



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF PURE AND APPLIED SCIENCE

DEPARTMENT OF APPLIED SCIENCE

UNIVERSITY ORDINARY EXAMINATION

2017/2018 ACADEMIC YEAR

**SECOND YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN
FOOD SCIENCE AND TECHNOLOGY**

DFT 1213 – FOOD ANALYSIS II

DURATION: 2 HOURS

DATE: 23RD APRIL, 2018

TIME: 9.00 – 11.00 A.M.

Instructions to Candidates:

1. Answer **Question 1** and **Any Other Two** questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

SECTION A – ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE

- a) Define the following terms:
 - i. Densimetry
 - ii. Viscometry (2 marks)
- b) Describe how paper chromatography technique can be used to analyse and identify a food sample (15 marks)
- c) Explain the uses of 5 components of a UV-V-spectrophotometer (10 marks)
- d) Explain four reasons of conducting food analysis (8 marks)

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO

- a) Differentiate the two packing methods in column chromatography (10 marks)
- b) Describe the analysis of a sample using the Lovibond colour comparator (4 marks)
- c) Explain how colourless components are detected on a Thin Layer chromatography plate (6 marks)

QUESTION THREE

- a) State four advantages of colorimetry over other classical methods of analysis such as titrimetry and gravimetry (4 marks)
- b) List the basic components of a colorimeter (4 marks)
- c) Outline the principle of colorimetry (6 marks)
- d) Describe how a TLC plate is prepared for laboratory work (6 marks)

QUESTION FOUR

- a) State the steps involved in separation of a coloured mixture by column chromatography (6 marks)
- b) Differentiate between single and double beam spectrophotometer (10 marks)
- c) Outline the principle of densimetry (4 marks)