

Assignment-2(Colloidal state)

1. The following will have the maximum coagulating power:

- (a) Na^+ (b) Sn^{+4} (c) Ba^{+2} (d) Al^{+3}

2. Milk is:

- (a) Gel (b) Sol (c) Aerosol (d) Emulsion

3. The size of colloid particles is:

- (a) $> 0.1\mu$ (b) $1\text{m}\mu\text{--}0.1\mu$ (c) $>1\text{m}\mu$ (d). $5000\text{m}\mu$

4. A freshly prepared precipitate of SnO_2 peptized by HCl will carry the following charge

- (a) Neutral (b) Positive (C) Negative (d) Amophoteric

5. Every colloid system is:

- (a) Homogeneous (b) Heterogeneous (c) Contain one phase
(d) Homogeneous and Heterogeneous

6. The following is a hydrophobic colloid

- (a) Gelatine (b) Gum (c) Starch (d) sulphur

7. Gold sol prepared by different methods will have different colours. It is due to;

- (a) Difference in size of colloidal particles
(b) Gold shows variable valency
(c) Different concentrations of gold
(d) Presence of impurities

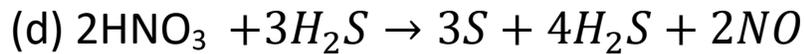
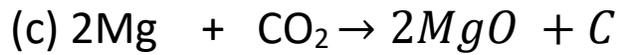
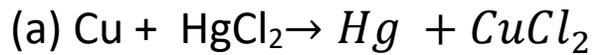
8. Following is an emulsifier:

- (a) Oil (b) Water (C) NaCl (d) Soap

9. The sky appears blue .It is due to:

- (a) Reflection (b) Absorption (c) Scattering (d) Refraction

10. Which of the following reaction will give colloidal solution?



11. Fat is:

(a) Emulsion (b) Gel (c) Colloidal solution (d) Solid sol

12. Colloidal solution cannot be purified:

(a) Dialysis

(b) Electrodialysis

(c) Ultrafiltration

(d) electrophoresis

13. The charge on As_2S_3 sol is due to the adsorption of:

(a) H^+

(b) OH^-

(c) S^{-2}

(d) O_2^-

14. Surface tension of lyophilic sols:

- (a) Lower than water
- (b) More than water
- (c) Equal to water
- (d) Sometimes lower and sometimes more than water

15. On addition of 1.0 ml of 10% NaCl to 10 ml gold sol in the presence of 0.0250 gm starch, the coagulation is just stopped. The gold number of starch is:

- (a) 0.025
- (b) 2.5
- (c) 2.5
- (d) 25.0

16. Which of the following is a lyophilic colloid?

- (a) milk
- (b) fog
- (c) Blood
- (d) Gelatine

17. At critical micelle concentration, the surfactant molecules undergo:

- (a) Association
- (b) Aggregation
- (c) Micelle formation
- (d) All the above

18. Which of the following electrolyte is least effective in causing coagulation of $\text{Fe}(\text{OH})_3$ sol?

- (a) $\text{K}_3[\text{Fe}(\text{CN})_6]$ (b) K_2SO_4 (c) KCl (d) K_2CrO_4

19. The ability of an ion to bring about coagulation of given colloid depends on:

- (a) Its charge (b) Sign of the charge only
(c) magnitude of charge only (d) Both charge and magnitude

20. Which of the following statement is not true?

- (a) Elastic gels undergo imbibition:
(b) Non elastic gels are reversible in nature
(c) Inorganic gels usually exude solvent on standing
(d) Both elastic and non elastic gels show thixotropy

Answer key Assignment-2 (colloidal state)

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|--------------|--------------|---------------|---------------|---------------|
| 1.(b) | 5.(b) | 09.(c) | 13.(c) | 17.(d) |
| 2.(d) | 6.(d) | 10.(d) | 14(a) | 18.(c) |
| 3.(b) | 7.(a) | 11.(a) | 15(d) | 19.(d) |
| 4.(b) | 8.(d) | 12.(d) | 16(d) | 20.(b) |

