



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
BIMBT 10M

SBT 2329: PROTEIN BIOTECHNOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATION

FEBRUARY 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **FIVE** questions

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

Question ONE

- List **FIVE** advantages of baculovirus infected insect cell expression system **(5marks)**
- Explain the difference between homologous and heterologous proteins **(4marks)**
- Describe **THREE** recombinant pharmaceutical products that have radically improved human health **(6marks)**
- Highlight the benefits of using *Saccharomyces cerevisiae* over bacteria as a cloning host **(3marks)**
- Name **THREE** strains of *Bacillus* commonly used as expression system **(3marks)**
- Describe **TWO** possible strategies for producing transgenic plants **(4marks)**
- Describe **TWO** possible strategies for producing transgenic plants **(4marks)**
- Name **FOUR** transgenic annuals used for production of recombinant proteins **(4marks)**

Question TWO

Discuss the advances made in the production of industrial enzymes rising protein engineering and recombinant DNA technology **(20marks)**

Question THREE

Describe the different compounds of lactice dehydrogenate (LDH) that are used for diagnosis **(20marks)**

Question FOUR

Discuss the economic benefits of using *E.Coli* as cloning hosts **(20marks)**

Question FIVE

Describe FIVE protein contaminants associated with recombinant proteins produced using *B.Subtilis*. **(20marks)**