

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular/Backlog), April-May 2015

B. Tech/ M. Tech (as applicable) in Chemical Engineering, Semester VI



Roll No.....

COURSE CODE: 622 Corrosion engineering (CHE)

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A Objective type multiple choice questions (10 questions @ 1 mark) 10

- I. Give chemical reaction of rust formation.
- II. Filiform corrosion is ?
(a) occurred on metal surface (b) its called under film corrosion
(c) types of crevice corrosion (d) All of the above
- III. Write the chemical formula of black rust .
- IV. Corrosion fatigue is
(a) repeated cyclic stressing (b) types of metal properties
(c) it is crystallization (d) None
- V. Intergranular corrosion related to
(a) chromium carbide (b) chromium sulfide (c) Chromium (d) Carbon
- VI Bakelite is
(a) Thermosetting plastic (B) thermoplastic (b) type of metal (d) none
- VII Give name of factor affecting corrosion resistance rate.
- VIII Passivity is ?
(a) oxidizing power of metal (b) reduction power of metal (c) None
(d) Both A& B
- IX Which oxide layer stable on metal surface.
(a) Porous (b) Volatile (c) Nonporous (d) Both A&B
- X KLA is ?
(a) Knife-line attack (b) 18-8 steel (c) types of steel (d) None

Q.2 Short answer type questions (4 questions @ 2.5 marks) 10

- 1 Rusting of iron
- 2 Short note on galvanisation corrosion
- 3 Short note on crevice corrosion of steel
- 4 Selective leaching of metals

Q.3A Short note on Filiform corrosion of 18-8 steel. 05

Q.3B Write short note velocity effect on metal corrosion. 05



Q.4A	What is passivity of metal discuss it with graph.	05
Q.4B	Discuss the Knife-line attack on steel.	05
Q.5A	Discuss the Graphitization of metals.	05
Q.5B	What is pitting corrosion of metal discuss it with graph.	05
Q.6A	Describe the various factors which influencing corrosion rate .	05
Q.6B	Write short not on stress corrosion of steel(18-8).	05
OR		
Q.6B	Short note on effects of alloying elements on steel.	05
Q.7A	Explain the wet corrosion of iron with suitable diagram and chemical reaction.	05
Q.7B	Short note on different type of metal coatings.	05
OR		
Q.7B	Discuss the Cavitation corrosion of 18-8 steel.	05
Q.8A	Explain the cathodic and anodic protection of steel	10
Q.9A	Explain the erosion corrosion of stainless steel alloy pump impeller.	10
Q.9B	Explain the hydrogen Embrittlement of metal	10
OR		
Q.9B	Explain the corrosion fatigue on stainless steel.	10