

Topic : Surface Chemistry

Type of Questions

Multiple choice objective ('-1' negative marking) Q. 1

(4 marks 4 min.)

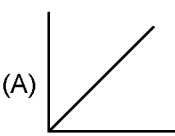
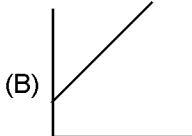
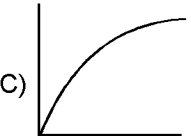

M.M., Min.

Single choice Objective ('-1' negative marking) Q.2 to Q.12

(3 marks 3 min.)

[4, 4]

[33, 33]

- 1.* Which of the following statements is correct?
(A) The efficiency of a heterogeneous catalyst depends upon its surface area.
(B) Catalyst operates by providing alternate path for the reaction that involves a lower activation energy.
(C) Catalyst lowers the energy of activation of the forward direction without affecting the energy of activation of the backward direction.
(D) Catalyst does not affect the overall enthalpy change of the reaction.
2. Most effective ion to coagulate a negative sol is :
(A) PO_4^{3-} (B) Al^{3+} (C) Ba^{2+} (D) K^+
3. Which one is colloid :
(A) NaCl (B) Urea (C) Cane Sugar (D) Blood
4. Oil soluble dye is mixed with water in oil emulsion. Then :
(A) dispersion medium is coloured (B) different phase is coloured
(C) both coloured (D) none is coloured
5. Sorption is term used when :
(A) adsorption takes place (B) absorption takes place
(C) both (A) and (B) (D) None of these
6. Negatively charged colloidal solution is obtained from AgNO_3 & KI , when moles of :
(A) AgNO_3 are more (B) KI are more
(C) both AgNO_3 and KI are more (D) can't say
7. Zeolites have shape selectivity depending on :
(A) pore structure (B) atomic structure
(C) molecular structure (D) none of these
8. The variation of $\frac{p}{(x/m)}$ as a function of p when Langmuir's isotherm is valid is :
(A)  (B)  (C)  (D) 
9. The removal of grease, dirt by soap during washing is an example of
(A) adsorption (B) emulsification (C) coagulation (D) dissolution
10. The difference in color of colloidal particles of gold obtained by different methods is related to
(A) variable valency of gold (B) different concentration of gold particles
(C) different types of impurity present (D) different size of colloidal particles
11. Sulphur sol contains
(A) discrete sulfur atoms (B) discrete sulfur molecules (S_8)
(C) large aggregates of S_8 molecules (D) water dispersed in solid sulfur
12. Among the following sols the one which is hydrophobic is
(A) gum (B) sulfur (C) starch (D) gelatin

Answer Key

DPP No. # 60

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|-----|-------|-----|-----|----|-----|----|-----|-----|-----|
| 1.* | (ABD) | 2. | (B) | 3. | (D) | 4. | (A) | 5. | (C) |
| 6. | (B) | 7. | (A) | 8. | (B) | 9. | (B) | 10. | (D) |
| 11. | (C) | 12. | (B) | | | | | | |

