



KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF THE
DEGREE OF DOCTOR OF PHILOSOPHY IN SCIENCE IN BIOMEDICAL SCIENCES
FIRST SEMESTER, 2021/2022
(FEBRUARY - JUNE, 2022)

DPBS 921: NANOBIO TECHNOLOGY

STREAM: Y1 S1

TIME: 3 HOURS

DAY:

DATE:

INSTRUCTIONS:

- 1. Do not write anything on this question paper.***
- 2. Answer question ONE (Compulsory) and any other TWO questions.***

QUESTION ONE

What is the role of Nanotechnology in vaccine development considering COVID-19. Discuss [20 Marks]

QUESTION TWO

Critically discuss characterization of nanomaterials [20 Marks]

QUESTION THREE

Review in details the key factors and achievements that led to the development of Nanotechnology [20 Marks]

QUESTION FOUR

“Nano-ethics” is a subject still aborning many ethical and social ills that seeks to address the hypothetical ramifications of these theoretical technologies.

- Mention the problems that should be addressed [10 Marks]
- What methodological strategies could you develop to address ethical-social implications? [10 Marks]

QUESTION FIVE

- a. Discuss how Nano is applied in cancer therapeutics [10 Marks]
- b. Discuss the design and applications of bio-sensor [10 Marks]