

Chapter 11 : Colloids

Sl. No.	Question	Obj/ Spec./ Diff. Level
1.	What are colloids? Particles of a substance having size 1 – 100 nm in a solution is called colloid.	K Define Average
2.	What is gel? Colloid system in which dispersal phase is liquid and dispersion medium is solid.	K Recall Easy
3.	What is electrophoresis? The process of migration of colloidal particles either towards anode or cathode in the presence of an electrical field is called electrophoresis.	K Recall Average
4.	What is the dispersed phase in a sol? Solid	K Recall Average
5.	What is emulsion? Liquid (dispersion phase) in liquid (dispersion medium)	K Recall Easy
6.	What is Aerosol? dp → solid dm → air (gas)	K Recall Easy

7. Name the dispersed phase in milk.
- K
Naming
Easy
- Liquid fat
8. What is Lyophobic sol?
- K
Definition
Easy
- Solvent hating colloids.
9. What is the size of a colloidal particles?
- K
Recall
Easy
- 1 – 100 nm
10. What is a sol?
- K
Recall
Easy
- A colloidal solution in which the solid dispersed phase is present in a liquid dispersion medium.
11. What is lyophilic sol?
- K
Definition
Easy
- The sols in which the dispersed phase has an affinity for the medium or the solvent.
12. What happens when positively charged sol is mixed with negatively charged sol?
- A
Reasoning
Easy
- Coagulation takes place
13. What is a foam?
- K
Recall
Easy
- A colloid in which a liquid dispersed phase is present in a gaseous dispersion medium.
14. Give one example for lyophobic colloid.
- U
Cite
examples
Easy

- Ferric hydroxide in water
Or sulphur in water
Or any suitable example
15. Which is the dispersion medium in hydrosol?
- K
Recognize
Easy
- Water
16. What is a protective colloid?
- K
Recall
Easy
- The lyophilic colloid which prevents the co-agulation of lyophobic colloid on adding an electrolyte is called protective colloid.
17. Define Gold No.
- K
Define
Average
- No. of milligrams of the protective colloid needed to prevent the precipitation of 10 ml gold sol. On addition of 1 cm³ 10% NaCl solution.
18. What is Brownian movement?
- K
Definition
Average
- The zig-zag motion of the colloidal particles in a colloidal solution is called Brownian movement.
19. What is dialysis?
- K
Recall
Average
- The process of removing particles of true solution from a colloidal solution by diffusion using a suitable membrane is called dialysis.
20. Gold No. of Gelatin is 0.005 – 0.01 and soluble starch is 25. Which one possess high protective layer?
- A
Infer
Difficult
- Gelatin

- | | |
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| 21. State Hardy – Schulze Rule. | K
Definition
Easy |
| The larger the valency of the active ion, the greater is its precipitation. | |
| 22. What happens when an electrolyte is added to a colloid? | A
Predict
Easy |
| Coagulation takes place | |
| 23. What is coagulation? | K
Definition
Easy |
| The phenomenon by which the small colloidal particles grow bigger and finally precipitate out is called 'coagulation'. | |
| 24. Between AlCl_3 and NaCl , which one is required in small quantity to coagulate gold sol? | U
Compare
Easy |
| AlCl_3 | |
| 25. Name the dispersion medium present in emulsion. | K
Name
Easy |
| Liquid | |
| 26. Name the optical property when light is passed through colloidal solution. | U
Name
Easy |
| Tyndall effect | |
| 27. Cloud belongs to which type of colloidal system? | U
Identify
Average |
| Aerosol | |
| 28. Ink belongs to which type of colloidal system. | U
Identify
Average |
| Sol | |

29. Explain the phenomenon which takes place at the junction of sea water and river water.
- A
Analyse
Average
- The presence of charged colloidal particles (1 mark)
Co-agulation, delta formation (1 mark)
30. What is Brownian Movement? How is it caused?
- U
Reason
Easy
- Zig-zag movement of colloidal particles (1 mark)
Reason (1 mark)
31. Write any two differences between lyophilic and lyophobic colloids.
- U
Distinguish
Easy
- Each difference (1 mark)
32. Explain peptisation with an example.
- U
Explain
Average
- Explanation taking any one suitable example (2 marks)
May be $\text{Fe}(\text{OH})_3$ using FeCl_3 .
33. Give any two difference between crystalloids and colloids.
- U
Distinguish
Easy
- Any two differences (1 mark each)
34. Gold number of egg – albumin is 0.08, what does it mean?
- A
Drawing
inference
Average
- Correct meaning (2 marks)
35. Explain electro dialysis.
- U
Explain
Average
- Diagram (1 mark)
Movement of colloidal particles towards electrodes (1mark)

36. Explain the application of colloid in the precipitation of smoke.
- A**
Interpret
Average
- The presence of charge on colloidal particles (1 mark)
Precipitation using precipitator (1 mark)
37. Which of the following colloids belongs to emulsion?
Cloud, milk, butter, ice cream
- U**
Identify
Average
- Milk and ice cream (1 mark each)
38. Classify the following colloidal systems into Gels and Aerosols.
- A**
Classify
Average
- Gels – Butter, cheese (1 mark)
Aerosol – smoke, cloud (1 mark)
39. Explain Bredig's arc method for the preparation of gold sol, with diagram.
- S**
Drawing
Average
- Diagram (1 mark)
Explanation (1 mark)
Addition of alkali (1 mark)
40. How does preferential adsorption of ions account for the origin of electrical charge on colloidal particle?
- U**
Explain/
describe
Average
- Example (1 mark)
Explanation (2 marks)