

4



CRAWFORD UNIVERSITY

Faith City, Igbesa, Ogun State.

2016/2017 RAIN SEMESTER EXAMINATIONS

COLLEGE: NATURAL AND APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

PROGRAMME: MICROBIOLOGY

COURSE CODE AND TITLE: MCB 412 – FOOD MICROBIOLOGY

UNITS: 2

TIME: 2 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS.

1 In Nitrogen cycle, ammonia is oxidized to nitrite by _____ (1). *Campylobacter* bacteria are mostly found in _____ (2) and _____ (3). A bacterium that is mostly found in refrigerated fresh products is called _____ (4). *Aeromonas* bacteria normally inhabits the _____ (5) and some are fish pathogens. Raw milk, poultry products and fecal matter are the common sources of _____ (6) bacteria. *Arcobacteria* grow well at _____ °C (7) and are aerotolerant. The genus of *Bacillus* that contain only two pathogens are _____ (8) and _____ (9). Atmospheric nitrogen is fixed by many microorganisms such as *Rhizobium*, *Clostridium* and _____ (10) in Nitrogen cycle. (15mks)

2 (a) Write a note on "Genetically Modified Food"

(b) Name the three gram-positive spore forming bacteria that cause food poisoning.

(c) What are food additives? (15mks)

3.(a) Discuss HACCP?

(b) In the development and execution of an HACCP system, briefly define the following terms and concepts:

(i) Critical Control Point (ii) Corrective action (iii) Deviation (iv) Hazard (v) Monitoring

(c) Identify the three variations of beer. (15mks)

4.(a) Describe the process of wine fermentation?

(b) Compare and contrast the following: Dry wine, Sparkling wine and Sweet wine. (15mks)

5.(a) List and discuss the intrinsic parameters of foods that affect microbial growth.

(b) What is Food Preservation?

(c) Name different modern food preservation methods. (15mks)

6. (a) Discuss the beneficial effects of Microorganisms in food

(b) Draw the annotated generalized scheme for microbiological examination of food. (15mks)