

USN

--	--	--	--	--	--	--	--	--	--

18MR734

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022 Marine Corrosion and Prevention

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain any five forms of corrosion with causes and remedies. (10 Marks)
b. What is electrochemical cell? Explain its working principle with neat sketch. (10 Marks)

OR

- 2 a. Explain the fundamental aspects of Eh – PH diagram help of graph. (10 Marks)
b. List and explain the types of corrosion. (10 Marks)

Module-2

- 3 a. Explain the following: i) Oxidation ii) Passivity. (10 Marks)
b. Explain: i) Weld decay ii) Stress corrosion cracking. (10 Marks)

OR

- 4 a. Explain problems associated with material degradation in different industries. (10 Marks)
b. Explain the degradation of polymers and ceramics. (10 Marks)

Module-3

- 5 a. Explain any three mechanism of SRB corrosion. (10 Marks)
b. Explain Biofilms and microbial influenced corrosion. (10 Marks)

OR

- 6 a. Explain the role of aerobit and anaerobic micro organisms. (10 Marks)
b. Explain the prevention and control of (MIC) Microbial Influenced Corrosion. (10 Marks)

Module-4

- 7 a. List and explain preservation methods to avoid boiler corrosion. (10 Marks)
b. What are the causes of paint failure? Explain any two methods in ship board preparations for painting. (10 Marks)

OR

- 8 a. List the types of corrosive wears in cylinder liners with reasons and mention the remedies. (10 Marks)
b. Explain any three methods to remove atmosphere mill scale during plate preparation. (10 Marks)

Module-5

- 9 a. With neat sketch explain Tinning process. (10 Marks)
b. Explain chemical and electro chemical corrosion. List the methods of cathodic protection and explain any two. (10 Marks)

OR

- 10 a. With neat sketch, explain PVD technique and list the advantages. (10 Marks)
b. Explain Anodizing and Phosphating metallic coating. (10 Marks)

* * * * *

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.