

Chemistry Test Class XII
Surface Chemistry, Polymers and
General principles and processes of isolation of elements

Time: 2 hrs

M.M= 50

1. Answer the following questions: 1 x 10 = 10
 - a. Write the dispersed phase and dispersion medium in butter.
 - b. Why is adsorption always exothermic?
 - c. Write the reason for the stability of colloidal sol.
 - d. Name the method by which lyophobic colloids can be coagulated.
 - e. Define the term polymerization.
 - f. Can both addition and condensation polymerization result in the formation of a copolymer?
 - g. Which solution is used for the leaching of silver metal in the presence of air in the metallurgy of silver? Give the reaction involved.
 - h. What is the role of silica in the extraction of copper?
 - i. Indicate the principle behind the method used for the refining of zinc.
 - j. Out of BaCl_2 and KCl , which one is more effective in causing coagulation of a negatively charged colloidal sol? Give reason.

2. Write the name of monomers used for getting the following: 2
 - a. Teflon
 - b. Buna-N

3. What is the difference between elastomers and fibres? Give one example of each. 2

4. Define the following terms by giving an example of each 2
 - (a) Hydrosol
 - (b). Zeta potential

5. What are emulsions? State one application of emulsification. 2

6. Describe the principle controlling each of the following processes: 2
 - a. Zone refining of metal
 - b. Preparation of cast iron from pig iron

7. (a) Write the principle involved in the following: 3
- Zone refining of metals
 - Electrolytic refining
- (b) Name the metal refined by each of the following processes:
- Mond Process
 - Van Arkel Method
8. Explain the following phenomenon giving reasons: 3
- Chemical adsorption increases with increase in temperature.
 - Alum is applied on a cut to stop bleeding.
 - Sky appears blue in colour
9. Explain the following phenomenon giving reasons: 3
- Tyndall effect
 - Brownian movement
 - Physical adsorption decreases with increase in temperature
10. Answer the following questions: 3
- Name the polymer which is biodegradable. Write the structures of monomers and the repeating unit.
 - Write two uses of polymer.
 - On the basis of forces between their molecules in a polymer to which class does neoprene belong?
11. Give the formula of monomers involved in the formation of the following polymers: 3
- Buna-N
 - Nylon-6
 - Dacron
12. Give reason for the following observations: 3
- When Silver nitrate solution is added to Potassium iodide solution, a negatively charged colloidal solution is formed.
 - Finely divided substance is more effective as an adsorbent.
 - Lyophilic colloids are also called reversible sols.
13. Answer the following questions: 3
- Name the method of refining which is based on the principle of adsorption.

- b. What is the method of depressant in forth floatation process?
- c. What is the role of limestone in the extraction of iron from its oxide?

14. Define the following:

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- Coagulation
- Adsorption
- Lyophobic colloid

15. Answer the following question:

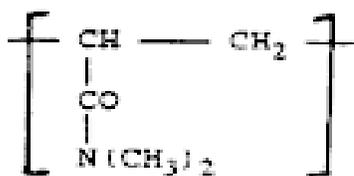
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- Write the name of method of refining Ni.
- What is the role of cryolite in the extraction of Aluminium?
- Write one difference between Roasting and Calcination.

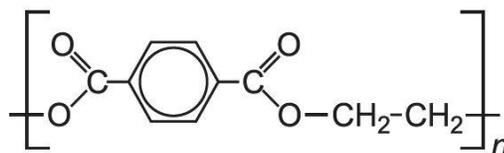
16. Answer the following:

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- Give an example of step growth polymer.
- On the basis of forces between their molecules in a polymer to which class polyester belongs?
- Identify the monomers in the following polymeric structure:



a.



b.