

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2182112****Date: 06/05/2017****Subject Name: Industrial Corrosion, Testing, Prevention & Control (Department Elective -III)****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss the importance of corrosion study based on economic aspects. **07**
(b) List forms of corrosion. Discuss causes, mechanism and way of prevention of selective leaching. **07**
- Q.2** (a) Enlist different methods of corrosion prevention. Explain cathodic protection method to combat corrosion. **07**
(b) Riveted vessel having which type of corrosion? Discuss. Explain protection technique against it. **07**
- OR**
- (b) Comment on failures due to embitterment in boiler tubes. Describe the remedial measures. **07**
- Q.3** (a) Discuss corrosive environment in Power industries. **07**
(b) Identify one corrosion related failures in petrochemical industries and suggest remedies. **07**
- OR**
- Q.3** (a) Describe the corrosion resistance materials, can be used in Power industries. **07**
(b) Explain how material selection is helpful to combat corrosion in petrochemical industries. **07**
- Q.4** (a) Identify one corrosion related failures in ship building industries and suggest remedies. **07**
(b) Discuss corrosion failures in passenger vehicle driveshaft. Suggest remedies. **07**
- OR**
- Q.4** (a) Describe corrosive environment in marine industries. **07**
(b) Explain how material selection is helpful to combat corrosion in ship building industries. **07**
- Q.5** (a) Discuss corrosive environment in fertilizer industries. **07**
(b) With the help of suitable examples explain how the water quality affects corrosion in industries. **07**
- OR**
- Q.5** (a) Explain how material selection is helpful to combat corrosion in fertilizer industries. **07**
(b) Identify corrosion related failures in a gas engine and suggest remedies. **07**
