

FORM FOUR BIOLOGY 2020

Corona holiday

1. (a) State the conditions necessary for seed germination and briefly describe how the facilitate germination.  
(b) Differentiate epigeal germination from hypogeal germination.  
(c) Outline four factors for body deterioration.

2. (a) State Mendel's first law.  
(b) Explain the following.

- i) Sex linked inheritance
- ii) Sex limited character.
- iii) Heredity.

(c) In the experiment done in the laboratory, pure-breed black fur mouse (male) was mated with a pure-breed brown fur mouse (female). The gene for black fur colour was dominant over the gene for brown fur colour. Use crosses to show the possibilities of the results in the first filial generation.

- 3 (a) (i) Define the term mitosis  
(ii) Outline the significance of mitosis to organisms
- (b) Define the following arms and give an example of organism where each takes place.  
(i) Complete metamorphosis  
(ii) Incomplete metamorphosis  
(iii) Ecdysis
- 4 (a) State three similarities and three differences between class insecta and

Class Arachnida similarities.

**Similarities**

- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_
- (iii) \_\_\_\_\_

**Differences.**

<b>Class insect</b>	<b>Class Arachnide.</b>
(i)	
(ii)	
(iii)	

(c) State three ways in which arachnida and insects are adopted for survival on land.

4 Explain the evidences of organic evolution