

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.