

KENYA HIGH SCHOOL

POST MOCK EXAMINATIONS

BIOLOGY PAPER 3 FORM 4

2021

Kenya Certificate of Secondary Education

1. (a) You are provided with a solution L. Using the reagents provided; determine the food compounds in L. Fill in the table below.

FOOD COMPOUND	PROCEDURE	OBSERVATION	CONCLUSION

- (b) Place 10mls of solution L in a visking tubing. Tie both ends and place it in 50mls of distilled water contained in a beaker. leave the set up for 20 minutes and make observations.

(i) Observations.

(1mark)

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(ii) Account for the observation in b (i) above.

(2marks)

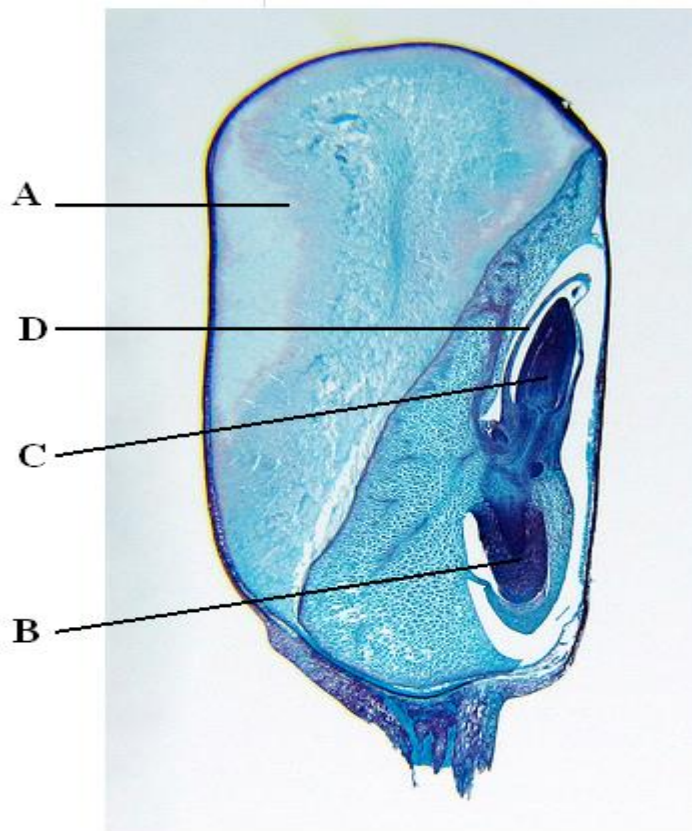
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(iii) Give the equivalent of a visking in the bodies of living organisms.

(1mark)

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2. Study the photomicrograph of the longitudinal section of a maize fruit below and answer the questions that follow.



(a) (i) Name the parts labelled A, B, C and D.

(4marks)

A

.....

B

.....

C

.....

D

.....
(ii) Give the role played by A and D.

(2 mark)

A

.....
.....
D

(b) (i) Name the type of germination exhibited by maize grain.

(1 mark)

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(ii) Place the organisms from where the photomicrograph was obtained into its

Kingdom

Division

Class

(3marks)

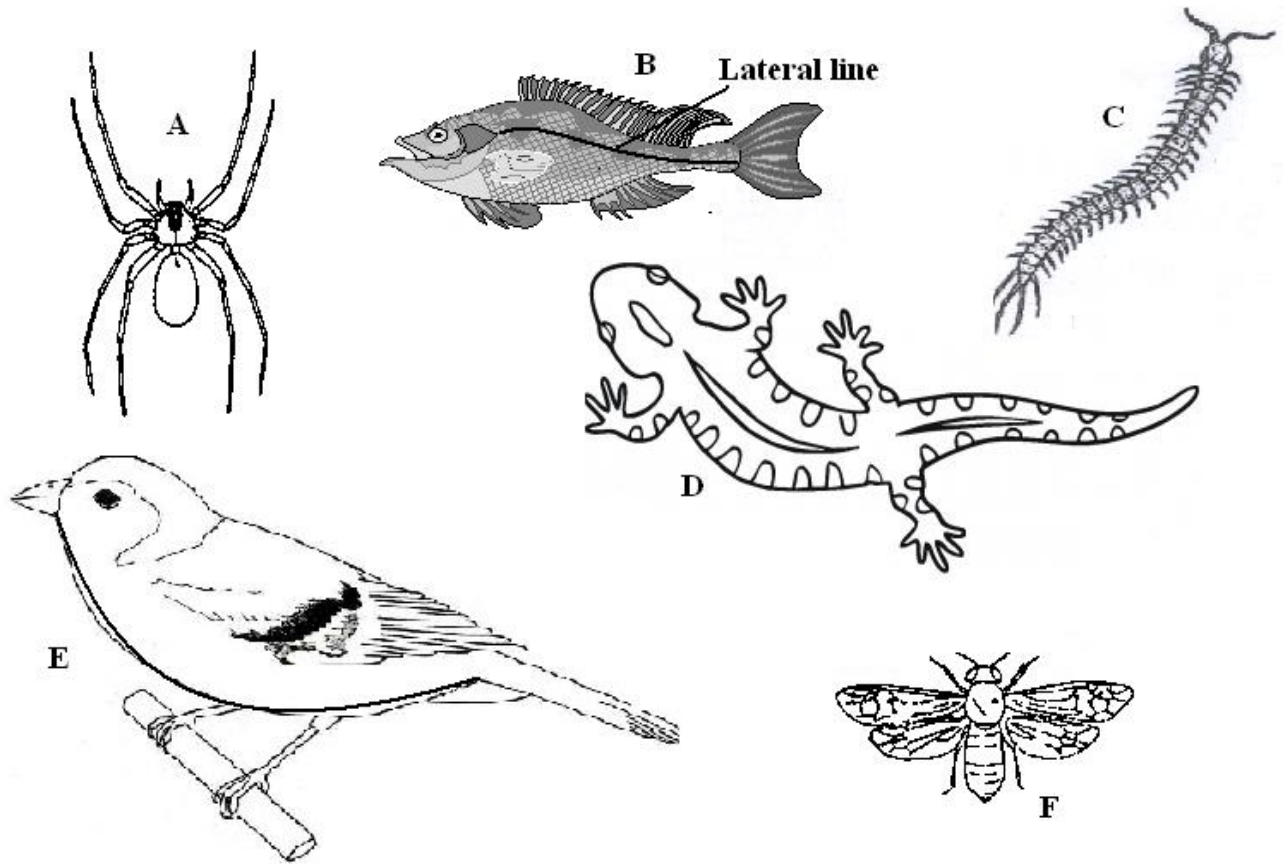
(iii) State three characteristics of members of the class identified in b (ii) above

(3marks)

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(c) Give one reason why the maize grain is classified as a fruit.

(1mark)

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3. Study the organisms drawn below and answer the questions that follow.



(a) Use the dichotomous key below to identify the class the organisms belong to. (12 marks)

1. (a) Phylum Chordata go to 2
 (b) Phylum arthropoda go to 3
2. (a) Has scales on the body go to 4
 (b) Has no scales on the body Mammalia
3. (a) Has cephalothorax Arachnida
 (b) Has no cephalothorax go to 5
4. (a) Has fins Pisces
 (b) Has no fins go to 7
5. (a) Has three pairs of legs Insecta
 (b) Has more than three pairs of legs go to 6
6. (a) Two pairs of legs per segment Diplopoda
 (b) One pairs of legs per segment Chilopoda
7. (a) Has feathers Aves
 (b) Has no feathers go to 8
8. (a) Has a tail Reptilia
 (b) Has no tail Amphibia

Specimen	Step followed	Identity
A		
B		
C		
D		
E		
F		

- (b) If the actual length from the tip of the mouth to the tip of the tail of the specimen B is 100mm, calculate the magnification. (2marks)

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