

GOVERNMENT POLYTECHNIC JAJPUR

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Discipline: Metallurgy	Semester: 6TH	Name of the Teaching faculty: P ARADHANA
Subject: corrosion Engg.	No of Days/Week class allotted: 4	Semester from Date: To Date: No of weeks: 16
Week	Class Day	Topics
1st	1 st	Introduction to Corrosion
	2 nd	cost of corrosion, direct and indirect losses
	3 rd	cost of corrosion, direct and indirect losses
	4 th	importance of corrosion studies
2nd	1 st	different types of corrosion
	2 nd	electrochemical corrosion
	3 rd	chemical corrosion.
	4 th	corrosion rate
	1 st	Corrosion principles
	2 nd	electrochemical principle of corrosion
	3 rd	Faraday's law and its causes and its deviation
	4 th	Faraday's law and its causes and its deviation
3rd	1 st	electrochemical cells
	2 nd	concentration cell
	3 rd	electrolytic cell
	4 th	Electrode potentia
4th	1 st	electromotive force
	2 nd	galvanic series
	3 rd	galvanic series and their application with reference to corrosion and protection
	4 th	galvanic series and their application with reference to corrosion and protection
5th	1 st	Different forms of corrosion
	2 nd	Atmospheric corrosion
	3 rd	Atmospheric corrosion & prevention
	4 th	Intergranular corrosion
6th	1 st	Intergranular corrosion
	2 nd	Intergranular corrosion & prevention
	3 rd	Pitting corrosion
	4 th	Pitting corrosion & prevention
7th	1 st	Corrosion fatigue
	2 nd	Corrosion fatigue & prevention
	3 rd	Galvanic corrosion
	4 th	Galvanic corrosion & prevention
8th	1 st	Pitting corrosion
	2 nd	Stress corrosion
	3 rd	Stress corrosion/cracking

	4 th	Stress corrosion/cracking & prevention
9th	1 st	Cavitation corrosion
	2 nd	Cavitation corrosion
	3 rd	Cavitation corrosion & prevention
	4 th	Fretting corrosion
10th	1 st	Fretting corrosion
	2 nd	Fretting corrosion & prevention
	3 rd	High temperature oxidation corrosion
	4 th	High temperature oxidation corrosion
11th	1 st	High temperature oxidation corrosion & prevention
	2 nd	Stray current corrosion
	3 rd	Stray current corrosion & prevention
	4 th	Corrosion Prevention
12th	1 st	Physical characteristic of protective coating
	2 nd	Mechanical characteristic of protective coating
	3 rd	Chemical characteristic of protective coating
	4 th	corrosion prevention by inhibition
13th	1 st	corrosion prevention by inhibition
	2 nd	corrosion prevention by inhibition
	3 rd	corrosion prevention by passivation
	4 th	corrosion prevention by passivation
14th	1 st	corrosion prevention by passivation
	2 nd	corrosion prevention control of environment
	3 rd	corrosion prevention control of environment
	4 th	corrosion prevention control of environment
15th	1 st	Cathodic protection
	2 nd	Cathodic protection
	3 rd	Cathodic protection
	4 th	Anodic protection
16th	1 st	Anodic protection
	2 nd	Anodic protection
	3 rd	Revision
	4 th	Revision