# LESSON PLAN

SUBJECT: APPLIED CHEMISTRY LAB

BRANCH: COMMON

SEMESTER: 2ND (2025-26)

NAME OF THE FACULTY: BISWANATH PADHI

# GOVERNMENT POLYTECHNIC, BHADRAK

07/01/2026

HOD, Humanities & Sciences

H.O.D.
Humanities & Sciences
Govt.Polytechic,Bhadrak

Academic Coordinator

Academic Co-ordinator

Principal
Govt. Polytechnic, Bhadrak

Principal
Govt.Polytechnic,Bhadrak

**`GOVT. POLYTECHNIC,BHADRAK**
**LESSON PLAN FOR SUMMER SEMESTER – 2026**
**Dept. of Humanities & Sciences**

Name of the Faculty : Biswanath Padhi & Ajit Kumar Pallei
Course Code: PR 5
Practical: Applied Chemistry Lab
Total Periods : 30
Examination: Summer-2026
Sem: 2nd

Sessional: 25 Mark
End Sem. Exam: 25 Mark
Total Mark : 50 Mark
Class Start : 09-01-2026

| | **Semester:** 2nd | **Name of the Teaching Faculty : Biswanath Padhi & Ajit Kumar Pallei** |
|---|---|---|
| **Subject: Chemistry Lab** | **No. of Days/per week class allotted: 2 Periods** | **Semester from date: 09-01-2026 To Date:08-05-2026** **No. of Weeks: 17** |
| **Week** | **Class Day** | **Theory/ Practical Topics** |
| 1st | 1 | Demonstration & Lab practice of To determine strength of given sodium hydroxide solution by titrating against standard oxalic acid solution using phenolphthalein indicator. |
| 2nd | 1 | Demonstration of Standardization of KMnO4 solution using standard oxalic acid and Determine the percentage of iron present in given Hematite ore by KMnO4 solution. |
| 3rd | 1 | Lab practice of Standardization of KMnO4 solution using standard oxalic acid and Determine the percentage of iron present in given Hematite ore by KMnO4 solution. |
| 4th | 1 | Demonstration of Iodometric estimation of copper in the copper pyrite ore. |
| 5th | 1 | Lab practice of Iodometric estimation of copper in the copper pyrite ore. |
| 6th | 1 | Demonstration of Volumetric estimation of total acid number (TAN) of given oil. |
| 7th | 1 | Lab practice of Volumetric estimation of total acid number (TAN) of given oil. |
| 8th | 1 | Demonstration of Volumetric estimation of a) Total hardness of given water sample using standard EDTA solution. b) Alkalinity of given water sample using 0.01M sulphuric acid |
| 9th | 1 | Lab practice of Volumetric estimation of a) Total hardness of given water sample using standard EDTA solution. b) Alkalinity of given water sample using 0.01M sulphuric acid. |
| 10th | 1 | Demonstration of Proximate analysis of coal a) Gravimetric estimation moisture in given coal sample b) Gravimetric estimation ash in given coal sample. |
| 11th | 1 | Lab practice of Proximate analysis of coal a) Gravimetric estimation moisture in given coal sample b) Gravimetric estimation ash in given coal sample. |
| 12th | 1 | Demonstration & Lab practice of Determine the conductivity of given water sample. |
| 13th | 1 | Demonstration & Lab practice of Determination of the Iron content in given cement sample using colorimeter. |
| 14th | 1 | Demonstration & Lab practice of Determination of calorific value of solid or liquid fuel using bomb calorimeter. |
| 15th | 1 | Record Check. |

| Additional Experiment | | |
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| 16th | Expt.11 | Determination of viscosity of lubricating oil using Redwood viscometer |
| | Expt.12 | Determination of flash and fire point of lubricating oil using Able's flash point apparatus. |
| 17th | Expt.13 | To verify the first law of electrolysis of copper sulfate using copper electrode. |
| | Expt.14 | Construction and measurement of emf of elector chemical cell (Daniel cell). |
| | Expt.15 | To study the effect of dissimilar metal combination. |

Biswanath Patel

**Signature of the Faculty**