

# KAPSABET HIGH SCHOOL

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TRIAL 1 EXAMINATION 2025



## BIOLOGY

231/3

PAPER 3

TIME: 1¼ HOURS

NAME.....

INDEX NO ..... SIGN.....

### CONFIDENTIAL

**Each candidate shall require the following**

- i) 10ml hydrogen peroxide solution*
- ii) Specimen K (Irish potato)*
- iii) Mortar and a pestle*
- iv) Four test tubes*
- v) Distilled water in a wash bottle*
- vi) A scalpel*
- vii) Means of heating (source of heat)*
- viii) Test tube holder*

# KAPSABET HIGH SCHOOL



TRIAL 1 EXAMINATION 2025



## BIOLOGY

NAME.....

SIGN..... INDEX NO.....

ADM NO.....

*Kenya Certificate of Secondary Education*

### INSTRUCTIONS

Answer all questions in spaces provided

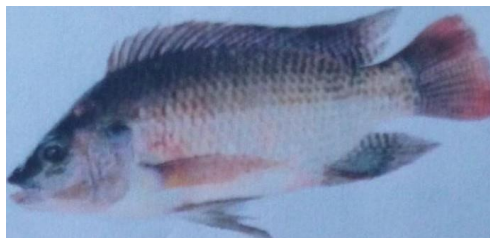
### EXAMINER'S USE

QUESTIONS	MAX.MARKS	CAND.SCORE
1	9	
2	13	
3	18	
TOTAL	40	

1. Study the organisms below



C



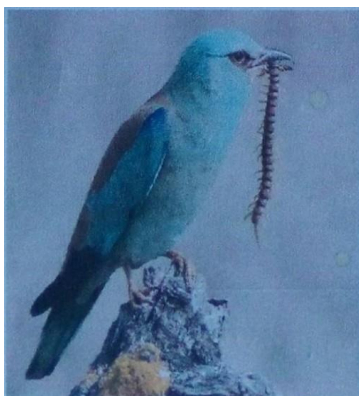
D



E



F



a) Complete and use the key below to identify the organisms (2mks)

1. a) Organism with endoskeleton .....go to 2
1. b) .....go to 4
2. a) Has scales on the body .....go to 4

- 2 b) Has no scales on the body.....mammalian
- 3a) Has cephalothorax .....Arachnida
- 3b) Has no cephalothorax .....go to 5
- 4a).....Pisces
- 4b) Has no fins .....go to 7
- 5a) Has three pairs of legs .....Insect
- 5b) Has more than three pairs of legs .....go to 6
- 6a) Two pairs of legs per segment .....Diplopoda
- 6b) One pair of legs per segment .....Chilopoda
- 7a) Has feathers ..... Aves
- 7b) Has no feathers .....go to 8
- 8a) Has a tail .....Reptilia
- 8b) Has no tail .....Amphibia

**b) Identify the organisms above using the completed key above (6mks)**

<b>Specimen</b>	<b>Steps followed</b>	<b>Identity</b>
<b>A</b>	_____	_____
<b>B</b>	_____	_____
<b>C</b>	_____	_____
<b>D</b>	_____	_____
<b>E</b>	_____	_____
<b>F</b>	_____	_____

**c) Name the phylum in which specimens C, E and F belong to. (1mk)**

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**d) Give three reasons for your answer in (c) above (3mks)**

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**e) Name one feature that is common in organisms B, E and D (1mk)**

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2. You are provided with the following;

- i) Hydrogen peroxide
- ii) Specimen K
- iii) Pestle and mortar
- iv) 4 test tubes
- v) A scalpel
- vi) Source of heat
- vii) Test tube holder

Using a scalpel, obtain three peeled cubed from specimen K measuring about 1cm x 1cm x 1cm. For the first cube, you are required to boil it in water for five minutes. For the second cube, you are required to crush it into a paste. For the last cube, you are required to use it as it is.

Label three test tubes A, B and C and put 2ml of hydrogen peroxide in each test tube. To test tube A, add the boiled cube and record your observation.

To test tube B. add the crushed paste and record your observation.

To test tube C, add the unboiled cube remaining and record your observation.

a) Complete the table below (3mks)

Test tube	Observation
A	
B	
C	

b) Explain your observation in test tube A (1mk)

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c) Between test tubes B and C, in which test tube was the volume of foam produced the highest?  
Explain (3mks)

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.....  
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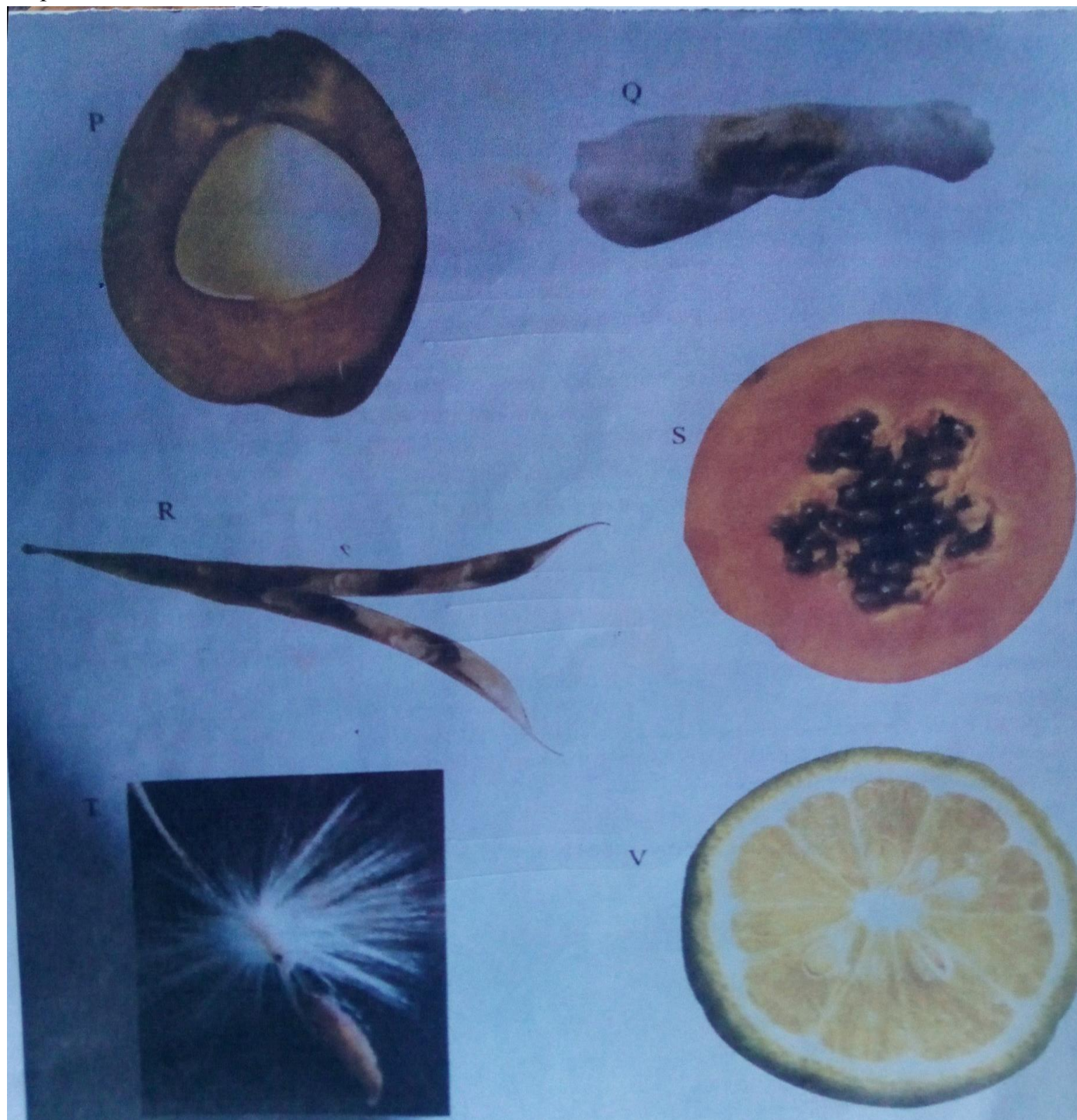


d) Apart from temperature, state two other factors that affect the rate of enzyme controlled reactions (2mks)

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3. The photographs below shows specimen of different types of fruits. Examine them and answer the questions that follow.



**a) State four differences between specimen P and R (4mks)**

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**b) State the types of gynoecium and placentation of specimen P, S and V (4mks)**

**i) Specimen P** Gynoecium .....Placentation .....

**ii) Specimen S** Gynoecium .....Placentation.....

**iii) Specimen V** Gynoecium .....Placentation .....

**c) In the table below name the mode of dispersal for each specimen and the features that adapt the specimen to its mode of dispersal. (6mks)**

Specimen	Mode of dispersal	Adaptive features
P		
Q		
R		
S		
T		
V		

**d) Draw and label a plan diagram of specimen V (4mks)**