

GOVERNMENT POLYTECHNIC JAJPUR

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DEPARTMENT OF METALLURGICAL ENGINEERING

LESSON PLAN

<u>Discipline</u> Metallurgy	<u>Semester</u> 6 th	Name of teaching faculty: Hari Shankar Dehuria	
<u>Subject</u> Corrosion Engg. Th-04-A	No day/ week class: 04	No of week: 16	Session: Summer
<u>Week</u>	<u>Class Day</u>	<u>Topic</u>	
1st	1st	Introduction to Corrosion, Engg.	
	2nd	Explain cost of corrosion, direct and indirect losses.	
	3rd	The important of corrosion studies.	
	4th	Classify different types of corrosion	
2nd	1st	Continues different types of corrosion.	
	2nd	Explain full detail of Electrochemical Corrosion	
	3rd	Explain full detail of Chemical Corrosion.	
	4th	Difference between electrochemical corrosion and	
3rd	1st	Chemical corrosion.	
	2nd	The rate of corrosion.	
	3rd	The basic concepts of corrosion principles.	
	4th	The principle of Electrochemical Corrosion	
4th	1st	State the Faradays law and its causes	
	2nd	and its deviation.	
	3rd	Discuss about types of electrochemical cells.	
	4th	Discuss in details about Galvanic cell.	
5th	1st	Discuss in details about concentration cell.	
	2nd	Discuss in details about Electrolytic cell.	
	3rd	What is Electrode Potentials, full details	
	4th	State the Faraday's law and its causes and its deviation.	
	1st	Discuss electrolytic cell	
	2nd	and its uses.	

6th	2nd	
	3rd	Electrode potential
7th	4th	State its significance without experimental measurement
	1st	
	2nd	Discuss in details Electromotive force
	3rd	Galvanic series
8th	4th	Continue of Galvanic cell.
	1st	Their application with reference to corrosion and prevention.
	2nd	Different forms of corrosion and protective factors affecting mechanism
	3rd	
9th	4th	Atmospheric corrosion
	1st	
	2nd	Intergranular corrosion
	3rd	Pitting corrosion
10th	4th	Corrosion fatigue
	1st	Galvanic corrosion
	2nd	Stress-corrosion / Cracking
	3rd	Cavitation corrosion
11th	4th	Fretting corrosion
	1st	High temperature oxidation corrosion
	2nd	Corrosion Prevention
	3rd	Study the physical, mechanical and chemical characteristic of protective coating.
12th	4th	Explain corrosion prevention by inhibition and passivation by control of environmental
	1st	Discuss the cathodic and anodic protection
	2nd	Reversion
	3rd	
13th	4th	
	1st	
	2nd	
14th	3rd	
	2nd	
	1st	