

10. Select the correct statement:
 i) Tween is hydrophilic group surface active agent.
 ii) Span is lipophilic group surface active agent.
 iii) Surface tension decreases with decrease in temperature.
 iv) The Surface tension of a liquid is zero at critical temperature.
 a. All are correct
 b. (i),(ii), (iv)
 c. (i),(ii)
 d. (iii), (iv)
11. Dilution test is an identification test for?
 a. Emulsion
 b. Suspension
 c. Tablet
 d. Liquid
12. _____ the flocculation value, _____ the precipitating power.
 a. Higher, higher
 b. Smaller, smaller
 c. Higher, smaller
 d. Smaller, higher
13. Methyl cellulose is a polymer, which is of a type _____
 a. Anionic
 b. Amphilytic
 c. Cationic
 d. Non-ionic
14. A maximum sedimentation volume will be obtained when zeta potential is
 a. Negative
 b. Neutral
 c. Positive
 d. Zero
15. Porosity of a porous powder is defined as
 a. Bulk volume/void volume
 b. Void volume/bulk volume
 c. Void volume/true volume
 d. True volume/bulk volume
16. Hydrolysis reaction can be prevented by using?
 a. Buffers
 b. Complexation
 c. Both (a) and (b)
 d. None of the above
17. Oxidation reaction can be prevented by using?
 a. Antioxidants
 b. Chelating agents
 c. Vehicle
 d. All of the above
18. In reactions that follow first order kinetics, half life is expressed by equation
 a. $0.693/k$
 b. $0.301/k$
 c. $0.105/k$
 d. $k/0.693$
19. Which one of the following dosage forms exhibit faster rate of reaction under normal conditions?
 a. Emulsions
 b. Ointments
 c. Solutions
 d. Suspensions
20. In chemical Kinetics, the rate of a reaction is expressed as $(-dc/dt)$, where dc refers to the concentration. Whose concentration does it refer to?
 a. Catalyst
 b. Product
 c. Reactant
 d. Solvent medium

(PART-B : Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

1. Explain purification of colloidal dispersion. 5
2. Define chemical kinetics. Write its applications in pharmacy. 1+4=5
3. Discuss Physical instability-markers in emulsion. 5
4. Define three types of particle diameters with diagram. 1+1+1+2
=5
5. Explain cup and bob viscometer with diagram. 3+2=5
6. What is zero order kinetics? Discuss the estimation of half life. 1+4=5
7. Discuss preventive measures taken for oxidation and hydrolysis reactions. 5
8. What is Kraft point? Discuss protective colloidal action with diagram. 1+4=5
9. Explain reasons of coagulation in Lyophobic colloids with diagram. 5

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PART-C: Long type questions
[Answer any two (2) questions]

1. Explain classification of viscometers. Define thixotropy and write its applications .Discuss about capillary viscometer. 10

2. What is colloidal Dispersion? Mention it's application and classification of colloidal dispersion. Explain method of preparations of Lyophobic colloids. 10

3. Explain Adsorption and air permeability method for determination of Surface area. 10

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