

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: BPharm  
BRANCH: PHARMACY

SEMESTER: 5<sup>th</sup>  
SESSION: MO 2022

SUBJECT: BP502T INDUSTRIAL PHARMACY-I

TIME: 3.00 Hours

FULL MARK: 75

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
4. This question paper consists of (03) three parts. Read the part wise instructions before attempting the questions.

PART-I

Objective types questions (Instruction: Answer all questions)

Q1. (10 x 2 = 20 Marks)

- A. Define the Preformulation studies [CO1]
- B. Discuss the Organoleptic properties parameter used for preformulation studies.[CO1]
- C. (i.) \_\_\_\_\_% of weight loss is acceptable for conventional compressed tablets after performing friability test[. [CO1]  
(ii) Write the function of a glidant and Lubricant\_\_\_\_\_ [CO1]
- D. The shape coefficient factor for a sphere should be \_\_\_\_\_.What is the role of Shellac in sugar coating of tablets? [CO 1]
- E. The angle of repose for a granules to have perfect and smooth flow properties falls within the range of\_\_\_\_\_. Write the formula for % Carr's Consolidation Index. [CO1]
- F. Define bloom strength .What is Minim per gram factor(M/g)? [CO1]
- G. The maximum quantity of drug that can be entrapped inside a size "000" and size "5" hard gelatin capsule is\_\_\_\_\_ [CO1]
- H. Define Phase inversion temperature. [CO2]
- I. Discuss Hydrotrophy and Cosolvents used for oral clear liquid preparations [CO1]
- J. Aspartame is chemically what? What is Caplocking? [CO1]

PART-II

Short Answers

(Instruction: Answer seven out of nine questions)

(7 x 5 = 35 Marks)

- Q2. Discuss the preservation of Oral Liquid Preparations. {CO1]
- Q3. Briefly discuss the steps involved in Sugar Coating. [CO1]
- Q4. Explain the process involved in the manufacture of Hard Gelatin Capsule Shell. [CO1]
- Q5. Calculate the HLB value of an emulsifier blend (containing emulsifier A & B) used in the ratio of 68:32, where emulsifier A (HLB value 4.7) and emulsifier B (HLB value 15.0) are used to prepare a stable emulsion. [CO1]
- Q6. Enlist and describe the different components of a continuous valve used for aerosol containers.[CO1]

- Q7. Discuss the theory of emulsification [CO2]  
Q8. Explain in details the DLVO theory for suspension preparation. [CO2]  
Q9. Answer in short the following with proper logic:  
a. Why water for injection has less ion content in comparison to sterile water for injection? [CO1]  
b. Why sodium bicarbonate is added to Ascorbic injection IP? [CO1]  
c. What are Pyrogens chemically? [CO1]  
d. What remedy is taken to prevent the adherence of liquids to the surface of Glass containers used for parenterals? [CO1]  
e. What is Class 100 room? [CO1]  
Q10. Discuss the Foam based systems and Dispersion systems used for aerosols. [CO1]

**PART-III**

**Long Answers**

**(Instruction: Answer two out of three questions)**

(2 x 10 = 20 marks)

- Q11. Discuss the evaluation of aerosols. [CO1]  
Q12. Deduce the equation for pH for a weakly acidic drug and Weakly basic drug. [CO2]  
Q13. Discuss the problems associated with tablet coating and mention their related remedies. [CO1]

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