



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
TECHNOLOGY IN INDUSTRIAL MICROBIOLOGY AND
BIOTECHNOLOGY
BTMBT

SBT 2436 : ETHICS AND RISK OF BIOTECHNOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATION

OCTOBER 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **FIVE** questions

Answer question **ONE** (compulsory) and any other **TWO** questions

Question ONE

- a) Define the following terminologies
- | | |
|---------------------------------------|---------|
| (i) Risk | (1mark) |
| (ii) Exposure assessment | (1mark) |
| (iii) Risk Characterization | (1mark) |
| (iv) Unexpected serious adverse event | (1mark) |
- b) Describe the risks of cloning. (6marks)

- c) Briefly discuss the bioethics in human diagnostics **(6marks)**
- d) Describe any FIVE special practices recommended for biosafety level four (BLA) containment conditions **(5marks)**
- e) Describe the classifications of biological agents on the basis of hazard. **(4marks)**
- f) Eugenics is a controversial discipline. Explain. **(5marks)**

Question TWO

Discuss ethical concerns regarding the practice and possibilities of human cloning. **(20marks)**

Question THREE

- a) Discuss ethical issues related to development of genetically modified organisms (GMOs) **(15marks)**
- b) Explain why different groups in society have different views about the use of recombinant DNA (rDNA) technology **(5marks)**

Question FOUR

Discuss the processes of risk analysis associated with biotechnological products. **(20marks)**

Question FIVE

As a researcher in a molecular cloning laboratory, explain the factors you would consider during ethical reasoning. **(20marks)**