

“Investing in Africa’s future”

**COLLEGE OF HEALTH,
AGRICULTURE AND NATURAL**



SCIENCES

**NSLS106 : ANATOMY AND PHYSIOLOGY
END OF FIRST SEMESTER FINAL EXAMINATIONS
NOVEMBER-DECEMBER 2021
LECTURER: DR. CHITUKU S
DURATION: 5 HRS**

INSTRUCTIONS

Answer one question

All questions carry equal marks (100) each.

DO NOT repeat material.

Write legibly.

QUESTION 1

Mr John is involved in a road traffic accident and sustained a compound fracture of the femur.

- i. Describe the anatomy and physiology of the structures damaged. 25 marks
- ii. Outline the hormones that influence bone formation. 25marks
- iii. Blood is made up of different components that are oxygen and nutrients from the food we consume. Describe the components of blood and their function. 25 marks
- iv. The results from an HIV infected person showed low white blood cells indicating low immunity. Describe the organs which are involved in the body immunity. (25)

Question 2

- i. Describe the erythrocyte characteristics that contribute to their respiratory function. (5)
- ii. Write notes on following cells basophils, eosinophils, neutrophils. (15)
- iii. A pus swab is brought to the laboratory for isolation of causative microorganism of infection of the middle ear. Describe the structures of the middle ear and the functions that are disrupted. 20 marks
- iv. The dorsal and ventral body cavities are located on different sides of the body and contain different organs. Explain. 10 marks
- v. Compare and contrast venules and capillaries. 10 marks
- vi. In contact dermatitis, the patient has rough, itchy patches of skin present. In atopic dermatitis, the patient develops a temporary rash in response to an irritant. Describe the layers of the skin. 20 marks
- vii. Describe how the flow of blood in the systemic circulation. 20 marks.

Question 3

- i. Pericarditis is the inflammation of the outer layer of the heart. Describe the heart. 25 marks.
- ii. Anatomy is a branch of biology that studies the structure and relationship between body parts. Describe the levels of structural organisation of the body. 25 marks
- iii. Describe the effects of tonicity of a solution on the cells 10 marks
- iv. Compare and contrast arteries and veins 15 marks
- viii. iii. A pus swab is brought to the laboratory for isolation of causative microorganism of infection of the middle ear. Describe the structures of the middle ear and the functions that might be disrupted by the infection. 25 marks

END OF PAPER