



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER SPECIAL/ SUPPLEMENTARY EXAM

FOR THE DEGREE OF BACHELOR OF SCIENCE

COURSE CODE: SBL 412

COURSE TITLE: ETHICS AND RISKS IN BIOTECHNOLOGY

DATE: 12TH JANUARY 2022 TIME: 2.00 – 4.00 PM

INSTRUCTIONS TO CANDIDATES

Answer question **ONE** [1] and **ANY** other **TWO** [2] questions

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over 

KIBU observes ZERO tolerance to examination cheating

Question 1

a). Define the following terms as used in physiology

- i). Biosafety (2 marks)
- ii). Genetic Engineering (3 marks)
- iii). Bioethics (3 marks)
- iv). Biorisk (2 marks)

b). State five points to consider in the design and submission of protocols for the transfer of recombinant nucleic acid molecules into human research participants (5 marks)

c). Explain the biological containment of GMO plants (5 marks)

d). what are the ethical issues that surround cloning as a new technology (5marks)

e). State some of the benefits of genetically modified plants (5marks)

Question 2

Gene therapy is considered to be the newest frontier in the battle against disease. What are the major ethical concerns for the implementation of such a procedure? (20marks)

Question 3

Explain the rationale of standard assays in biotechnology (20marks)

Question 5

Describe the risks of genetically modified organisms (20marks)

Question 5

Discuss the ethics and risks of recombinant DNA technology (20marks)