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

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: **[7 x 1 = 7]**

1) What is photolysis?
2) What do you mean by stabilizers?
3) What is biological sample?
4) Enlist biological matrices.
5) What is hypersensitivity?
6) What do you mean by repeated insult irritant?
7) What is polymorphic transformation?

(b) Attempt any four: **[4 x 2 = 8]**

1) What is mean kinetic temperature?
2) How is selectivity determined in bioanalytical method development?
3) What do you mean by oxidative autocatalysis?
4) What is an open patch test? How is it performed?
5) What do you mean by long term stability?
6) Enlist the preservatives commonly used in pharmaceuticals. Explain assay principle of any one preservative.

Q.2] (a) Discuss physical stability testing of tablets. **[5]**

OR

(a) Describe principle, procedure, advantages and disadvantages of liquid-liquid extraction. **[5]**

(b) The interaction of moisture with the drug substance and excipients can significantly affect the physical stability of the final drug product. Explain giving suitable examples. **[5]**

OR

(b) Name the pathways of chemical degradation. Enumerate the factors affecting chemical stability of drugs. Discuss the significance of hydrolytic degradation study of drugs. **[5]**

Q.3] Attempt any two **[2 x 5 = 10]**

(a) What is the significance of skin irritation test? How is it performed?
(b) Describe US-FDA guidelines for bioanalytical method development.
(c) Discuss physical stability testing of suspensions.

SECTION-2

Q.4] (a) Answer the following: **[7 x 1 = 7]**

1) What is a Gross sample?
2) What do you mean by Acceptable Quality Level (AQL)?
3) Define: Iodine value.
4) Name the methods for determination of moisture and volatile matter.
5) What is GRAS list?
6) Enlist the types of cosmetic pencils.
7) What do you mean by softening point of lipstick?

(b) Attempt any four: **[4 x 2 = 8]**

1) Write classification of cosmetics.
2) Explain the principle of any one method for determination of rosin.
3) How will you prepare composite samples for liquid soaps?
4) Describe packing and marking requirements for skin powder for infants.
5) How will you perform the test for stability of smell for after shave lotions?
6) Enlist the requirements for shaving creams as per BIS specifications.

Q.5] (a) Describe the principle and procedure involved in determination of foaming power. Name the cosmetics for which determination of foaming power is required. **[5]**

OR

(a) Name the types of shampoos. Enlist the ideal properties of shampoos. Enumerate the requirements for both types of shampoos. **[5]**

(b) Describe the principle and procedure involved in determination of combined alkali and total anhydrous soap. **[5]**

OR

(b) Describe the requirements for tooth paste as per BIS specification. **[5]**

Q.6] Attempt any two **[2 x 5 = 10]**

(a) Name the types of hair oils. Describe the requirements for all types of hair oils as per BIS specification.

(b) Describe the scale of sampling for henna powder. Enumerate the requirements for henna powder as per Indian standard specification.

(c) Discuss the quality control of raw materials used in cosmetic industry.