

UKA TARSADIA UNIVERSITY
M.PHARM 1st Semester Examination December 2012
Subject Name: Pharmaceutical Formulation, Development & Biopharmaceutics
Subject Code: 040040102

Max. Marks: 70

Instructions:

1. Attempt all questions.
2. Write each section in a separate answer book.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.
5. Draw diagrams/figures whenever necessary.

Section-I

Q-1 (A) Do as directed:

[14]

- (I) Define preformulation.
- (II) Enlist one example each of hydrate & solvate.
- (III) Enlist different type of rouges.
- (IV) What do you understand by solubilized systems?
- (V) Define Dissolution number.
- (VI) Define Mean kinetic temperature.
- (VII) Define mean residence time.
- (VIII) Write the purpose of establishing IVIVC.
- (IX) Write the disadvantage of Wagner nelson method.

Q-1 (B) Answer the following in brief: (Any 4)

[16]

- (I) Enlist methods for identifying polymorphs.
- (II) Enlist methods to determine particle size measurement.
- (III) Metastable polymorph can be used in solid dosage forms but not liquid dosage forms. Justify.
- (IV) Describe in brief different types of surfactants used in shampoos.
- (V) Enlist various inter and intra molecular forces responsible for poor solubility.
- (VI) Write formula for f1 and f2 factor.
- (VII) Enlist different methods for determination of solubility.
- (VIII) Write objectives of BCS.
- (IX) Explain the methods for bioavailability enhancement.

Q-2 Answer the following:

[10]

- A) Why are drug-excipient studies important in preformulation studies?

OR

- A) Describe various factors affecting solubility.

- B) Discuss the manufacturing variables which affect the absorption.

OR

- B) Discuss the rationale in selecting a particular polymorph or crystalline form in a dosage form.

Q-3 Answer the following in detail. (Any 2)

[10]

- A) How shall be the preformulation of proteins carried out?
- B) What do you mean by reduced designs? What are its advantages? Explain matrixing.
- C) Describe the considerations of OVIs in preformulation study.

Q-5 Answer the following:

[10]

- A) Enlist various solubilization techniques and explain any two.

OR

- A) Describe formulation & evaluation aspects of cold cream, vanishing cream & shaving creams.

- B) Explain BCS class boundaries for solubility, permeability and dissolution.
Explain regulatory applications of BCS.

OR

- B) Describe methods available for shelf life determination.

Q-6 Answer the following in detail. (Any 2)

[10]

- A) How to perform the evaluation of herbal products?
- B) Write the effect of physiochemical properties of drug for prediction of IVIVC.
- C) Explain all the level of IVIVC.