



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A constituent of JKUAT)

**Faculty of Applied and Health Sciences**

**DEPARTMENT OF PURE AND APPLIED SCIENCES**

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF  
TECHNOLOGY IN APPLIED CHEMISTRY

## **ACH 4408: COSMETIC ANALYSIS**

SPECIAL/SUPPLEMENTARY EXAMINATION

FEBRUARY 2013 SERIES 2  
HOURS

Instructions to candidates:

This paper consist of **FIVE** questions

Answer question **ONE** (compulsory) and any other **TWO** questions

### **Question ONE**

- a) Give the factors to consider a method for analysis of cosmetic products **(3marks)**
  - b) Describe three sample preparation techniques used for cosmetic analysis **(6marks)**
  - c) (i) Define the term preservatives as used in cosmetics. **(4marks)**  
(ii) Name TWO examples of preservatives **(2marks)**
  - d) Explain how coloring agents are analyzed by TLC method. **(6marks)**
  - e) Name the THREE major cosmetic legislations in the world. **(3marks)**
    - I. Lukes
    - II. Tones
    - III. True pigments
- (6marks)**

## Question TWO

- a) State and explain FOUR methods used in analysis of surfactants **(8marks)**
- b) List SIX properties of analytical techniques **(6marks)**
- c) Due to the complexity of cosmetic samples analytical methods for analyzing cosmetic product has to meet some conditions. Give 6 of these conditions **(6marks)**

## Question THREE

- a) Define the following terms
  - (i) Cosmetic **(2marks)**
  - (ii) Surfactant **(4marks)**
- b) Describe the categories of substances subject to be controlled by the authorities **(6marks)**
- c) Mention FOUR active ingredient in VU filters **(4marks)**
- d) Give any FOUR metals found in mineral pigments **(4marks)**

## Question FOUR

- a) Define the term legislation **(2marks)**
- b) State key features of pre-marked regulation of cosmetic product **(8marks)**
- c) Give FIVE reasons for carrying out cosmetic analysis. **(10marks)**

## Question FIVE

- a) Differentiate between a tanning and a whitening agent **(4marks)**
- b) Hydroquinone (HO) an active ingredient in tanning can be determined using two major methods. Describe how these two analyses are carried out. **(6marks)**
- c) State other methods of testing the efficacy of cosmetic apart from physical and chemical methods. **(5marks)**
- d) Give FOUR strategies adopted by the legislations in order to classify cosmetic products **(5marks)**