SYNERGY SCHOOL OF ENGINEERING DHENKANAL

LESSON PLAN

SESSION (2026-2027)

Discipline : Common to all branches	Name of the teaching faculty: Ms. Amrita Aiswarya Nanda Ms. Jyotirmayee Behera
Subject : Applied chemistry Lab Subject code : PR-3	No of weeks-32
	Start date-17.08.2026 End date- 17.04.2027

Week	Class no.	Topic to be taught
1	1	Explanation and demonstration of laboratory equipments.
2	2	Introduction to common terms to be used in laboratory methods
3	3	**Expt 1**-Preparation of standard solution of oxalic acid.
4	4	**Expt 2**-To determine strength of given sodium hydroxide solution by titrating against standard oxalic acid solution using phenolphthalein indicator.
5	5	To determine strength of given sodium hydroxide solution by titrating against standard oxalic acid solution using phenolphthalein indicator.
6	6	**Expt 3**-Volumetric estimation of a) Total hardness of given water sample using standard EDTA solution.
7	7	Volumetric estimation of a) Total hardness of given water sample using standard EDTA solution.
8	8	b) Alkalinity of given water sample using 0.01M sulphuric acid.
9	9	Revision, completion of lab records and viva voice.
10	10	**Expt 4**-Volumetric estimation of total acid number (TAN) of given oil.
11	11	Volumetric estimation of total acid number (TAN) of given oil.
12	12	**Expt 5**-Standardization of $KMnO_4$ solution using standard oxalic acid
13	13	Standardization of $KMnO_4$ solution using standard oxalic acid
14	14	**Expt 6**-Determination of the percentage of iron present in given Hematite ore by $KMnO_4$ solution.
15	15	Determination of the percentage of iron present in given Hematite ore by $KMnO_4$ solution.
16	16	Viva voice and completion of lab records.
17	17	**Expt 7**-Iodometric estimation of copper in the copper pyrite ore.
18	18	Iodometric estimation of copper in the copper pyrite ore.
19	19	**Expt 8**-Proximate analysis of coal a) Gravimetric estimation moisture in given coal sample.
20	20	Proximate analysis of coal b) Gravimetric estimation ash in given coal sample.
21	21	Viva voice and completion of lab records.
22	22	**Expt 9**-Determine the conductivity of given water sample.
23	23	Determine the conductivity of given water sample.
24	24	**Expt 10**-Determination of flash and fire point of lubricating oil using Able's flash point apparatus.

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25	25	Determination of flash and fire point of lubricating oil using Able's flash point apparatus.
26	26	Viva voice and completion of lab records.
27	27	**Expt 11**-Determination of viscosity of lubricating oil using Redwood viscometer.
28	28	Determination of viscosity of lubricating oil using Redwood viscometer.
29	29	**Expt 12**-Determination of amount of TDS present in a water sample.
30	30	Determination of amount of TDS present in a water sample.
31	31	Viva voice and completion of lab records.
32	32	Practical assessment and performance evaluation.

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Principal

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HOD Chemistry