

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**FOURTH YEAR EXAMINATION FOR THE AWARD OF
BACHELOR DEGREE IN BIOMEDICAL TECHNOLOGY**

BMET 417: IMMUNOLOGY AND IMMUNOCHEMISTRY

STREAMS: Y4S1 Bsc. CHEMISTRY

TIME: 2 HOURS

DAY/DATE : TUESDAY 28 /09/ 2021

8.30 AM – 10.30 AM

INSTRUCTIONS:

- Answer Question One and any other Two Questions
- Do not write on the question paper

QUESTION ONE (30 MARKS)

- a) Briefly describe the cells that originate from the myeloid lineage [6 Marks]
- b) Describe the various humoral barriers to infection that protects the body once the anatomical barriers have been breached. [6 Marks]
- c) Phagocytic cells have a variety of receptors on their cell membranes through which infectious agents bind to the cells. Explain these receptors [6 Marks]
- d) Differentiate between the antigenic determinants recognized by B cells and those recognized by T cells in terms of composition, size and number. [6 Marks]
- e) Antigen-antibody reactions can also be measured by their ability to fix complement. Explain. [6 Marks]

QUESTION TWO (20 MARKS)

- a) With the aid of well labeled diagram, describe the lymphoid organs. [10 Marks]
- b) Describe in detail the basic types of vaccines. [10 Marks]

QUESTION THREE (20 MARKS)

- a. With the help of a well labeled diagram, explain in detail the basic structure of immunoglobulins. [10 Marks]
- b. The MHC gene complex contains a number of genes that control several antigens. Discuss. [10 Marks]

QUESTION FOUR (20 MARKS)

- a) Elucidate the various mechanisms that contribute to the pathogenesis of autoimmune diseases. [10 Marks]
- b) Discuss in details the classical pathway of complement activation. [10 Marks]
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