

GUJARAT TECHNOLOGICAL UNIVERSITY**B.PHARM - SEMESTER- 6 EXAMINATION – SUMMER-2024****Subject Code:BP605TP****Date: 16/05/2024****Subject Name: Industrial Pharmacy I****Time: 10.30 a.m. to 1.30 p.m.****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define tablets. Classify different type of tablets with examples. **06**
(b) What is class 100 area ? Explain the construction requirement for it. **05**
(c) i. Comment : Sterile products must pass pyrogen test. **02**
ii. Differentiate : Dry granulation and direct compression. **03**
- Q.2** (a) Write a short note on preparation of Water for Injection with quality control specification according to IP/US pharmacopeia. **06**
(b) Give the examples of binders used for tablet formation. Explain various stages of granulation process. **05**
(c) i. Differentiate: Disintegration and dissolution process. **02**
ii. Give four examples of antioxidants used to prepare aqueous injection. **02**
iii. Differentiate: Water for injection and Sterile water for injection **01**
- Q.3** (a) Define Base absorption capacity and bloom strength with respect to soft gelatin capsule. Explain its importance and methods used to measure it. **06**
(b) Write a short note on formulation and evaluation of eye ointments **05**
(c) i. Comment: Acidic compound has pKa less than 7. **02**
ii. What should be the temperature and humidity range of the area where the soft gelatin capsules are manufactured? **03**
- Q.4** (a) Explain the method in detail to prepare hard gelatin capsule shell. **06**
(b) What is polymorphism? Explain different types of polymorphs with suitable examples. Explain importance of polymorphism in dosage form development. **05**
(c) i. What is racemization? Explain its importance in context of preformulation studies with suitable example. **02**
ii. What is ostwald ripening? Explain its importance with respect to stability of dispersion system **03**
- Q.5** (a) Classify the propellants used to prepare aerosol products with suitable examples. **06**
(b) Explain following terms and remedies to prevent it: 1. Orange peel effect 2. Mottling 3. Cracking 4. Chipping 5. Lamination **05**
(c) i. Comment: Metered dose inhalers (MDI) are preferred for pulmonary aerosol drug delivery system. **03**
ii. Comment: Syrup IP and USP have same concentration of sugar. **02**
- Q. 6** (a) Write a short note on evaluation of suspension. **06**
(b) Classify primary, secondary, and tertiary packaging materials with example. **05**
(c) i. Give four examples of Non-ionic emulsifiers **02**
ii. Comment: Eudragit E is an enteric coating polymer. **03**

- Q.7** (a) What is BCS classification system? explain its importance with respect to dosage form development. **06**
- (b) Write a short note on Fluidized bed coater. **05**
- (c) i. Give four examples of disintegrating agent. **02**
ii. Comment: Pellets have better control over drug release compared to conventional tablets. **03**
