

Date: 8/11/12

Exam no. 01

Maliba Pharmacy College
Uka Tarsadia University
Mid-Semester Examination
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 pharmaceutical equivalence?
 - 2) What do you mean by emulsifiers?
 - 3) Enlist the steps of pretreatment of biological sample.
 - 4) Name the pathways of chemical degradation.
 - 5) What is Draize scale?
 - 6) Name the safety tests to be carried out for hair care products.
 - 7) Enlist biological matrices.

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

- 1) What do you mean by polymorphic and pseudo polymorphic transformation? - Carstensen (184)
- 2) Enumerate the factors affecting chemical stability of drugs. - Stella (34)
- 3) What do you mean by oxidative autocatalysis? - Carstensen (122)
- 4) What is an oral toxicity test? How is it performed?
- 5) What is Arrhenius equation? State its significance. - Carstensen (37) + Stella (61)
- 6) Enlist the preservatives commonly used in pharmaceuticals. Explain assay principle of any one preservative.

- Q.2] (a) Discuss physical stability testing of disperse systems. - Carstensen (262) [5]**

OR

- (a) What do you mean by solid phase extraction? Give its benefits. Describe the phases in SPE. - xrdx [5]**

- (b) Discuss physical stability testing of tablets. - Carstensen (293) [5]**

OR

- (b) Discuss the significance of hydrolytic and oxidative 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) Write brief notes on Protein precipitation and lyophilisation. - max.
- (c) Discuss the role of Cyclodextrins in improving the stability of drugs. - Sella (128)

SECTION-2

Q.4] (a) Answer the following:

[7 x 1 = 7]

- ✓ (1) Name the types of shampoos. (1) Soap based (2) Surfactant based
- ✓ (2) What do you mean by composite sample? Pg → 4
- ✓ (3) What do you mean by breaking load value of lipstick? Maximum value of a lipstick cream withstand before it break
- 4) Name the methods for determination of potassium in cosmetics. Shaving soap → (1) Gravimetric (2) Flame photometric
- 5) Name the cosmetics for which determination of foaming power is required. ← shaving cream
- 6) What is a sampling instrument? Use for drawing samples of different cosmetics.
- 7) Define: Cosmetics. Pg → 1 → ppt

(b) Attempt any four:

[4 x 2 = 8]

- 1) How will you perform the test for stability of smell for after shave lotions? Pg → 1
- 2) Write classification of cosmetics. Pg → 1 to 2 → ppt
- 3) What do you mean by GRAS and GNRAS? ✓ Pg → 11 → ppt
- 4) Enlist the ideal properties of shampoos. Pg → 5
- 5) What is scale of sampling for packages? Pg → 10
- 6) Enlist the requirements for henna powder as per BIS specifications. Pg → 4

Q.5]

(a) Describe the principle for determination of arsenic and iron content in cosmetics. Name the cosmetics for which determination of arsenic and iron is specified by BIS. [5]

OR

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

(b) Describe the principle and procedure involved in determination of unsaponified and unsaponifiable matter? [5]

OR

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

Q.6] Attempt any two

[2 x 5 = 10]

- (a) Describe preparation of test samples for powders and pastes.
- (b) Enumerate the requirements for lipstick as per Indian standard specification. How will you determine peroxide number and softening point for lipstick?
- (c) Write general requirements for sampling of cosmetics. Pg → 5

* GRAS = (Generally Recognized as Safe).
GNRAS = (- - - NOT - - -)