

**B. PHARM.
FOURTH SEMESTER
PHYSICAL PHARMACEUTICS II
BP403T**

**SET
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 75

(PART-A: Objective)

Time: 30 min.

Marks: 20

Choose the correct answer from the following:

1×20=20

- Dilution test is an identification test for?
 - Emulsion
 - Suspension
 - Tablet
 - Liquid
- Methyl cellulose is a polymer, which is of a type ____
 - Anionic
 - Amphilytic
 - Cationic
 - Non-ionic
- ____ the flocculation value, ____ the precipitating power.
 - Higher, higher
 - Smaller, smaller
 - Higher, smaller
 - Smaller, higher
- A maximum sedimentation volume will be obtained when zeta potential is
 - Negative
 - Neutral
 - Positive
 - Zero
- Hydrolysis reaction can be prevented by using?
 - Buffers
 - Complexation
 - Both (a) and (b)
 - None of the above
- Porosity of a porous powder is defined as
 - Bulk volume/void volume
 - Void volume/bulk volume
 - Void volume/true volume
 - True volume/bulk volume
- Which one of the following dosage forms exhibit faster rate of reaction under normal conditions?
 - Emulsions
 - Ointments
 - Solutions
 - Suspensions
- 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?
 - Catalyst
 - Product
 - Reactant
 - Solvent medium
- Oxidation reaction can be prevented by using?
 - Antioxidants
 - Chelating agents
 - Vehicle
 - All of the above

10. 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. $k/0.693$
11. ____ order reaction is independent of its reactant concentration.
 - a. Zero
 - b. First
 - c. Second
 - d. Both (a) and (b)
12. Oxidation follows ____ order of reaction.
 - a. Zero
 - b. First
 - c. Pseudo First
 - d. Second
13. For topical use which emulsifying agent is use?
 - a. Non ionic
 - b. Ionic
 - c. Both (a) and (b)
 - d. None of the above
14. Brookfield viscometer is an example of type
 - a. Cone and plate
 - b. Extrusion
 - c. Rotating sphere
 - d. Rotating spindle
15. Particle volume determination technique is also called as
 - a. Sedimentation method
 - b. Microscopic method
 - c. Coulter-Counter method
 - d. Rheology
16. 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)
17. When thixotropy is high, physical stability of suspension is
 - a. High
 - b. Less
 - c. Zero
 - d. None of the above
18. Breaking of emulsion is an ____
 - a. Reversible process
 - b. Irreversible process
 - c. Complex
 - d. None of the above
19. Solid/Solid interfaces are important in
 - a. Emulsion
 - b. Pastes
 - c. Suspensions
 - d. Tablets
20. Shear thinning is shown by
 - a. Polymeric solutions
 - b. Solutions
 - c. Plastic flow
 - d. Dialatant flow

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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