

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF CHEMISTRY

 MAR 2023

CH401: PHARMACEUTICAL TECHNOLOGY

TIME: 2HRS

ANSWER QUESTION 1 AND FOUR OTHERS. TWO FROM EACH OF SECTIONS A AND B. EACH QUESTION CARRIES 20 MARKS

1. (a) List five advantages of suspensions as a dosage form? [5 marks]
- (b) Explain the need for granulation before preparing tablets. [5 marks]
- (c) List five functions of excipients in drug formulation. [5 marks]
- (d) List five ways of drug administration in pharmacy. [5 marks]

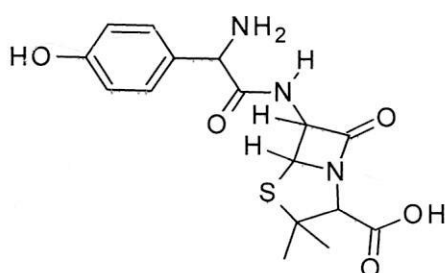
SECTION A: ANSWER TWO QUESTIONS

2. (a) Describe the concept of pharmaceutical compounding. [10 marks]
- (b) Distinguish between ambulatory care compounding and institutional pharmacy compounding. [10 marks]
3. (a) Outline the difficulties faced in the use of tablets as solid dosage forms. [10 marks]
- (b) With the help of an illustration, describe the operating principles of a sprayer. [10 marks]
4. (a) Spray drying is one type of a granulation technique. Describe the principles and advantages of this technique over other granulation techniques? [10 marks]
- (b) Inhalation dosage forms are important in the treatment of asthma and chronic obstructive pulmonary diseases.

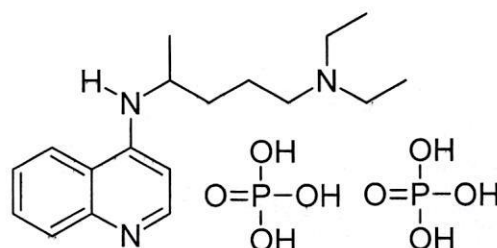
- (i) Explain what has limited the use of metered dose inhalers. [5 marks]
- (ii) What are the major challenges in further developing these devices? [5 Marks]

SECTION B: ANSWER TWO QUESTIONS

- 5 (a) Describe the following coating techniques
- (i) Enteric coating
- (ii) Sugar coating [10 marks]
- (b) Describe the common defects encountered in coated tablets? [10 marks]
6. (a) Pharmaceutical companies must adhere to codes of good manufacturing practices. Briefly describe the main aspects of pharmaceutical good manufacturing practices. [10 marks]
- (b) Describe the quality control procedures in a pharmaceutical manufacturing environment? [10 marks]
7. (a) The following compounds are common ingredients in certain drugs.



Compound A



Compound B

- (i) What are the names of these drug compounds? [4 marks]
- (ii) What are the therapeutic functions of each of the drug compounds? [4 marks]
- (b) State the raw materials used in the manufacture of these compounds. [8 marks]
- (c) Give at least two examples in each case of the trade names for these drug compounds. [4 marks]

END OF EXAM