



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

BEAUTY THERAPY

SUBJECT: Cosmetic Science

PAPER NO : 400/18/S05

DURATION: 3 hours

MARCH/APRIL 2023 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATES

- 1) Answer any five (5) questions.**
- 2) Each question carries (20 marks).**
- 3) Write neatly and legibly.**

This paper consists of 3 printed pages.

QUESTION 1

- 1.1 Compare mixtures and compounds. (10 marks)
- 1.2 Outline functions of any five (5) elements that are found in the body. (10 marks)

QUESTION 2

- 2.1 Draw a surfactant molecule. (3 marks)
- 2.2 Briefly explain the following citing relevant examples from your trade:
- i) Suspensions
 - ii) Solution
 - iii) Emulsion (17 marks)

QUESTION 3

Describe functions of active ingredients added during the production of cosmetics. (20 marks)

QUESTION 4

- 4.1 Differentiate physical and chemical change. (6 marks)
- 4.2 Draw the pH scale and indicate pH values of products used in Beauty Industry. (10 marks)
- 4.3 State two (2) types of hard water and their causes. (4 marks)

QUESTION 5

- 5.1 outline the drawbacks of using hard water in the salon. (3 marks)
- 5.2 Elaborate on the health benefits of drinking hard water as human beings. (7 marks)
- 5.3 Describe two (2) methods of separating mixture commonly used in Beauty Industry. (10 marks)

QUESTION 6

- 6.1 Distinguish between covalent and electrovalent bonding. (5 marks)
- 6.2 Explain the effects of using acidic and alkaline cosmetics on the skin and its appendages. (15 marks)

QUESTION 7

- 7.1 Describe electronic configuration of the following elements:

- i) O_8 (2 marks)
- ii) Ti_{22} (2 marks)
- iii) Cl_{17} (2 marks)

- 7.2 Write the structural and molecular formulae for water and methane. (4 marks)

- 7.3 Elaborate on the types of chemical reactions. (10 marks)

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