



Faculty of Health Sciences
B.Sc. (Hons) in Cosmetics Sciences
BCS 1153 – General Cosmaceutics
End Semester Examination
1st Year 1st Semester –SEQ
10th Batch (BCS 8th Batch)

Date: 11th of November 2025

Time: 09.00 am – 12.00 pm - Three Hours

Index Number-

INSTRUCTIONS TO CANDIDATES Page

- This question paper consists of **SIX** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01

(100 marks)

- 1.1 Write the definition of “cosmetics”. (15 Marks)
- 1.2 Name **four (04)** different types of tablets. (12 Marks)
- 1.3 Write **four (04)** differences between hard gelatin capsules and soft gelatin capsules. (20 Marks)
- 1.4 List **four (04)** advantages of the tablet dosage form. (08 Marks)
- 1.5 Write **two (02)** advantages of film-coated tablets over sugar-coated tablets. (10 Marks)
- 1.6 Briefly outline the main steps of hard gelatin capsule shell manufacturing (35 Marks)

Question 02

(100 marks)

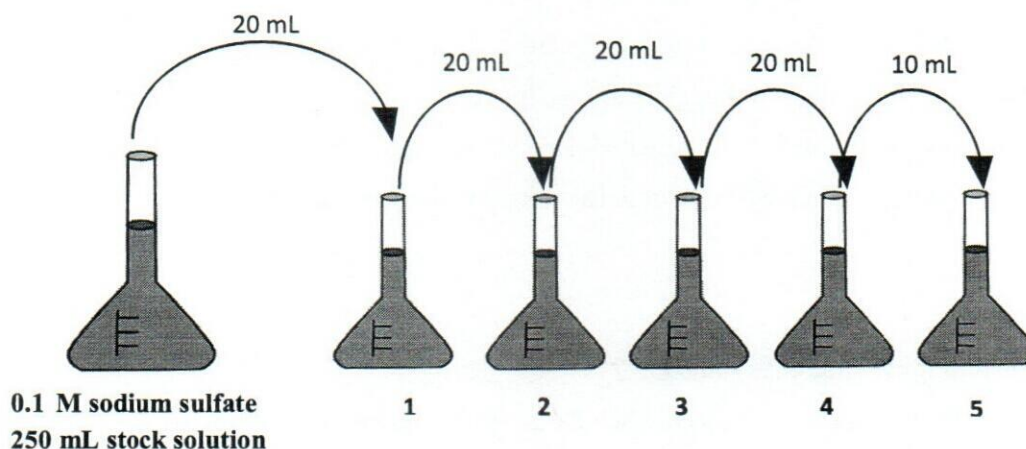
- 2.1 What is meant by “reference standard”? (15 Marks)
- 2.2 Write **two (02)** examples of reference standards used in cosmetics and pharmaceutical manufacturing. (15 Marks)
- 2.3 List **four (04)** characteristics of primary standards. (20 Marks)
- 2.4 Which ISO standard outlines the good manufacturing practices (GMP) guidelines specifically for the cosmetic industry? (10 Marks)
- 2.5 Write **five (05)** good manufacturing practices in a cosmetic manufacturing plant to ensure the quality and safety of the cosmetics. (40 Marks)

Question 03**(100 Marks)**

- 3.1 Define the term "emulsion". (10 Marks)
- 3.2 List **four (04)** physical instabilities of an emulsion. (20 Marks)
- 3.3 Write **three (03)** differences between flocculated and deflocculated suspension. (30 Marks)
- 3.4 Write **three (03)** factors affecting the stability of suspension. (15 Marks)
- 3.5 List **five (05)** important aspects of packaging in cosmetic products. (15 Marks)
- 3.6 List **four (04)** main types of thickening agents. (10 Marks)

Question 04**(100 Marks)**

- 4.1 A student has prepared 250 mL of 0.1 mol dm^{-3} sodium sulphate (Na_2SO_4) solution for an experiment. The assay of the $\text{Na}_2\text{SO}_4 \cdot 7\text{H}_2\text{O}$ stock bottle was 99.8%.
($\text{Na} = 23 \text{ g mol}^{-1}$, $\text{S} = 32 \text{ g mol}^{-1}$, $\text{O} = 16 \text{ g mol}^{-1}$, $\text{H} = 1 \text{ g mol}^{-1}$)
- 4.1.1 Calculate the required mass of the sodium sulphate from the stock bottle to prepare the solution. (25 Marks)
- 4.1.2 Calculate the concentration of the sodium sulphate as (W/V) percentage. (25 Marks)
- 4.2 A student has prepared a dilution series of **100 mL** of sodium sulfate (Na_2SO_4) solution by using the stock solution prepared in 4.1.



- 4.2.1 Calculate the dilution factor for **solutions 1 to 4**. (20 Marks)
- 4.2.2 Calculate the dilution factor for **solution 5**. (10 Marks)
- 4.2.3 Calculate the concentration of **solutions 4 and 5**. (20 Marks)

Question 05**(100 Marks)**

5.1 Preservatives in cosmetics are important to maintain the stability of cosmetic products.

5.1.1 Name the two classes of preservatives used in cosmetics and give reasons for their use. (20 marks)

5.1.2 In addition to cleansing, some surfactants are useful as preservatives. Explain the statement.

(20 marks)

5.2 Surfactants are possibly the most versatile components among all the ingredients of cosmetic products.

5.2.1 List three different reasons to use surfactants in cosmetic products. (15 marks)

5.2.2 Name the four different types of surfactants used in cosmetics (20 marks)

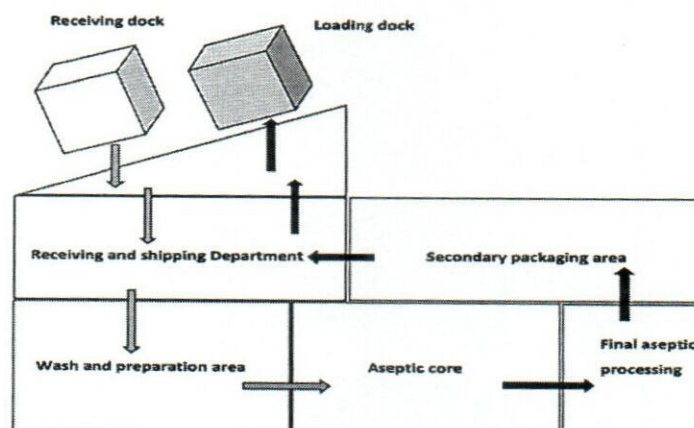
5.3 Organic polymers are frequently used in cosmetic products.

5.3.1 Name two of them. (10 marks)

5.3.2 Describe why they are useful in cosmetics. (15 marks)

Question 06**(100 Marks)**

6.1 Following figure shows a pharmaceutical plant layout.



6.1.1 Comment on the desirability of this plant layout.

(20 marks)

6.1.2 Write a short note on the material movement and the personnel movement within a pharmaceutical plant.

(30 marks)

6.2 List main roles of followings in facial skin.

6.2.1 Sebaceous glands

(15 marks)

6.2.2 Sweat glands

(15 marks)

6.3 State main types of facial skin.

(20 marks)



Faculty of Health Sciences
B.Sc. (Hons) in Cosmetic Sciences
BCS 1153 – General Cosmeceutics
End Semester Examination
1st Year 1st Semester –SEQ
9th Batch (BCS 7th Batch)

Date: 6th of August 2025

Time: 09.00 am – 12.00 pm - Three Hours

INSTRUCTIONS TO CANDIDATES Page

- This question paper consists of **Six Structured Essay** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

Question 01

(100 marks)

- 1.1 List the **four (04)** advantages of the tablet dosage form. (20 Marks)
- 1.2 List the **four (04)** disadvantages of the tablet dosage form. (20 Marks)
- 1.3 Write **seven (07)** steps of the hard gelatin capsule shell manufacturing process. (42 Marks)
- 1.4 Write **three (03)** important aspects of standard pharmacopoeias. (18 Marks)

Question 02

(100 marks)

- 2.1 Write **two (02)** examples of release modified tables. (10 Marks)
- 2.2 Write **one (01)** specific content included in the following volumes of the British Pharmacopoeia. (40 Marks)

Volume No	Content
Volume I & II	
Volume III	
Volume IV	

Volume V	
Volume VI	

- 2.3 Write the purpose of manufacturing the enteric-coated tablets. (20 Marks)
- 2.4 List **three (03)** types of tablet coating methods. (15 Marks)
- 2.5 Write **two (02)** advantages of soft gelatin capsules over hard gelatin capsules. (15 Marks)

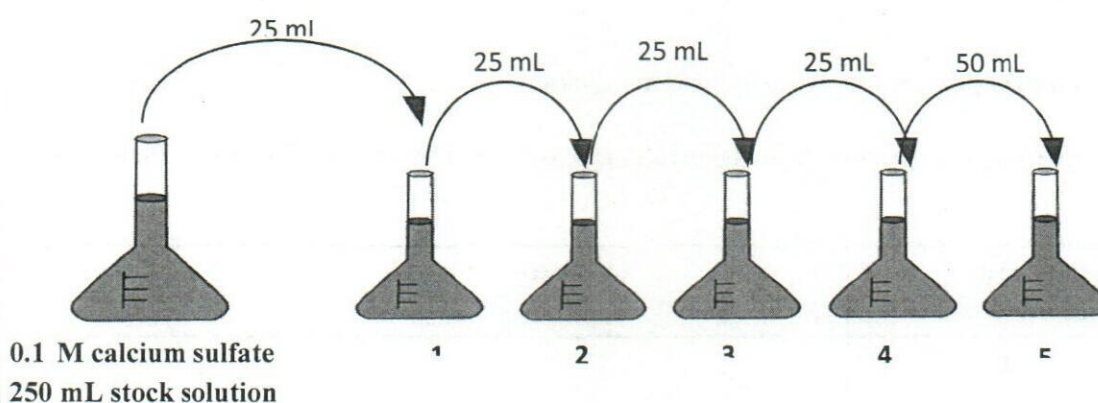
Question 03

(100 Marks)

3.1 A student has prepared 250 mL of 0.1 mol dm⁻³ calcium sulfate (CaSO₄) solution for an experiment. The assay of the CaSO₄·5H₂O stock bottle was 98%.
(Ca=40 g mol⁻¹, S = 32 g mol⁻¹, O = 16 g mol⁻¹, H=1 g mol⁻¹)

- 3.1.1 Calculate the required mass of calcium sulfate to prepare the solution. (25 Marks)
- 3.1.2 Calculate the concentration of the calcium sulfate as (W/V) percentage. (25 Marks)

3.2 A student has prepared a dilution series of 100 mL of calcium sulfate (CaSO₄) solution by using the stock solution prepared in 3.1.



- 3.2.1 Calculate the dilution factor for **solutions 1 to 4**. (20 Marks)
- 3.2.2 Calculate the dilution factor for **solution 5**. (10 Marks)
- 3.2.3 Calculate the concentration of **solutions 4 and 5**. (20 Marks)

Question 04**(100 Marks)**

- 4.1 Define the term "emulsion". (20 Marks)
- 4.2 List **three (03)** applications of emulsion formulations in the cosmetic manufacturing industry. (15 Marks)
- 4.3 Write **four (04)** instabilities that can occur in emulsion formulation. (20 Marks)
- 4.4 Write **two (02)** factors affecting the stability of suspension. (20 Marks)
- 4.5 List **four (04)** types of ointment bases used in ointment manufacturing. (25 Marks)

Question 05**(100 Marks)**

- 5.1 Which ISO standard outlines the Good Manufacturing Practices (GMP) guidelines specifically for the cosmetic industry? (20 Marks)
- 5.2 Write **five (05)** implementations of good Manufacturing practices in a cosmetic manufacturing plant to ensure the quality and safety of the cosmetics. (40 Marks)
- 5.3 Write **four (04)** important aspects of the packaging of cosmetic products. (20 Marks)
- 5.4 List **four (04)** characteristics of primary standards. (20 Marks)

Question 06**(100 Marks)**

- 6.1 Illustrate the structure of human skin. (25 marks)
- 6.2 Explain how knowledge on human skin is important to cosmetic scientists. (25 marks)
- 6.3 Write **five (05)** methods to minimize the particulate matters within a clean room. (20 marks)
- 6.4 Comment on the material movement and the personnel movement within a pharmaceutical plant. (30 marks)