

Department of Pharmaceutical Technology
Jadavpur University
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M.Pharm (Industrial Pharmacy)/ 1st year/ 1st Sem/Time 3 hrs/ FM 75/ 2023-24

Course: Novel Drug Delivery Systems Code: MIP103T

Q1. Answer the following questions (Question 1 is Compulsory) 10x2M=20 Marks

- a. Define epitope.
- b. What is the full form of IEP? Define it for protein.
- c. Give 2 examples for each kind of fibrous protein and globular protein respectively.
- d. Why vesicular drug delivery systems are important for drug delivery?
- e. Name some methods for preparation of magnetite preparation.
- f. Give the name of first Transdermal system approved by FDA and the year of approval.
- g. Give the name of the equipments which are used for the *in-vitro* drug release and *in-vitro* skin permeation studies for patches.
- h. Give the emulsion type of cold cream and vanishing cream.
- i. Define co-polymers with examples.
- j. Explain pulsatile dds with examples.

Long Answer Questions 2 x 10Marks = 20Marks

(Answer 2 out of 3)

Q2. Discuss different evaluation techniques for establishment of suitability of microsphere. 10

Q3. Briefly discuss the various evaluation parameters of a transdermal patch.

Q4. Explain in details the mechanism of mucoadhesion.

[Turn over

Short Answer Question

7 x 5Marks = 35Marks

(Answer 7 out of 9)

- Q5. Write down the causes for protein instability.
- Q6. How in vitro drug dissolution/drug diffusion study is done for liposomal drug delivery system?
- Q7. Write on TEM, XRD and VSM study of Magnetic nanoparticle.
- Q8. What are the different types of telepharmacy recently present? Write on its application.
- Q9. Explain the use of primary and secondary surfactant in shampoo preparation. Give examples.
- Q10. Enlist the common ingredients to be incorporated in the preparation of tdds with their purposes.
- Q11. Classify pharmaceutical polymers with examples.
- Q12. Discuss the factors affected in the design of colon specific drug delivery systems.
- Q13. Give a note on dissolution controlled release systems.