

GOVERNMENT POLYTECHNIC, JAJPUR
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DEPARTMENT OF MATHS AND SCIENCE

LESSON PLAN

Name of the Teaching faculty: Sucheta Dhal, Sasmita Tiadi

Subject: Applied Chemistry Lab

Periods per week- 2

Semester from Date: 16.08.2024

To Date: 10.12.2024

Total period - 30.

Sessional- 25 marks,

End sem. Exam- 25 Marks

Week	Class Day	Topic
1st		Expt 1: Preparation of standard solution of oxalic acid of potassium permanganate solution.
	1st	Theory, procedure and working.
		Expt 2: Determination of strength of NaOH Solution.
	2nd	Theory, procedure, Demonstration and working.
	3rd	Tabulation, calculation and results.
		student sessional Assessment.
2nd		Expt 3: Standardisation of potassium Permanganate solution and determination of percentage of haematite ore.
	4th	Theory, procedure, Demonstration and working.
	5th	Observation, Tabulation and calculate on and result.
	6th	student sessional Assessment.
		Expt 4: Iodometric estimation of Copper in copper pyrite ore
	7th	Theory and procedure Standardisation of the solutions.
3rd	8th	Observations and conclusions for the determination of % of Cu.
	9th	student sessional Assessment.
		Expt 5: Determination of TAN of given oil
	10th	Theory, procedure, Demonstration and working.
	11th	Titration, Tabulation and calculations, Result.
4th	12th	student sessional Assessment.
		Expt 6(A): Estimation of hardness of water using EDTA solution.
	13th	Theory, procedure, Demonstration and working.
	14th	Observation, Calculation and result.
	15th	student sessional Assessment.
5th		Expt 6(B): Determination of alkalinity of a given water sample using 0.01M Sulphuric acid.
	16th	Theory, procedure, Demonstration and working.
	17th	Titration, Tabulation, Calculation and result.
	18th	student sessional Assessment.
		Expt 7: Gravimetric analysis of the moisture and ash contents in a Coal sample.
6th	19th	Theory, procedure, Demonstration and working.
	20th	Observations, calculation and conclusion.
	21th	student sessional Assessment.
		Expt 8: Determination of conductivity of given water sample.
7th	22th	Theory, procedure, Demonstration and working.
	23th	Observations, Reading Conclusion.
	24th	student sessional Assessment.
		Expt 13: Verification of Faraday's 1st law. of electrolysis of copper sulphate using Cu electrode.
	25th	Theory, procedure, Demonstration and working.
	26th	Observations, calculation and conclusion.

	27th	student sessional Assessment.
		Expt 15: Determination of the effect of two dissimilar metals immersed in solution.
	28th	Theory, procedure, Demonstration and working.
8th	29th	Observations, calculation and conclusion.
	30th	student sessional Assessment.

Reference Books:-

Applied Chemistry by Dr. Anju Rawley (Download from <https://ekumbh.aicteindia.org/dbook.php>)

Text Book of Chemistry for Class XI & XII (Part-1, Part-II); N.C.E.R.T., Delhi, 2017-18.

Dr. G. H. Hugar and Prof A. N. Pathak, Applied Chemistry Laboratory Practices, Vol, I and Vol. II, NITTTR, Chandigarh, Publications, 2013-14

Agnihotri, Rajesh, Chemistry for Engineers, Wiley India Pvt.Ltd., 2014.

Jain & Jain Engineering Chemistry, Dhanpat Rai and Sons; New Delhi, 2015.

Sucheta Shal