MIP 102 T

Total No. of Questions : 14] [Total No.of Pages : 01

M. PHARMACY (SUPPLE) DEGREE EXAMINATIONS, JANUARY - 2022

First Semester

INDUSTRIAL PHARMACY

PHARMACEUTICAL FORMULATION DEVELOPMENT

Time : **Three Hours** Maximum : **75** Marks

SECTION - A

Answer any FIVE Questions. **5x5 = 25 M**

1. Describe the early stage preformulation studies and various stages of it's development.
2. Discuss the major areas of preformulation research.
3. Write the classification and sources of formulation additives.
4. Describe the merits and demerits of factorial design.
5. Describe the correction factor for dissolution profile calculations.
6. Explain inclusion complex formation technique in improving solubility.
7. "Nano suspension technology is promising candidate for efficient delivery of hydrophobic drugs". Justify the statement.

SECTION - B

Answer any FIVE Questions. **5x10 = 50 M**

8. Explain in detail about the analytical techniques for the evaluation of Drug-excipient interactions.
9. Illustrate the role of additives in pharmaceutical formulation.
10. Write an essay about additives interaction in pharmaceutical products.
11. Explain the types of factorial design. Write the protocol for implementing design of experiments in product design.
12. Explain in detail about the techniques for solubility enhancement.
13. Discuss the theoritical considerations for characterizing dissolution and super saturation behaviors under non-sink dissolution conditions.
14. Describe the mechanisms of dissolution theories.

MIP 102 T

Total No. of Questions :14] [Total No. of Pages : 02

M.PHARMACY (Regular) DEGREE EXAMINATIONS, FEB/MAR-2020

First Semester

M.PHARMACY

INDUSTRIAL PHARMACY

PHARMACEUTICAL FORMULATION DEVELOPMENT

Time: Three Hours **Maximum marks:75**

SECTION-A

Answer any FIVE Questions 5X5=25M

1. Write about the application of differential calorimetry in drug-excipient compatibility studies.
2. Write about antioxidants suitable for parenterals.
3. Write the applications complexation in solubility enhancement with suitable examples.
4. Write the significance of similarity and dissimilarity factors.
5. Write about solid state stability of drugs.
6. Discuss the causes for degradation by hydrolysis and suggest suitable protective methods.
7. Write about conditions to be followed in intrinsic dissolution rate.

SECTION-B

Answer any FIVE Questions 5X10=50M

8. Explain the role of crystal morphology and powder flow in the design of solid dosage forms.
9. Enumerate the factors influencing the selection of excipients in formulation development and discuss about the excipients suitable for tablets.
10. Write about phase solubility studies and pH solubility profile.

11. Explain the theories of dissolution and mention their limitations.
12. Explain the method of determination of shelf life of solid dosage form. Mention its limitations.
13. Explain the stability testing protocol for drug product as per ICH guidelines.
14. Give the comparisons between levels of correlation used for in vitro and in vivo. Which level of correlation is most preferred one?

Total No. of Questions :14]

MIP 102 T

[Total No. of Pages : 02

I/II M.PHARMACY (Regular) DEGREE EXAMINATIONS, FEB-2019

First Semester

M.PHARMACY (INDUSTRIAL PHARMACY)

PHARMACEUTICAL FORMULATION DEVELOPMENT

Time: Three Hours **Maximum marks:75**

SECTION-A

Answer any FIVE Questions **5X5=25M**

1. Explain the role of structure modification in preformulation studies?
2. Describe the role of formulation development?
3. Write about micellar solubilization with a suitable example?
4. Explain the theories involved in disolution?
5. Elaborate the drug-excipient compatability studies?
6. Explain in detail about ICH guidelines?
7. Discuss about various types of complexation with suitable examples?

SECTION-B

Answer any FIVE Questions **5X10=50M**

8. a) Define preformulation? What is the significance of particle size and size distributions in formulation?
   b) What is polymorphism? Name the methods to identify polymorphs?
9. Explain the role of formulation development and processing in parenteral preparations.
10. What is intrinsic solubility? Briefly explain about phase-solubility studies.
11. a) Explain in detail about Biorelevant dissolution medium?
    b) How dissolution medium is selected for Active pharmaceutical ingredient.
12. Explain in detail about factorial design of experiments for product development.

P.T.O

13. What is formulation stability? Describe various means of formulation stabilization.

14. Define degradation kinetics? Explain in detail about accelerated stability studies.