

10. A substance containing two or more donor groups combine with metal ions to form complex is known as
- Chelate
 - Diluent
 - Surfactant
 - None of these
11. Fick's first law applies to:
- Steady state system
 - Dynamic state system
 - Both a and b
 - None of the above
12. Example of practically immiscible liquids include:
- Phenol-water
 - Alcohol-water
 - Chloroform-water
 - All of the above
13. Ideal solutions are known to Raoult's law.
- obey
 - disobey
 - deviate
 - None of the above
14. is the melting point of ice.
- 100°C
 - 0°C
 - 50°C
 - None of the above
15. The latent heat of fusion is associated with the solid-liquid transition change in temperature.
- with
 - Without
 - Both a and b
 - None of the above
16. is used in making powder from heat-sensitive materials.
- Sublimation
 - Melting
 - Condensation
 - Evaporation
17. is a mixture in which two solid particles mix together and reduce their melting point and convert into liquid at normal temperature.
- Eutectic mixture
 - Concurrent mixture
 - Bipolar mixture
 - None of the above.
18. $\text{pH} + \text{pOH} = \dots\dots$
- 0
 - 7
 - 14
 - 10
19. In colorimetric method for determination of pH, which filter is used?
- 575nm
 - 700nm
 - 625nm
 - 820nm
20. If $[\text{H}^+] > [\text{OH}^-]$ then the solution is:
- Acidic
 - Basic
 - Neutral
 - None of the above

(PART-B : Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

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| 1. Explain the different methods used for the determination of pH. | 5 |
| 2. Explain about HLB scale. | 5 |
| 3. Write a note on Protein binding. | 5 |
| 4. Explain about Continuous Variation method in complexations. | 5 |
| 5. Write a note on Surfactants. | 5 |
| 6. Discuss about the polymerism in different pharmaceutical compounds. | 5 |
| 7. Explain about Drop weight method along with diagram. | 5 |
| 8. Discuss the Fick's first and second law of diffusion. | 5 |
| 9. Discuss about the characteristic features of the three states of matter. | 5 |

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PART-C: Long type questions

[Answer any two (2) questions]

1. Explain about classifications and applications of complexation. 10
2. Explain the various phenomenon involved in changes in the states of matter. Discuss both the types of latent heat. 10
3. Explain the different factors affecting solubility. 10

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