



CRAWFORD UNIVERSITY

FAITH CITY, IGBESA, OGUN STATE

2022/2023 RAIN SEMESTER EXAMINATIONS

COLLEGE: NATURAL AND APPLIED SCIENCES

DEPARTMENT: BIOLOGICAL SCIENCES

PROGRAMME: BIOCHEMISTRY

COURSE CODE: BCH 420

COURSE UNIT: 2

STATUS: ELECTIVE

COURSE TITLE: INDUSTRIAL BIOCHEMISTRY

INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS. **TIME ALLOWED:** 2 HOURS

1 Explain briefly the industrial uses of enzyme in any THREE (3) of the following areas:

(i) Food industry (ii) Leather industry (iii) Photography (iv) wine industry [15 marks]

2 Discuss in details the industrial uses of microorganisms. [15 marks]

3 (i) Explain the different phases of the bacterial growth curve using the appropriate graphical approach. [10 marks]

(ii) What is the generation time of bacteria population that increases from 40,000 to 40,000,000 cells in nine hours of growth? [5 marks]

4 Discuss the physical and chemical agents used to control microbial growth. [15 marks]

5 Explain concisely Industrial fermentation and highlight its application. [15 marks]

6 Write an essay on the industrial application of any TWO (2) the following: [7.5 marks each]

(i) Citric acid

(ii) Aspartame

(iii) Monosodium Glutamate (MSG)