TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN FOOD TECHNOLOGY AND QUALITY ASSURANCE

AFS 2103 : FOOD ENGENEERING

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

DATE: Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

a) Explain Highlight the benefits of sorting foods. **(2marks)**

b) Distinguish between cleaning and grading of raw materials **(2marks)**

c) Describe the drive systems for trucks used in material handling **(2marks)**

d) Highlight geometric factors effect on processing suitability index of raw materials **(4marks)**

e) Outline the hygienic design requirements in food plant with regards to
   a. Floors **(2marks)**
   b. Walls **(2marks)**

f) Highlight four ways of increasing effectiveness of soaking as a washing method. **(4marks)**

g) Describe asphyxia, and how its managed **(4marks)**

h) Explain the importance of good ventilation and lighting in food premises **(4marks)**

i) Highlight four desired characteristics for food contact surfaces **(4marks)**

j) Explain the importance of temperature and humidity control in food storage **(4marks)**

Question TWO

a) With aid of diagram describe the discharge system in dilute phase conveying **(6marks)**
b) Explain hygienic considerations in the design and layout of processing vats **(9marks)**

Question THREE

a) discuss storage control needs for fresh Fruits and vegetables **(9marks)**
b) explain modified atmosphere storage **(6marks)**

Question FOUR

a) discuss the following cleaning methods
    a. Spray washing **(8marks)**
    b. Fluming **(4marks)**
    c. Asphiration **(3marks)**

Question FIVE

a) Discuss the considerations in hygienic concerns in plant construction in regards to
    i. fittings of pipe systems **(4marks)**
    ii. Water and drainage system **(3marks)**
b) Highlight four food storage conditions of importance **(8marks)**