

LESSON PLAN

GOVT.POLYTECHNIC SONEPUR

Name of the Faculty :
KISHAN KUMAR AGRAWAL
Lecturer, Stage-II (Chemistry)

Academic Year:2026-27

Course No:PR3

Course Name: APPLIED CHEMISTRY LAB.

Program: Diploma

Department: Math and Science

Year:1st Year

Branch: Civil,Electrical,Mechanical

WEEK	PERIOD	TOPIC TO BE COVERD
1	1	Introduction to Chemistry lab regarding record maintenance, safety rules and guidelines
		EXPT.NO-01: Preparation of standard solution of oxalic acid or potassium permanganate. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
	2	Demonstration of Experiment
		Experiment performed by students
2	3	Record writing by the students, record checking and viva-voce
		ASSESSMENT
	4	EXPT.NO-02: To determine strength of given sodium hydroxide solution by titrating against standard oxalic acid solution using phenolphthalein indicator. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
		Demonstration of Experiment
3	5	Experiment performed by students
		Record writing by the students
	6	Record checking and viva-voce
		ASSESSMENT
4	7	EXPT.NO-03: Standardization of KMnO_4 solution using standard oxalic acid and determine the percentage of iron present in given Hematite ore by KMnO_4 solution. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
		Demonstration of Experiment
		Experiment performed by students
	8	Record writing by the students

5	9	Record checking and viva-voce
		ASSESSMENT
	10	EXPT.NO-04: Volumetric estimation of total acid number (TAN) of given oil. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students Demonstration of Experiment
6	11	Experiment performed by students
		Record writing by the students
	12	Record checking and viva-voce
		ASSESSMENT
7	13	EXPT.NO-05: Volumetric estimation of total hardness of given water sample using standard EDTA solution. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students Demonstration of Experiment
		Experiment performed by students
		Record writing by the students
	14	Record checking and viva-voce
8	15	Experiment performed by students
		Record writing by the students
	16	Record checking and viva-voce
		ASSESSMENT
9	17	EXPT.NO-06: Volumetric estimation of Alkalinity of given water sample using 0.01M sulphuric acid Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students Demonstration of Experiment
		Experiment performed by students
		Record writing by the students
	18	Record checking and viva-voce
10	19	ASSESSMENT
		Experiment performed by students
	20	Record writing by the students

	20	Experiment performed by students
		Record writing by the students
11	21	Record checking and viva-voce
		ASSESSMENT
	22	EXPT.NO-08: Determine the conductivity of given water sample. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
		Demonstration of Experiment
12	23	Experiment performed by students
		Record writing by the students
	24	Record checking and viva-voce
		ASSESSMENT
12	25	EXPT.NO-09: To verify the first law of electrolysis of copper sulfate using copper electrode. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
		Demonstration of Experiment
	26	Experiment performed by students
		Record writing by the students
13	27	Record checking and viva-voce
	28	ASSESSMENT
15	29	EXPT.NO-10: Construction and measurement of emf of elector chemical cell (Daniel cell). Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
	30	Demonstration of Experiment
16	31	Experiment performed by students
	32	Record writing by the students
17	33	Record checking and viva-voce
	34	ASSESSMENT
18	35	EXPT.NO-11:Determination of amount of BOD present in a water sample. Introduction of the apparatus & Chemical required, Explanation of theory & safety

		precaution to students
	36	Demonstration of Experiment
19	37	Experiment performed by students
	38	Record writing by the students
20	39	Record checking and viva-voce
	40	ASSESSMENT
21	41	EXPT.NO-12: Determination of amount of dissolved chlorine present in a water sample. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
	42	Demonstration of Experiment
22	43	Experiment performed by students
	44	Record writing by the students
23	45	Record checking and viva-voce
	46	ASSESSMENT
24	47	EXPT.NO-13: Determination of amount of COD present in a water sample. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
	48	Demonstration of Experiment
25	49	Experiment performed by students
	50	Record writing by the students
26	51	Record checking and viva-voce
	52	ASSESSMENT
27	53	EXPT.NO-14: Determination of amount of turbidity present in a water sample. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
	54	Demonstration of Experiment
28	55	Experiment performed by students
	56	Record writing by the students
29	57	Record checking and viva-voce
	58	ASSESSMENT

30	59	EXPT.NO-15: Determination of amount of TDS present in a water sample. Introduction of the apparatus & Chemical required, Explanation of theory & safety precaution to students
	60	Demonstration of Experiment
31	61	Experiment performed by students
	62	Record writing by the students
32	63	Record checking and viva-voce
	64	ASSESSMENT

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14/08/2026

Signature of Faculty

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14.08.2026

Signature of HOD

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14.08.26

Counter Signature of Academic co-ordinator