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**BIOLOGY 2**

**0510**

**CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD**

General Certificate of Education Examination

**JUNE 2019**

**ORDINARY LEVEL**

Subject Title	<b>BIOLOGY</b>
Paper No	<b>2</b>
Subject Code No	<b>0510</b>

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**Two hours**

*Answer ALL FIVE questions.*

*All questions carry 20 marks each for your guidance, the approximate mark for each part of a question is indicated in the brackets*

*Being each question on a new page.*

*Give labelled diagram where these will make the answer clearer.*

*You are advised to read carefully through the question paper before you begin your answers.*

*You are reminded of the necessity for good English and orderly presentation in your answers.*

*In calculations you are advised to show all the steps in your working, giving your answer at each stage.*

1. (a) State the chemical composition of the following.
- (i) Proteins
  - (ii) Fats
  - (iii) Carbohydrates
- (3, 3, 3, marks)**
- (b) How do you test for
- (i) the presence of reducing sugar in germinating maize seeds?
  - (ii) the presence of fats in meat?
  - (iii) the presence of proteins in meat?
- (5, 3, 3 marks)**  
**(Total = 20 marks)**
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2. (a) Draw a large and well labelled diagram of an insect pollinated flower. **(6 marks)**
- (b) Distinguish between pollination and fertilization **(5 marks)**
- (c) How is the
- (i) Coconut fruit
  - (ii) Cotton seed
  - (iii) Mango fruit
- Adapted to their various method of dispersal? **(3, 3, 3 marks)**
- (Total = 20 marks)**
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3. (a) State the function of human skeleton. **(5 marks)**
- (b) Make a labelled diagram of a typical synovial joint. **(5 marks)**
- (c) What is
- (i) Long-sightedness?
  - (ii) Astigmatism?
- (2, 3 marks)**  
**(Total = 20 marks)**
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4. (a) Define the following terms:
- (i) Monohybrid cross.
  - (ii) Mutation
  - (iii) Homozygous
- (3, 3, 2 marks)**
- (b) State the causes of mutations. **(4 marks)**
- (c) In a certain variety of squirrels, the fur colour is either grey or black. When a pure breeding black squirrel is crossed with a pure breeding grey squirrels, all the offspring produced had grey fur. When these offspring were allowed to interbreed, the following results were obtained; 428 squirrels with grey fur and 152 squirrels with black fur.

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Using appropriate symbols and diagrams explain the genetics of these crosses. **(6 marks)**

(d) How does bread mould reproduce asexually? **(2 marks)**

**(Total = 20 marks)**

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5. (a) Define the following terms as used in genetic engineering:

(i) Restriction enzyme.

(ii) Recombinant DNA.

(iii) Cloning.

**(3, 3, 3 marks)**

(b) How are cereal plants important to mammals?

**(6 marks)**

(c) Describe how atmospheric Nitrogen is made available for plant use.

**(5 marks)**

**(Total = 20 marks)**

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