



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
ENVIRONMENTAL SCIENCES**

ENS 132: ENVIRONMENTAL BIOLOGY

DATE: Thursday, 18th March 2021

TIME: 11.00 a.m. - 1.00 p.m.

INSTRUCTIONS:

Answer Question ONE and any other THREE Questions

1. a) Differentiate between the following:
 - i) DNA and RNA (2 marks)
 - ii) Eukaryotic and prokaryotic cells (2 marks)
 - iii) Alturistic behaviour and sexual dimorphism (4 marks)
 - iv) Erythrocytes and hepatocytes. (4 marks)
 - b) Define plant and animal morphogenesis. (4 marks)
 - c) Describe the functions of mitochondria and lysosomes. (4 marks)
 - d) Outline five symptoms of viral diseases in plants (5 marks)
 2. a) Discuss the difference between mitosis and meiosis in cell division (10 marks)
 - b) Explain how sex is determined in human beings. (5 marks)
 3. a) Using an illustration describe the four basic stages of mosquito's life cycle (8 marks)
 - b) Give four symptoms of Malaria and discuss three key facts about Malaria worldwide (7 marks)
 4. a) Explain the three categories of carbohydrates giving an example of each. (9 marks)
 - b) Describe the functions of proteins in the body of a living organism (6 marks)
 5. a) Name five stimuli and discuss how they cause a response in plant and / or animals (5 marks)
 - b) Explain the stages of moulting in insects. (10 marks)
-