

UKA TARSADIA UNIVERSITY
M. Pharm. (Pharmaceutical Analysis) (3rd Semester)
040060302: Pharmaceutical and Cosmetic Analysis

Time : 10:00 am to 1:00 pm

Date : 08/01/2014

Duration: 3 hours

Maximum 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 allocated to that question.
5. Draw diagrams/figures wherever necessary.

SECTION-1

Q.1] (a) Answer the following (any five): [5 x 2 = 10]

- 1) Write benefits of Solid phase extraction.
- 2) Explain how cyclodextrins aid in improving stability of drugs.
- 3) What is Draize scale?
- 4) How a photo patch test is performed?
- 5) What is a biological sample? Enlist the steps of pretreatment of biological sample.
- 6) Enlist the antioxidants commonly used in pharmaceuticals. Explain assay principle of any one antioxidant?

(b) Define photosensitization. [1]

Q.2]

(a) Discuss the factors affecting extraction of drugs with suitable examples. [7]

OR

(a) Describe the significance of oxidative and photolytic degradation study of drugs with suitable examples. [7]

(b) Give a brief account of drug-excipients and drug-drug interactions in solid state. State the methods of stabilization for same. [5]

Q.3] Attempt any three [3 x 4 = 12]

- (a) What is the significance of eye irritation test? How is it performed?**
- (b) Explain the following terms: Oxidative autocatalysis, Membrane filtration.**
- (c) Describe the principle, merits and demerits of liquid-liquid extraction.**
- (d) Explain the significance of mean kinetic temperature and Arrhenius equation in drug decomposition study.**

SECTION-2

Q.4] (a) Answer the following (any five): [5 x 2 = 10]

- 1) Define and classify cosmetics.
- 2) Enlist the requirements for skin powder for infants as per BIS specifications.
- 3) What do you mean by GRAS and GNRAS list?
- 4) What are the types of hair oil? Enlist the tests to be performed for hair oils as per BIS specifications.

- 5) What is break load value and softening point of lipstick?
- 6) Why is it important to determine nickel, copper and iron content for baby toilet soaps?

(b) **Define: Gross sample** [1]

Q.5]

- (a) Describe the principle and procedure involved in determination of chlorides, sulphates, phosphates and carbonates in cosmetics. [7]

OR

- (a) What are the types and ideal properties of shampoos? Describe the requirements for both types of shampoos as per BIS specifications. [7]

- (b) Discuss the quality control of raw materials used in cosmetic industry. [5]

Q.6] Attempt any three [3 x 4 = 12]

- (a) How foaming power of cosmetics is determined? Explain the significance of determining the foaming power of cosmetics.
- (b) Explain the principle for determination of rosin and borax in cosmetics.
- (c) Write general requirements for sampling of cosmetics.
- (d) Explain the significance of pH determination for cosmetics. Enumerate the cosmetics for which pH determination is required as per BIS specifications.