



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

SCIENCE TECHNOLOGY / LABORATORY TECHNOLOGY

SUBJECT: Biology

**PAPER NO: 360/13/S03
360/18/S03
360/19/S03**

DURATION: 3 Hours

MARCH/APRIL 2021 EXAMINATION

REQUIREMENTS

INSTRUCTIONS TO CANDIDATE

1. Choose and answer ANY FIVE (5) questions.
2. Each question carries 20 marks.

This paper consists of 3 printed pages.

QUESTION 1

- a) Compare Prokaryotes and Eukaryotes. (8 marks)
- b) i) Explain the Binomial system of nomenclature. (2 marks)
- ii) Give two (2) examples of named organisms using the Binomial system of nomenclature. (2 marks)
- c) Identify the five (5) Kingdoms of living matter. (5 marks)
- d) Describe the structure of the mitochondrion. (3 marks)

QUESTION 2

- a) Distinguish mitosis from meiosis. (4 mark)
- b) Explain the significance of mitosis and meiosis. (4 marks)
- c) Summarise major differences between Telophase I and Telophase II. (4 marks)
- d) Highlight the features associated with the human female uterus. (8 marks)

QUESTION 3

- a) Give two (2) examples of Amino acids and two proteins. (4 marks)
- b) Outline any four (4) functions served by proteins in the body. (4 marks)
- c) Explain the importance of water in the diet. (4 marks)
- d) Discuss the digestion of food in the stomach. (5 marks)
- e) Describe the following conditions:
- i) Diabetes mellitus (1 mark)
- ii) Anaemia (1 mark)
- iii) Kwashiorkor (1 mark)

QUESTION 4

- a) Explain the importance of the following: (4 marks)
- i) Teeth in digestion. (3 marks)
 - ii) The Aseptic technique. (4 marks)
 - iv) Breast feeding a baby. (4 marks)
- b) Discuss the general characteristics of parasites. (4 marks)
- c) Parasite may be transmitted in a number of ways to their hosts. Identify any four (4) routes of entry. (5 marks)

QUESTION 5

- a) Identify five (5) examples of carbohydrates. (5 marks)
- b) Summarise the glycolytic pathway indicating the enzymes involved in each step. (10 marks)
- c) Explain the fate of digested foods after they have been absorbed. (5 marks)

QUESTION 6

- a) Explain sex determination and sex linkage. (4 marks)
- b) Describe the phases of bacterial growth in their order. (8 marks)
- c) Distinguish between the light and dark phases of photosynthesis. (4 marks)
- d) Identify the causative agents of the following diseases:
- i) Tuberculosis
 - ii) Cholera
 - iii) Meningitis
 - iv) Whooping cough (4 marks)