



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN FOOD TECHNOLOGY AND QUALITY ASSURANCE

AFS 2101: FOOD MICROBIOLOGY 1

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) Define the following terms
 - i. Intrinsic factors (2marks)
 - ii. Extrinsic factors (2marks)
 - iii. Optimal growth temperature (2marks)
 - iv. Favism (2marks)
 - v. Food spoilage (2marks)
 - vi. D-Value (2marks)
- b) State **Eight** causes of disturbances in the gastrointestinal tract resulting from ingestion of food (8marks)
- c) Differentiate food poisoning and food infection (4marks)
- d) State ANY **Six** importance's of microorganisms in food technology (6marks)

Question TWO

- a) Based on temperature, explain **THREE** groups of microorganisms (5marks)
- b) State and explain the radiation processing of food products (8marks)

- c) Explain ANY **Two** factors that affect the efficiency of antibiotics and disinfectants (2marks)

Question THREE

Discuss Staphylococcus food poisoning under the following

- a) The disease (4marks)
b) Foods involved (4marks)
c) Conditions necessary for outbreak (4marks)
d) Prevention of the outbreak (3marks)

Question FOUR

Discuss the following methods used in controlling microbial growth

- a) Filtration (2 marks)
b) High temperatures (6 marks)
c) Low temperatures (2 marks)
d) Dehydration (2 marks)
e) Radiation (3 marks)

Question FIVE

- a) Define the following terms used in radiation
i. Radappertization (2 marks)
ii. Radicidation (3 marks)
iii. Radurization (3 marks)
b) Explain ANY **Seven** primary sources of microorganisms (7marks)