

SARASWATI INSTITUTE OF TECHNOLOGY

Science & Humanities Department

Name of Programme: - ME/CE/CO (common to all programme)

Name of Course: - Basic Chemistry (SEM-I 2018-19)

Course Outcome- CO1

Assignment –I

Q.1 What is meant by polar and non-polar covalent bonds? Explain with examples.

Q.2 Explain the formation of the following covalent compounds:

- a. Water molecule
- b. Ammonia molecule

Q.3 Compare polar and non-polar covalent molecules.

Q.4 Explain the formation of ammonium ion (NH_4^+).

Q.5 Explain the formation of hydronium ion (H_3O^+).

Q.6 Explain the following properties of a metal on the basis of metallic bond.

- | | |
|---------------------------------|-------------------------------|
| i) High electrical conductivity | ii) High thermal conductivity |
| iii) Lustre | iv) Softness |
| v) Malleability and ductility | vi) High tensile strength |
| vii) High elasticity | viii) crystalline nature |
| ix) Melting points | |

Q.7 What are the inter-molecular forces of attraction?

Q.8 What is Van der Waals attraction? Explain.

Q.9 What is meant by a hexagonal close-packed lattice?

Q.10 List a few important industrial processes using catalysts.

Last Date Of submission: - 06/09/2018

Name of course coordinator -

SARASWATI INSTITUTE OF TECHNOLOGY

Science & Humanities Department

Name of Programme: - ME/CE/CO (common to all programme)

Name of Course: - Basic Chemistry (SEM-I 2018-19)

Course Outcome- CO2

Assignment –II-----

1. State Faradays First & Second Law of electrolysis with mathematical Expression.
2. “Wooden Windows are preferred in coastal area rather than iron” Clarify.
3. Explain “The container of pickle is not coated with Zinc.”
4. Mention the role of Sacrificial anode in corrosion control.
5. Steel Pipe connected to copper plumbing occurs corrosion. Explain.
6. Identify the strong & weak electrolyte from the given list.
NH₄Cl, NaCl, HCl, CH₃COOH, H₂SO₄, NaOH.
7. Explain with neat diagram impressed current Cathodic Protection.
8. The presence of Sand, Dust embedded on the iron surface, leads to corrosion. Name the Type of corrosion& explain the mechanism.
9. Explain the mechanism of crevice corrosion with example.
10. Distinguish between1. Electrochemical cell & electrolytic cell 2. Primary & Secondary Cell.

Date Of submission: - 08/10/2018

Name of course coordinator –Mrs. Y.D.Wasu

SARASWATI INSTITUTE OF TECHNOLOGY

Science & Humanities Department

Name of Programme: - ME/CE (common to all programme)

Name of Course: - Applied Chemistry (SEM-II 2018-19)

Course Outcome- CO 202.4 (Select the relevant metallurgical process related to industrial applications)

Assignment –I

Q.i Write chemical composition of cement

Q.2 Define Refractories .Give the give various types of refractories with properties & uses.

Q.3 Define Lime. What is slaking of lime?

Q.4 Name the product of blast furnace with uses.

Q.5 What is bessemerisation process?

Q.6 Explain Electro refining of copper.

Q.7 write the composition Properties & uses of woods metal, duralumin, brass, bronze & Tinnamanns solder.

Q.8 What is lime. Give the properties of lime.

Q.9 Give the classification of lime with composition, properties & uses.

Q.10 Explain setting & hardening of lime.

Date Of submission: - 11/ 01/2019

Name of course coordinator –Mrs. Y.D.Wasu