

India's Number 1 Education App

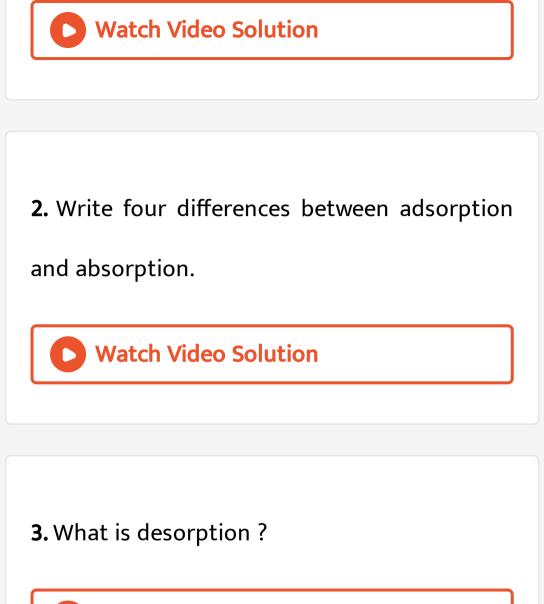
CHEMISTRY

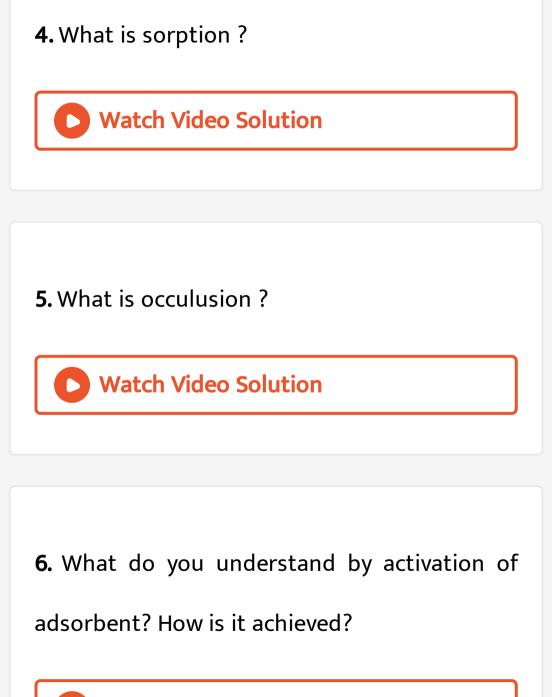
BOOKS - BETTER CHOICE PUBLICATION

SURFACE CHEMISTRY

Question Bank

1. Distinguish between the 'meaning of the terms adsorption and absorption. Give one example of each.





7. In case chemisorption, why adsorption first increase and then decrease with temperature

?



8. Physical adsorption is multilayered while

chemisorption is monolayered.Why?

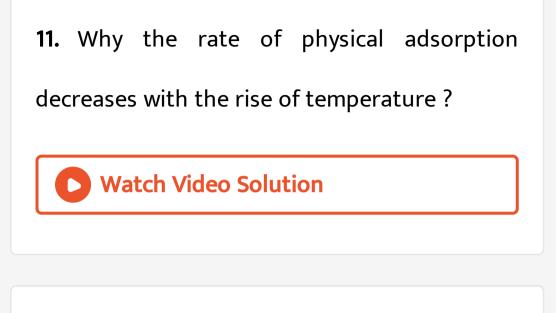


9. Adsorption is an exothermic process. Explain.



10. Why the rate of physical adsorption

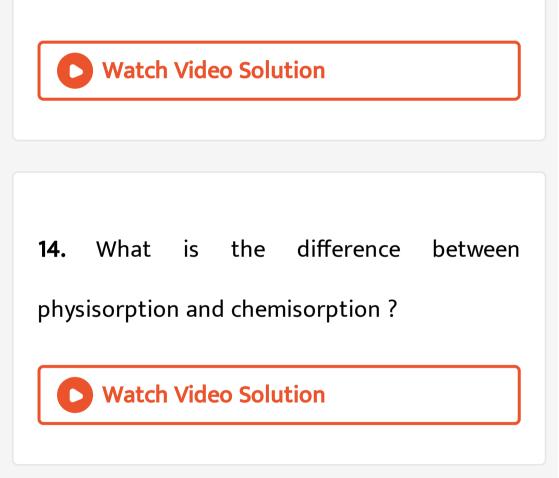
decreases with the rise of temperature ?



12. Why are powdered substances more effective adsorbents than their crystalline forms?

13. Give reasons why a finely divided substance

is more effective as an adsorbent.



15. What are the factors which influence the

adsorption of a gas on a solid ?

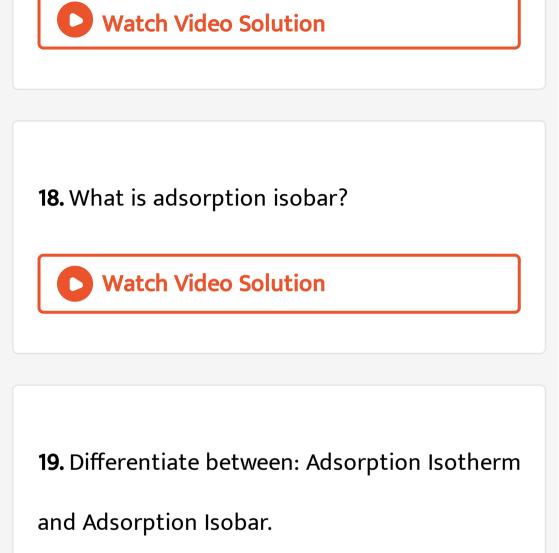
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16. How does adsorption of gases on solids

depend upon : Nature of gas ?

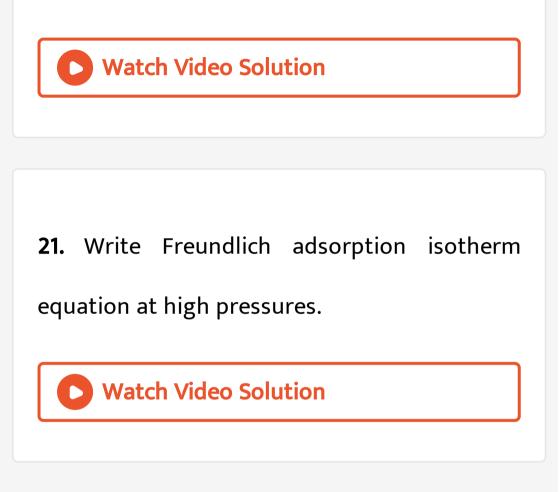
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17. What is adsorption isotherm ?

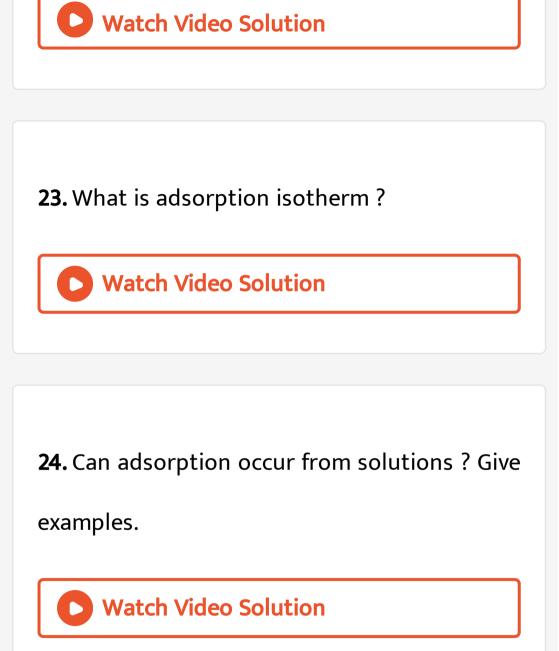




20. What is adsorption isotherm ?



22. Write Freundlich adsorption isotherm equation at high pressures.



25. How does adsorption of gases on solids

depend upon: Temperature?



26. Explain two applications of adsorption.

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27. Define Catalyst and Catalysis.

28. What is heterogeneous catalysis ? What role does adsorption play in heterogeneous catalysis ?

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29. Give the mechanism of heterogeneous

catalysed reaction.

30. Give four examples of heterogeneous

catalysis.



31. What name is given to the catalysis when the state of the catalyst is the same as those of the reactants.



32. What name is given to the catalysis when the state of the catalyst is different from the state of reactants ?



33. What name is given to the catalysis which

is explained by lock-and-key model?



34. Write two differences between homogeneous catalysis and heterogeneous catalysis.



35. What is homogeneous and heterogeneous

catalysis ? Give one example of each.



36. Write two differences between homogeneous catalysis and heterogeneous catalysis.



37. Explain briefly homogeneous catalysis.

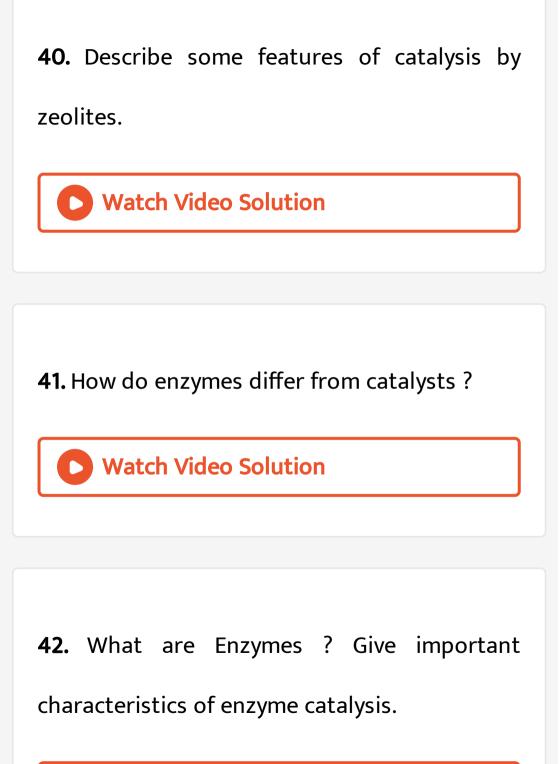


38. What do you understand by activity and selectivity of a catalyst ? Give one example of each.



39. What is shape selective catalysis?







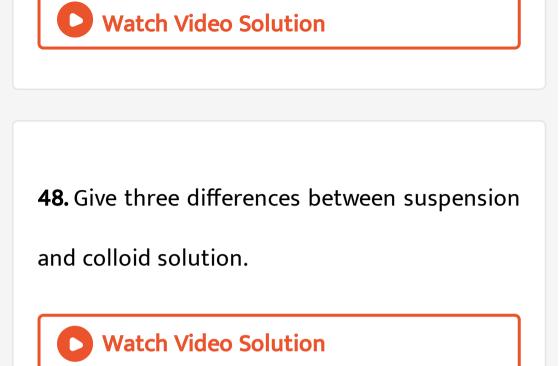
43. Give the mechanism of heterogeneous catalysed reaction.

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44. Explain two applications of enzymes.

45. What are colloids ? Watch Video Solution 46. which are the properties of colloidal solution? Watch Video Solution

47. What is the difference between true solution and colloidal solution?



49. Name the dispersed phase and dispersion

mediumin fog.

50. Comment on the statement that "colloid is

not a substance but a state of substance."



51. What are lyophilic and lyophobic sols ? Give one example of each. Why lyophobic sol is easily coagulated ?

52. What are gels ? Give an example of elastic

and non-elastic gel.

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53. How will you differentiate Lyophilic colloids

from Lyophobic colloids?

54. Lyophillic colloids are more stable than

lyophobic colloids. Explain.

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55. What is the difference between multimolecular and macromolecular colloids ? Give one example of each. How are associated colloids different from these two types of colloids?

56. Give three differences between multimolecular colloids and macromolecular colloids.



57. What are micelles ? Give one example of a

micellar system.



58. Explain the mechanism of the cleansing

action of soaps



59. Discuss cleansing action of soap by micelle

formation.

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60. Write short note on peptisation.

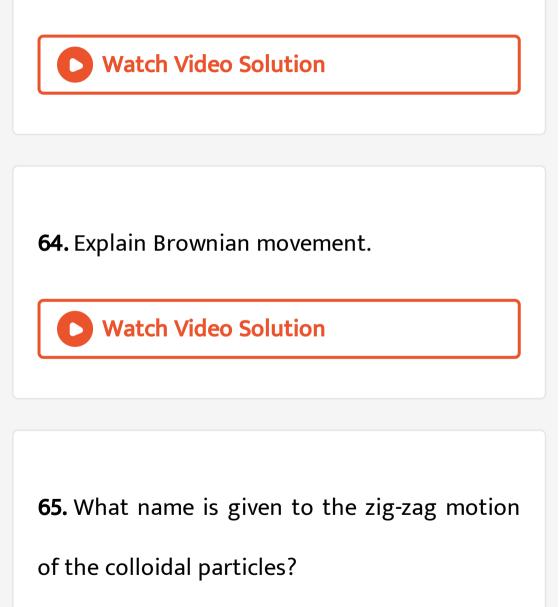
61. What is peptization ? What is cause of peptization ? Give one example.



62. How will you prepare a collidal solution of

gold?

63. Write short note on electro-dialysis.



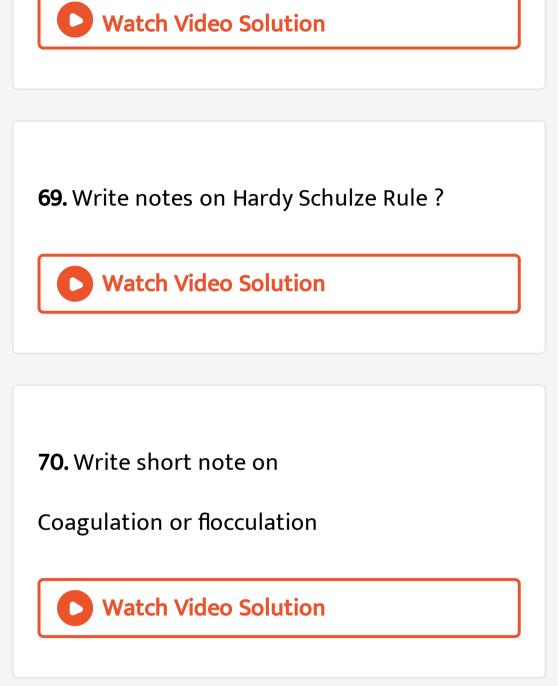
66. Explain Tyndall effect.

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67. Explain Tyndall effect.

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68. What name is given to the scattering of light by colloidal solution?



71. Write short note on electro-dialysis.



72. Write short note on

Electro-osmosis.

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73. Define electro-osmosis.

74. What do you understand by protection of

colloids ?



75. What do you mean by gold number ?



76. What happens when colloidal solutions of

 $Fe(OH)_3$ and 'AS_2O_3' are mixed ?

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77. What are emulsions ? What are their different types ? Give one example of each type.

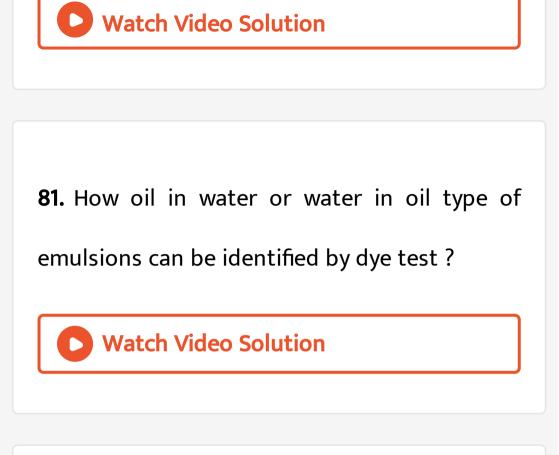
78. What name is given to the liquid-liquid colloidal solution ?

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79. Write two differences between solution and emulsion.



80. Milk is an oil in water type emulsion.

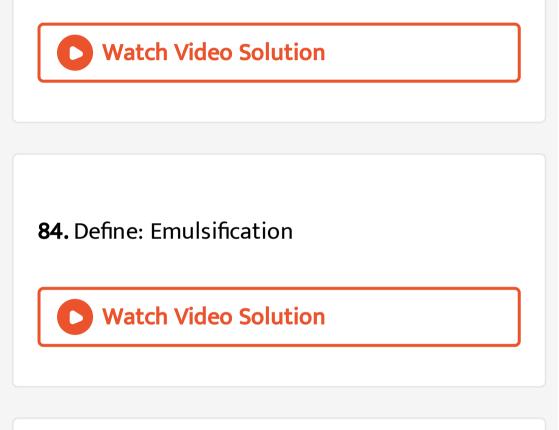


82. How oil in water or water in oil type of

emulsions can be identified by dye test ?

83. What is emulsification ? Explain the role of

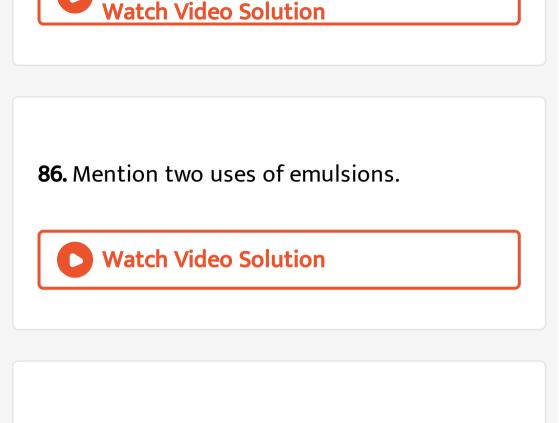
emulsifier to stabilise the emulsion.



85. What is emulsification ? Explain the role of

emulsifier to stabilise the emulsion.





87. Emulsions are normally prepared by shaking the two components together vigorously although some kind of emulsifying agent usually has to added to stabilize the product. This emulsifying agent amy be a soap or other sufactant (surface active) sepcies or a

lyophilic sol that forms a protective film around the dispersed phase.

Emulsion broadly classified into two types:

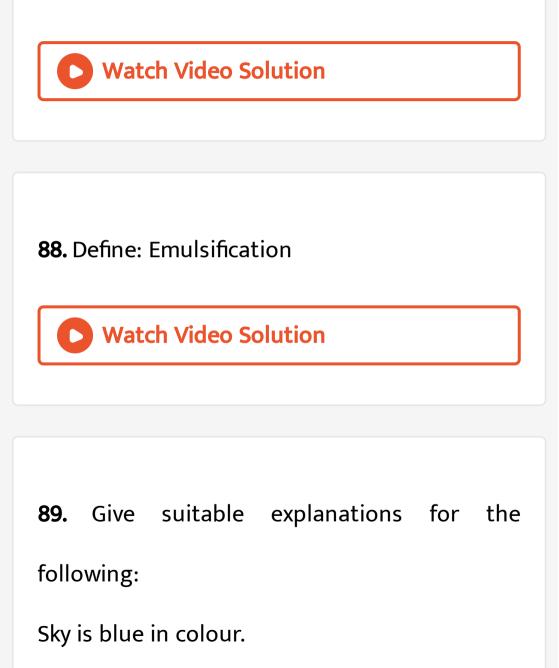
(i) Oil in water emulsions (O/W): Oil acts as dispersed phase and water acts as dispersion medium.

(ii). Water in oil emulsion (W/O): Water acts as dispersed phase and oil acts as dispersion medium Due test, dilution test may be emplyoyed for identification of emulsions.

Q. Read two statment s:

(1) milk is an example of oil in water (O/w) type emulsion (2) cold cream is an example of water in oil

(W/O) type emulsion





90. Give suitable explanations for

A delta is formed where a river falls into the

sea.



91. Give five important applications of colloids

in home and industry.

92. Give reason : Bleeding from a fresh cut can

be stopped by applying alum.



93. Why does the sun looks red at the time of setting ? Explain on the basis of colloidal properties.

colloidal state ?