		4.1 Portland cement	16/07/25	16/07/25	
69		Consituents of cement	16/07/25	16/07/25	
70		Setting and hardening of cement	17/07/25	27/07/25	
71		5.0(A) Fuel and combustion	17/07/25	17/07/25	
72		5.1 Fuel: Calorific value and ignition temperature,classiffication	17/07/25	17/07/25	
73		5.2 Solid fuel:Coal,classification and composition	18/07/25	18/07/25	
74		Proximate analysis	18/07/25	18/07/25	
75		Ultimate analysis	18/07/25	18/07/25	
76		Bomb calorimeter.	18/07/25	18/07/25	
77		5.3 Carbonization of coke by Otto Hofmann's oven.	18/07/25	18/07/25	
78		5.3 Liquid fuels:	18/07/25	18/07/25	
79		Fractional distillation of crude petroleum,	19/07/25	19/07/25	

80		Boiling range	21/07/25	21/07/25	
81		Composition and properties.	21/07/25	21/07/25	
82		Knocking	26/07/25	26/07/25	
83		Cracking	26/07/25	26/07/25	
84	5	Octane number and cetane number.	26/07/25	26/07/25	
85		5.4 Gaseous fuels;	29/07/25	29/07/25	
86		Biogas, LPG,and CNG	29/07/25	29/07/25	
87		Combustion equtaion of gaseous fuels,	29/07/25	29/07/25	
88		5.0(B)Lubricant,Paints and Varnishes	29/07/25	29/07/25	
89		Lubricant- Liquid, Solid,Semisolid	29/07/25	29/07/25	
90		Theory of lubrication	29/07/25	29/07/25	
91		Properties of a good lubricants	29/07/25	29/07/25	
92		Flash and fire points	31/07/25	31/07/25	
93		Pour paint and cloud point.	31/07/25	31/07/25	
94		Specification number and viscosity,	31/07/25	31/07/25	
95		5.2 Paints and varnish	02/08/25	02/08/25	
96		Consituents of paint and varnish.	06/08/25	06/08/25	
97		Properties and uses.	07/08/25	07/08/25	
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