

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY**

DATM 456: DAIRY TECHNOLOGY

STREAMS: BSC (FOST)

TIME: 2 HOURS

DAY/DATE: FRIDAY 07/12/2018

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS: Answer all questions in section A and any other TWO in section B

SECTION A (30 MARKS)

QUESTION ONE

- (a) Describe the production process of ghee from raw milk [5 marks]
- (b) Outline five major ingredients used in production of chocolate ice-cream and their roles [5 marks]

QUESTION TWO

- (a) Explain the major defects in yoghurt processing and suggest ways of their controlling [4 marks]
- (b) Explain the difference between thermisation and pasteurization as milk heat treatment [2 marks]

QUESTION THREE

- (a) Explain major reasons why you should recommend spray drying technique during production of whole milk powder [4 marks]
- (b) State four characteristics of starter culture [2 marks]

QUESTION FOUR

- (a) State the differences between natural yoghurt and 'mala' [4 marks]
- (b) Describe the production of condensed milk [4 marks]

SECTION B (40 MARKS)

QUESTION FIVE

- (a) Discuss the production process of cheddar cheese and the principle behind it [15 marks]
- (b) Describe various ways in which quality milk may be produced at the farm level [5 marks]

QUESTION SIX

- (a) Discuss six factors of fouling during milk pasteurization [12 marks]
- (b) Explain eight factors that affect milk composition [8 marks]

QUESTION SEVEN

- (a) Discuss various ways in which whey is processed into different products [12 marks]
 - (b) Describe the process production of anhydrous milk fat from raw milk [8 marks]
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