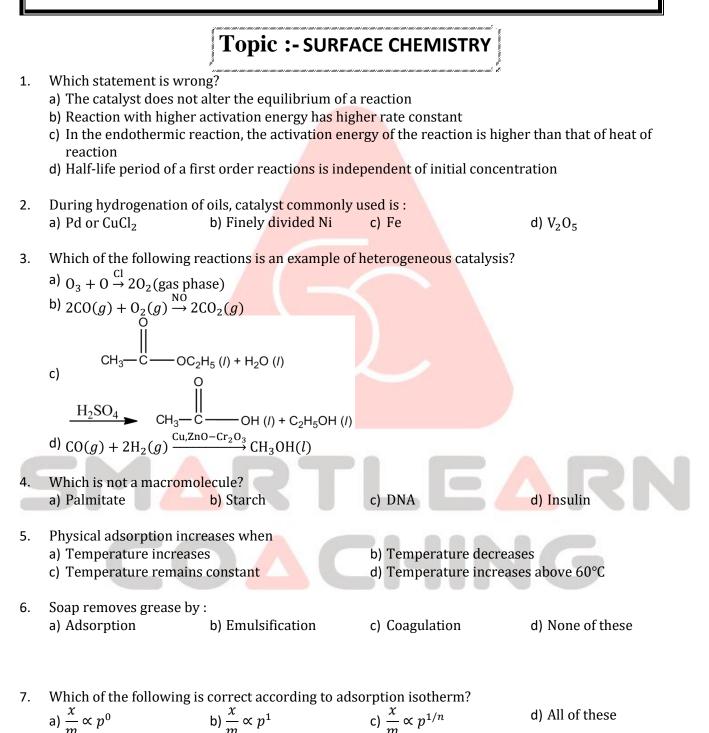






CLASS : XIth DATE : SUBJECT : CHEMISTRY DPP No. : 3



8. Which of the following statements is incorrect regarding physisorptions?a) It occurs because of van der Waals' forces



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- b) More easily liquefiable gases are adsorbed readily
- c) Under high pressure it results into multimolecular layer on adsorbent surface
- d) Enthalpy of adsorption ($\Delta H_{adsorption}$) is slow and positive
- 9. In which process, a catalyst is not used?a) Deacon's processb) Solvay's process
- c) Chamber process
- d) Haber's process

- 10. Hydrolysis of urea is an example ofa) Homogeneous catalysis
 - c) Biochemical catalysis

- b) Heterogeneous catalysis
- d) Zeolite catalysis
- 11. Which of the following is a heterogeneous catalysis?

a)
$$2C_2H_5OH \xrightarrow{Conc H_2SO_4} C_2H_5OC_2H_5 + H_2O$$

c) $SO_2 + \frac{1}{2}O_2 \xrightarrow{NO_2} SO_3$

- 12. Milk is
 - a) Fat dispersed in water
 - c) Fat dispersed in fat

b) $2CO + O_2 \xrightarrow{NO} CO_2$ d) $SO_2 + \frac{1}{2}O_2 \xrightarrow{V_2O_5} SO_3$

- b) Fat dispersed in milk
- <mark>d) Water d</mark>ispersed in milk
- 13. Which of the following is the best protective colloid?
 - a) Gelatin (Gold no.=0.005)
 - c) Egg albumin (Gold no.=0.08)

- <mark>b) Gum Arabic</mark> (Gold no. =0.15)
- d) None of the above
- 14. Which of the following reactions lead to the formation of colloidal solution? a) $Cu + HgCl_2 \rightarrow CuCl_2 + Hg$ c) $2Mg + CO_2 \rightarrow 2MgO + C$ b) $2HNO_3 + 3H_2S \rightarrow 3S + H_2O + 2NO$ d) $Cu + CuCl_2 \rightarrow 2CuCl$
- 15. The coagulation of sol particles or sol destruction may be brought in by :a) Cataphoresis
 - b) Adding oppositively charged sol
 - c) Adding electrolyte
 - d) All of the above
- 16. Which is an example of a heterogeneous catalysis?
 - a) Formation of SO_3 in the chamber process
 - b) Formation of SO_3 in the contact process
 - c) Hydrolysis of an ester in the presence of H⁺ ions
 - d) Combination of H_2 and Cl_2 in the presence of moisture
- 17. A negatively charged suspension of clay in water needs for precipitation the minimum amount of :a) Aluminium chlorideb) Potassium sulphatec) Sodium hydroxided) Hydrochloric acid
- 18. The Brownian motion is due to:
 - a) Temperature fluctuations within the liquid phase
 - b) Attraction and repulsion between charges on the colloidal particles
 - c) Impact of the molecules of the dispersion medium on the colloidal particles
 - d) Convective currents



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19. What will be the Freundlich adsorption isotherm equation at high pressure?

a)
$$\frac{x}{m} = k$$
 b) $\frac{x}{m} = kp^{1/n}$ c) $\frac{x}{m} = kp$ d) None of these

- 20. An example for autocatalysis is
 - a) Oxidation of NO to NO_2
 - c) Decomposition of $KClO_3$ to KCl and O_2
- b) Oxidation of SO_2 to SO_3
- d) Oxidation of oxalic acid by acidified $\rm KMnO_4$

