Roll No.							

24-PC-44

M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION
JUNE - JULY 2024

PHARMACEUTICAL CHEMISTRY
Paper - IV
[Applied Pharmaceutics - II]

[Max. Marks : 75] *[Time : 3:00 Hrs.]* *[Min. Marks : 26]*

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt five questions. Each question carries an internal choice.
Each question carries **15 marks.**

Q. 1 Analyze the various types of tablet compression machinery used in large scale production. What are the components and operational principles of single punch presses and rotary tables presses ? **(15 Marks)**

OR

Discuss the importance of stability testing and quality assurance in tablet manufacturing. How do stability testing and adherence to Good Manufacturing Practices (GMP) contribute to the safety and efficacy of pharmaceutical products ? **(15 Marks)**

Q. 2 Justify the advantages and disadvantages of capsule dosage forms. How do these compare to other dosage forms such as tablets and liquids ? **(15 Marks)**

OR

a) Outline the methods used for filling hard gelatin capsules. Discuss the advantages and limitations of each. **(9 Marks)**

b) Evaluate the quality control measures for capsule dosage forms. **(6 Marks)**

Q. 3 Explain the role and types of vehicles used in liquid dosage forms. How do these additives enhance the properties and effectiveness of the formulation ? **(15 Marks)**

OR

Illustrate the packaging requirements for semisolid dosage forms. What types of packaging material and designs are used to ensure the stability and usability of these products. **(15 Marks)**

Q. 4 Discuss the various route of administration for pharmaceutical products. What are the advantages and disadvantages of each route in terms of drug delivery and patient compliance ? **(15 Marks)**

P.T.O.

OR

a) Evaluate the types of containers and closures used in pharmaceutical packaging based on the nature of the product and its stability requirements. (7½ Marks)

b) Justify the key considerations in ensuring the safety and efficacy of ophthalmic products. (7½ Marks)

Q. 5 Describe the coacervation method of micro encapsulation. How does this technique work and analyze its advantages and limitations in pharmaceutical applications. (15 Marks)

OR

Evaluate the methods used to assess the quality and performance of microcapsules. What tests are conducted to ensure the efficacy, stability and release characteristics of microencapsulated drugs ? (15 Marks)

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