



CRAWFORD UNIVERSITY

FAITH CITY, IGBESA, OGUN STATE

2021/2022 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. [15 marks]

- 2 Discuss in details the industrial application 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 80,000 to 80,000,000 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: [15 marks each]
 - (i) Citric acid
 - (ii) Aspartate
 - (iii) Monosodium Glutamate (MSG)