

**End Semester / Reappear (Semester V) Examination Dec 2022**

**Programme: B.Pharm**

**Full Marks: 75**

**Course: Industrial Pharmacy I**

**Time: 3Hrs.**

**Course Code: BP502T**

**Enrollment No: \_\_\_\_\_**

**Section I**

**1. Objective type questions. Answer all questions.**

**20x1=20**

i. Determination of bulk density comes under the area of

- (a) Bulk characterization      (b) Solubility analysis      (c) Stability analysis      (d) None

ii. For a weakly acidic drug with pKa value greater than 3, the unionized form is present in the .....pH

- (a) Basic      (b) Acidic      (c) Neutral      (d) Both acidic and basic

iii. According to the Biopharmaceutical Classification System (BCS) drug substances in Class I possess

- (a) high permeability, low solubility      (b) low permeability, high solubility  
(c) high permeability, high solubility      (d) low permeability, low solubility

iv. An ingredient used to improve flow properties of granules into a die for compression during tablet formulation is a

- (a) Disintegrant      (b) Lubricant      (c) Surfactant      (d) glidant

v. Elimination of capping of tablet is achieved by

- (a) Pre- compression      (b) Reducing the final compression rate  
(c) Using flat punches      (d) All of above

vi. Which of the following agent is/are used in enteric coating of the tablet

- (a) HPMC      (b) CAP      (c) CMC      (d) All

vii. Disintegration time for sugar coated tablet is

- (a) 15 minutes      (b) 30 minutes      (c) 60 minutes      (d) 90 minutes

viii. Temperature condition in Dissolution test

- (a)  $37\pm 2^{\circ}\text{C}$       (b)  $37\pm 0.2^{\circ}\text{C}$       (c)  $37\pm 5^{\circ}\text{C}$       (d)  $37\pm 0.5^{\circ}\text{C}$

ix. In Roche friabilator plastic chamber revolves at speed

- (a) 25 rpm      (b) 50 rpm      (c) 15 rpm      (d) 30 rpm

x. Vanishing cream is an example of

- (a) Aerosol      (b) o/w emulsion      (c) Gel      (d) w/o emulsion

xi. Moisture content of empty gelatin capsule lie in the range of

- (a) Below 10%      (b) Above 20%      (c) 12-15%      (d) 30-35%

- xii. The shells of soft gelatin capsules may be made elastic or plastic by the addition of  
 (a) HPMC (b) Povidone (c) PEG (d) Sorbitol
- xiii. ROTOFIL is used for the filling of  
 (a) Pellets (b) Liquid (c) Corrosive liquid (d) Powder
- xiv. The filling of sterile medicinal products is done in  
 (a) Grade A area (b) Grade C area (c) Grade D area (d) None
- xv. Which of the following dosage form is having maximum bioavailability?  
 (a) Tablet (b) Emulsion (c) Parenteral (d) None of the above
- xvi. Treated Soda-Lime Glass is  
 (a) Type-IV (b) Type-III (c) Type-I (d) Type-II
- xvii. The estimated maximum volume of cul-de-sac is about:  
 (a) 10 $\mu$ L (b) 20 $\mu$ L (c) 30 $\mu$ L (d) 70 $\mu$ L
- xviii. The most frequently used surfactant in shampoo are  
 (a) Cationic (b) Anionic (c) Non-ionic (d) All
- xix. CFC114 is  
 (a) Tetra-fluoroethane (b) Dichloro difluoromethane  
 (c) Dichloro tetrafluoroethane (d) None of the above
- xx. Bubble test is used as a quality control test for  
 (a) Sachet (b) Plastic container (c) Glass container (d) Blister pack

## Section II

**2. Short Answer type questions. Answer any five. 5x7=35**

- a. Discuss the significance of particle size in the formulation of tablet dosage form.
- b. Explain the filling of liquid orals.
- c. Discuss the extraction of gelatin.
- d. How sterility testing of parenteral products are done?
- e. Describe the formulation of eyedrops.
- f. Give the formulation of cold cream.
- g. Give the quality control tests for aerosols.

## Section III

**Long Answer type questions. Answer any two. 2x10= 20**

3. Explain in detail the filling and production of hard gelatin capsules.
4. Define isotonic solution. Give its importance. Explain various methods for adjustment of isotonicity.
5. Describe the different granulation techniques used to manufacture tablets.

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