

Total No. of Questions : 6]

SEAT No. :

P269

[Total No. of Pages : 2

Oct./BE/Insem.- 587
B.E. (Chemical Engineering)
CORROSION ENGINEERING
(2015 Pattern) (409344) (Semester - I) (Elective - I)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) Assume suitable data if necessary.*
- 2) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6*
- 3) Figures to right indicate full marks.*
- 4) Draw neat figures wherever necessary.*
- 5) Use of scientific calculators is allowed.*

Q1) a) Explain the various forms of corrosion with a brief review. **[5]**

b) List the discrepancies of EMF series and explain them in brief. **[5]**

OR

Q2) a) What is cathodic protection? Under what conditions is this protection more useful? **[5]**

b) Differentiate between wet and dry corrosion with suitable illustrations. **[5]**

Q3) a) Explain types of polarization and significance of corrosion potential in brief. **[5]**

b) Draw and explain the purpose of anodic, cathodic and mixed control with neat diagram. **[5]**

OR

P.T.O.

Q4) a) Explain the significance of Tafel equation and Evans diagram with suitable illustrations. [5]

b) With a neat diagrammatic illustration explain the Pourbaix-diagram for Fe-H₂O system. [5]

Q5) a) Explain the Galvanic corrosion in detail. Also write the remedial measures for the same. [5]

b) Draw and explain the concept of cavitation in detail. Explain the remedial measures of the same. [5]

OR

Q6) a) What do mean by fretting corrosion? Explain it with suitable illustration. [5]

b) Illustrate the concept of pitting corrosion with suitable example. [5]

OR