

Class: 12
Subject: Chemistry
Topic: Surface
No. of Questions: 27

1. What happens when a colloidal sol of $\text{Fe}(\text{OH})_3$ is mixed with that of As_2O_3 ?
2. What type of solution NaCl form in benzene?
3. What is the difference in the nature of a dilute soap solution and a concentration soap solution?
4. What happens when a freshly prepared $\text{Fe}(\text{OH})_3$ is shaken with a little amount of dilute solution of FeCl_3 ?
5. What happens to a gold sol if gelatin is added to it?
6. What is the difference between a colloidal sol, gel and emulsion?
7. Why is a colloidal sol stable?
8. What happens when persistent dialysis of a colloidal solution is carried out?
9. What is demulsification? Name two demulsifiers.
10. The conductance of an emulsion increases on adding common salt. What type of emulsion is this?
11. Alum is used in cleaning town water supply. Explain.
12. Why hard water consumes more soap?
13. What is the difference between multimolecular and macromolecular colloids? Give an example of each. How are associated colloids different from these two types of colloids?
14. Describe a chemical method each for the preparation of sols of sulphur and platinum in water.
15. Action of soap is due to emulsification and micelle formation. Comment.

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System		Special Name	
a)	liquid dispersed in gas	i)	solid sol
b)	gas dispersed in liquid	ii)	gel
c)	liquid dispersed in liquid	iii)	solid foam
d)	solid dispersed in liquid	iv)	sol
e)	gas dispersed in solid	v)	emulsion
f)	liquid dispersed in solid	vi)	foam
g)	solid dispersed in solid	vii)	aerosol

17. Which of the following can act as a protective colloid?
- (A) Gelatin (B) silica gel
(C) oil-in-water emulsion (D) all correct
18. The coagulation of 100 ml of a colloidal sol of gold is completely prevented by addition of 0.25 g of starch to it before adding 1 ml of 10 % NaCl solution. Find out the gold number of starch.
19. For the coagulation of 100 ml of arsenious sulphide sol, 5 ml of 1 M NaCl is required. What is the Flocculation value of NaCl?
20. How rubber is obtained by latex?
21. Differentiate between physical & chemical adsorption?
22. Differentiate between multi molecular, macromolecular and associated colloids?
23. Discuss the effect of pressure & temperature on the adsorption of gases on solids?
24. Explain what is observed when
(i) An electrolyte, NaCl is added to hydrate ferric oxide sol.
(ii) Electric current is passed through a colloidal sol.
25. Explain what is observed when a colloidal solution is kept in the path of light?
26. Describe some features of catalysis by zeolites?
27. Comment on the statement that "colloid is not a substance but state of a substance"?