

UNIT TEST-I

QUESTION BANK- CH4G

PHYSICAL CHEMISTRY& MATERIAL OF CONSTRUCTION

Thermodynamics:

Q-I: THREE MARKS QUESTIONS:

- 1) Define the followings:
 - a) Closed system
 - b) Isothermal reaction.
 - c) Adiabatic process.
- 2) Define the terms:
 - a) System
 - b) Surroundings
 - c) Cyclic process
- 3) Define first law of thermodynamics.
- 4) Define second law of thermodynamics
- 5) Define third law of thermodynamics
- 6) Explain Zeroth law.

Q-II: FOUR MARKS QUESTIONS:

- 1) Explain the difference between extensive and intensive properties.
- 2) Explain the terms enthalpy and internal energy with the help of first law of thermodynamics.
- 3) distinguish between reversible and irreversible process.

Phase rule:

Q-I: THREE MARKS QUESTIONS:

- 1) Define the followings:
 - a) Phase
 - b) Component
 - c) Degree of freedom.

2) Define the phase rule.

Q-II: FOUR MARKS QUESTIONS:

3) Explain Gibb's phase rule.

4) explain phase diagram for water system.

5) explain phase diagram for sulphur system.

Adsorption and colloids:

Q-I: THREE MARKS QUESTIONS

1) Define the term:

a. adsorption.

b. adsorbent.

c. adsorbate.

2) Write the types of adsorption.

3) What is adsorption isotherm?

Q-II: FOUR MARKS QUESTIONS:

4) Explain the Freundlich adsorption isotherm.

5) Explain the Langmuir adsorption isotherm.

6) What are the applications of adsorption?

7) Define the colloids and types of colloids.

8) Differentiate between Lyophilic and lyophobic colloidal solution.

9) Write the methods of preparation of colloidal solutions.

QUESTION BANK FOR UNIT TEST –II

PCM (17423) CH4G

LESSON 4: CORROSION

Three marks question:

1) Define corrosion

2) What is dry corrosion

3) What is wet corrosion

4) What are the forms of corrosion?

- 5) What are the corrosion prevention methods?
- 6) Write about the galvanic cell.
Four marks question:
- 7) What is electrode potential?
- 8) Explain the electrochemical series.
- 9) What are the factors affecting the rate of corrosion?
- 10) Explain the corrosion protection methods.
- 11) Explain the mechanism of wet corrosion.
- 12) What is the galvanic series? Explain.
- 13) Explain in brief impressed current method.
- 14) Explain in brief sacrificial anodic method.

LESSON 5: MATERIALS OF CONSTRUCTION AND THEIR PROPERTIES:

Three marks question:

- 15) Write the classification of materials
- 16) Explain the properties & application of cast iron and mild steel.
- 17) Write the classification of stainless steel.
- 18) Explain the properties & application of SS304
- 19) Explain the properties & application of SS316
- 20) Explain the properties & application of SS314
- 21) Explain the properties & application of PVC.
- 22) Explain the properties & application of PTFE-TEFLON.
- 23) Explain the properties & application of POLYETHYLENE.

FOUR MARKS QUESTION:

- 24) Explain the types of lining.
- 25) Write in detail glass lining and lead lining
- 26) Write about rubber lining and plastic lining.
- 27) Explain in detail lining and its importance.