



Department of Engineering Science

Innovative Teaching Method (Activity Based Learning) - Report

Academic Year –2024-25	Class –F.Y.B.Tech (IT, Computer AI&DS)
Semester–I	Date: 15/12/2024
CO: CO5	PO:PO1, PO2, PO7, PO12

Title of Innovation method/activity: Activity based learning (Unit 5 Corrosion and its prevention)

Name of Faculty: Dr. S.J.Kokate, Ms .Bahare G.B. , Ms. R.B.Thkare and Ms. A.A.Malpure
Course : Engineering Chemistry

Objectives:

1. To study electrochemical corrosion.
2. To demonstrate the effect of medium on metals.
3. Clear the concept.
4. It helps students to think individually.
5. More involvement of students.

Instructions of Activity

1. The activity is to be performed in group
2. Group consists of 5 students.

Procedure

1. Each group needs to collect 3 similar metal articles easily available.
2. Keep the metals in 3 different media i.e. Water, acidic solution and basic solution for 7 days.
3. For acidic medium students can use citric acid or vinegar.
4. For basic mediums make use of soap solution or detergent solution.
5. Observe and note the changes in metal daily (click pic and record note).
6. Prepare a 5-6 page report which includes daily observation with pictures, your group details, and also suggest a suitable method for prevention of corrosion.

6. Description of method with Benefits(8 –10lines)

Description of method

Monitor and support students for performing Activity:

By using this method we are able to check the concept understood by the students. Also students get engaged and show their creativity while preparing the activity. Students are able to revise the topic very easily.

Benefits of method

- It helps students to think individually about a topic and clear their concept.
- It helps students to develop their creativity.
- It helps students to understand the concepts and revise the topic.
- Students know the application which increases the interest of students in learning Engineering Chemistry.

7. Roles and Responsibilities

• Teacher

- Elaborate regarding activity.
- Provide the study material on Topic.
- Remain available during the completion of task.
- Prepare assessment methodology.

• Student

- Go through the concept of the topic.
- Understand the concept and show their creativity independently while preparing the activity.
- Actively participate in activity and contribute their knowledge regarding the topic covered.

8. Assessment Tools :Maximum Marks 8

Observations & Collecting Information	3	2	1
	Very Good	Good	Developing
	All the information is collected .	Some information is collected	Few information is collected
Completing Task	3	2	1
	Very Good	Good	Developing
	Neat and clean report prepared and presented.	Neatness is OK and with less creativity	less Neatness and with no creativity or file of other student is uploaded
	Very Good	Good	Developing
Contribution	-	2	1
	Excellent	Good	Poor
	Active participation and maximum contribution	Less participation and moderated contribution	Passive participation and less contribution

9. Evaluation sheet of attendee:

Activity Based Assessment Engineering Chemistry (100202) AY-2024-2025
Semester-1 (sample sheet: Information & Technology)
IT-A

Roll No.	Name of student	R1: Observations & Collecting Information (3)	R2: Completing Task (3)	R3: Contribution (2)	CO5 Marks
1	Shravasti Adakmol	3	3	2	8
2	Rutuja Aher	3	3	2	8
3	Samir Aher	3	3	2	8
4	Vidya Aher	3	3	2	8
5	Harshad Ahire	3	3	2	8
6	Ayush Ahire	3	3	2	8
7	Sarthak Ahire	3	3	1	7
8	Rudra Akalade	3	3	2	8
9	Prathamesh Apsunde	3	3	2	8
10	Samiksha Argade	3	3	2	8
11	Aditya Aushikar	3	3	2	8
12	Anushka Bachhav	3	3	2	8
13	Samruddhi Bagale	3	3	2	8
14	Rutuja Bartad	3	3	2	8
15	Yash Bhadage	3	3	2	8
16	Bharvi Bhangale	3	3	2	8
17	Vishal Bora	3	3	2	8
18	Payal Chaudhari	3	3	2	8
19	Vinod Chaudhari	3	3	2	8
20	Bhavesh Chavan	3	3	2	8
21	Namrata Chavhanke	3	3	2	8
22	Samruddhi Chinchole	3	3	2	8
23	Gitanjali Daund	3	3	2	8
24	Snehal Daware	3	3	2	8
25	Prathmesh Deore	3	3	2	8
26	Sanchita Deshmukh	3	3	2	8
27	Unnati Dhandar	3	3	2	8
28	Prathmesh Dhongade	3	3	2	8

29	Mahak Fabiyani	3	3	2	8
30	Dipti Firke	3	3	2	8
31	Amol Ghuge	3	3	2	8
32	Sanika Ghuge	3	3	2	8
33	Dhruv Girase	3	3	2	8
34	Umesh Girase	3	3	2	8
35	Preeti Gosavi	3	3	2	8
36	Priyanka Jadhav	3	3	2	8
37	Sakshi Jadhav	3	3	2	8
38	Kartiki Jadhav	3	3	2	8
39	Sanskriti Jadhav	3	3	2	8
40	Atharva Jadhav	3	3	2	8
41	Darshan Jadhav	3	3	2	8
42	Priyanka Jadhav	3	3	2	8
43	Varad Joglekar	3	3	2	8
44	Manas Joshi	3	3	2	8
45	Mohak Joshi	3	3	2	8
46	Om Kadam	3	3	2	8
47	Pavanraj Kadam	3	3	2	8
48	Shahu Kadlag	3	3	2	8
49	Shraddha Kalunge	3	3	2	8
50	Avishkar Kapadnis	3	3	2	8
51	Arti Kasbe	3	3	2	8
52	Simran Kaur	3	3	2	8
53	Pranav Kedar	3	3	2	8
54	Nishant Khaire	3	3	2	8
55	Prathamesh Khamkar	3	3	2	8
56	Hita Khandhar	3	3	2	8
57	Sushant Khandizod	3	3	2	8

58	Anushka Kokate	3	3	2	8
59	Vidisha Koli	2	2	0	4
60	Tanisha Kothari	3	3	2	8
61	Vaibhavi Kotkar	3	3	2	8
62	Switesha Kshirsagar	3	3	2	8
63	Anuj Kulkarni	3	3	1	7
64	Ishwari Kushare	3	3	2	8
65	Neha Kushare	3	3	2	8
66	Dnyaneshwari Kute	3	3	2	8
67	Shraddha Lalwani	3	3	2	8
68	Soham Lodha	3	3	2	8

IT-B

Roll No.	Name of student	R1: Observations & Collecting Information (3)	R2: Completing Task (3)	R3: Contribution (2)	CO5 Marks
70	Malve Yash Ravindra	2	2	0	4
71	Mandal Rahul Gajadhar	3	3	2	8
72	Mandwade Gaurav Sanjay	2	2	0	4
73	More Chaitanya Dnyaneshwar	3	3	2	8
74	More Jay Sanjay	2	2	0	4
75	Mukhedkar Aryan Bhaskar	2	2	0	4
76	Musale Prajyot Sandip	3	3	1	7
77	Nawale Isha Purushottam	3	3	2	8
78	Nerkar Darshan Jayant	2	2	0	4
79	Nikam Neeral Vivek	3	3	2	8
80	Nikam Krutika Santosh	3	3	2	8
81	Pagar Nanadini Sandip	3	2	2	7
82	Pagar Om Dinesh	3	2	2	7
83	Pagar Kartiki Vinod	3	2	2	7

84	Pakhale Mayuri Sharad	3	2	2	7
85	Pal Anchal Narendra	3	2	1	6
86	Patel Soham Sandeep	3	2	1	6
87	Patil Saurav Gajanan	3	3	2	8
88	Patil Prajwal Sandeep	3	3	2	8
89	Patil Dipak Sunil	3	3	2	8
90	Patil Pranjal Rajendra	3	3	2	8
91	Patil Sanika Pradip	3	3	2	8
92	Pawar Atharv Sandip	2	2	2	6
93	Pawar Vaishnavi Sandip	3	3	2	8
94	Pawar Sahil Nanasaheb	2	2	2	6
95	Pawatekar Samruddhi Bhalchandra	3	3	2	8
96	Pingale Harshal Sanjay	3	3	2	8
97	Rajput Rohit Bhagwansing	3	3	1	7
98	Rokade Pranav Ravindra	2	1	1	4
99	Salave Chaitali Pradip	3	3	1	7
100	Salunke Aarti Santosh	3	3	1	7
101	Salunkhe Divya Devendra	3	3	2	8
102	Sanap Sayali Hari	3	3	2	8
103	Sansare Kaushal Pavan	3	3	2	8
104	Satpute Sarang Abhijit	3	3	2	8
105	Savane Sanskar Jalandhar	3	3	1	7
106	Shaikh Shaizaan Naveed	3	3	2	8
107	Shankhapal Vedika Dnyaneshwar	3	3	2	8
108	Shelke Om Madhukar	3	3	1	7
109	Shelke Sarvadny Rajendra	3	3	1	7
110	Shetty Gautami Jayprakash	3	3	2	8

111	Shewale Divya Gokul	3	3	1	7
112	Shimpi Mrunmayee Kiran	3	3	1	7
113	Shinde Ayush Mangesh	3	3	1	7
114	Shinde Sakshi Pravin	3	3	1	7
115	Shinkar Atharv Kishor	3	3	1	7
116	Shirode Bhavesh Ravindra	3	3	2	8
117	Singh Sanya Ramkumar	3	3	2	8
118	Sonawane Harshal Manoj	3	3	2	8
119	Sonawane Gaurav Haridas	3	3	2	8
120	Sonawane Vedant Prabhakar	3	3	2	8
121	Sonawane Payal Jibhau	3	3	2	8
122	Suryawanshi Purvashri Anil	3	3	0	6
123	Suryawanshi Isha Bapusing	3	3	2	8
124	Tadge Siddhi Pandharinath	3	3	2	8
125	Tirukhe Harshal Uddhav	3	3	2	8
126	Torane Shrawasti Sunil	3	3	2	8
127	Ugale Tejal Bhausahab	3	3	2	8
128	Uphade Sanskruti Sandip	2	2	0	4
129	Uswadkar Pranav Prashant	3	3	2	8
130	Vadje Anushka Bhanudas	3	3	2	8
131	Vadje Shrinivas Vishal	3	3	1	7
132	Vanjare Ritesh Sanjay	3	3	2	8
133	Vanse Nisha Babasaheb	3	3	2	8
134	Warkhede Ayush Sachin	3	3	2	8
135	Watane Parag Bharat	3	3	1	7
136	Yeola Sakshi Chandrahas	3	3	1	7
137	Zankar Aaradhya Dinkar	3	3	1	7

138	Shiurkar Sayee	3	2	1	6
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10. Rubrics for Evaluation

Rubrics	Very Good (3)	Good (2)	Developing (1)
Observations & Collecting Information (3)	3	2	1
Completing Task (3)	3	2	1
Contribution (2)	-	2	1

11.

12. Activity Picture

ROLL NO:	NAME OF MEMBER
✓ 41	DARSHAN JADHAV
✓ 42	PRIYANKA JADHAV
✓ 43	VARAD JOGLEKAR
✓ 44	MANAS JOSHI
✓ 45	MOHAK JOSHI

DAY 1 IMAGES

DAY 1:

- Day 1 Observation
 - 1. **Water**
 - Initial state: The metal appears shiny and unaltered.
 - Changes: No visible changes observed.
 - 2. **Acidic Solution (vinegar)**
 - Initial state: The metal is fully submerged; bubbles may form on the surface.
 - Changes: A slight discoloration or no visible changes.
 - 3. **Basic Solution (soap solution)**
 - Initial state: The metal looks clean and shiny.
 - Changes: No visible changes observed.

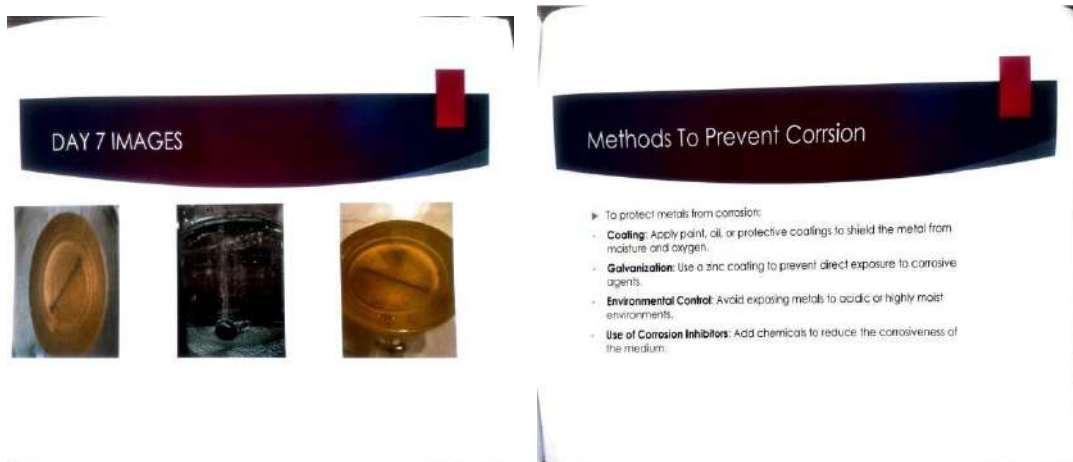
DAY 7 IMAGES

Day 7 Observation

- **ACIDIC SOLUTION (vinegar)**
 - Changes:
 - The metal may exhibit severe corrosion, with parts of it thinning, pitting, or appearing eaten away.
 - The acidic solution might have turned darker due to dissolved metal ions.
 - Bubbles or a metallic smell might persist.
- **BASIC SOLUTION (soap solution)**
 - Changes:
 - The metal might have a dull surface but less visible rust compared to water or acidic medium.
 - Minor discoloration or slimy deposits may form on the surface.
 - The basic solution might turn cloudy or develop sediment at the bottom.

DAY 4 OBSERVATION

- **WATER**
 - Initial State: The metal is submerged in water with no visible reaction at the start.
 - Changes: Light rust or discoloration may appear on the surface of the metal. The water might turn slightly cloudy.
- **ACIDIC SOLUTION (vinegar)**
 - Initial State: The metal showed slight discoloration by Day 1.
 - Changes: Corrosion is more noticeable, with pitting or a rough texture on the surface. The solution may develop a metallic smell, and bubbles may form on the metal surface.
- **BASIC SOLUTION (soap solution)**
 - Initial State: The metal remained mostly unchanged in earlier observations.
 - Changes: The surface may appear dull or have minor deposits. No significant rust or corrosion might be visible, but the solution could feel slightly slippery or greasy.



13. For review and critique contact: e-mail address of faculty and HOD

bahare.gayatri@kbtcoe.org , hod.enggsci@kbtcoe.org

Ms. G.B. Bahare, Dr. S.J. Kokate
Ms. R.B. Thakare , Ms. A.A. Malpure

Subject Incharge

Ms. G.B. Bahare

Subject Chairman

Dr. S.J. Kokate

BOS Chairman