



## CHEMISTRY

### CH: 4 SURFACE CHEMISTRY

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: XII Sec: \_\_\_\_

### Answer the following

1. Why does a gas mixed with another gas not form a colloidal system?
2. Why are adsorbate particles attracted and retained on the surface of adsorbent?
3. Explain the terms sorption and desorption.
4. "Chemisorption is highly specific." Illustrate with an example.
5. "Adsorbents in finely divided form are more effective." Why?
6. Name two compounds used as adsorbent for controlling humidity.
7. Why is adsorption always exothermic?
8. Out of  $\text{NH}_3$  and  $\text{CO}_2$ , which gas will be adsorbed more readily on the surface of activated charcoal and why?
9. Mention one shape selective catalyst used to convert alcohol directly into gasoline.
10. 'Generally high temperature is favourable for chemisorption.' Why?
11. Addition of alum purifies the water. Give reason.
12. Why gas masks are used by miners in coal mines while working?
13. True solutions do not show Tyndall effect. Give reason.
14. Freundlich isotherm becomes independent of pressure at high pressure for a gas adsorbed on a solid. Why?
15.  $\text{FeCl}_3$  is preferred over  $\text{KCl}$  in case of a cut leading to bleeding. Why?
16. State the principle of electrodialysis.
17. Brownian movement provides stability to the colloidal solution. Why?
18. State the sign of entropy change involved when the molecules of a substance get adsorbed on a solid surface
19. What happens when hydrated ferric oxide and arsenious sulphide sols are mixed in almost equal proportions?
20. Smoke is passed through charged plates before allowing it to come out of chimneys in factories. Why?
21. Give reasons for the following.
  - a) Leather gets hardened after tanning
  - b) Gelatin is generally added to ice-cream. Why?