



# Atika School

Free Online Academy

Name ..... Index Number .....

School ..... Class .....

Candidates Signature..... Date .....

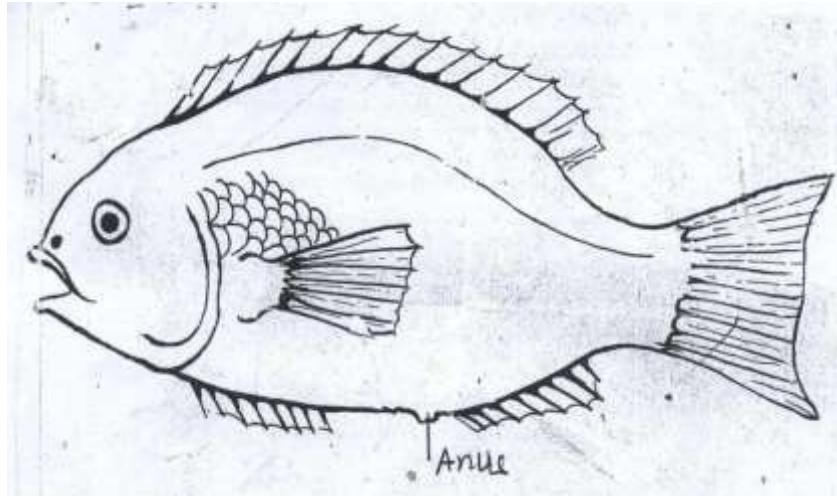
## Instructions to candidates

- Write your name, school and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- Answer all questions in this paper in the spaces provided.
- You are required to spend the first 15 minutes of the 1¼ hours allowed for this paper reading the paper carefully before commencing your work
- Additional pages must **not** be inserted.
- This paper consist of 7 printed pages.
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer the questions in English.

## For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1	13	
2	12	
3	15	
<b>Total Score</b>	<b>40</b>	

1. The photograph below is of a certain organism. Study it and answer the questions that follow.



Using observable features only

a) (i) Name the class to which the organism belongs (1mk)

.....  
(ii) Give **two** reasons for your answer in (a)(i) above. (2mks)

.....  
.....

(b) What term is used to describe the shape of the organism in the photograph? (1 mk)

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(c) Measure in millimeters the length of the:

(i) specimen in the photograph from the tip of the mouth to the tip of the tail

Length-----mm (1 mk)

(ii) tail from the anus to the tip of the tail

Length-----mm (1 mk)

(iii) Using the measurement in (c) (i) and (ii) above, calculate the tail power  
(3 mks)

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d) (i) Label on the photograph the parts that enable the specimen to balance,  
brake and change direction.

(2 mks)

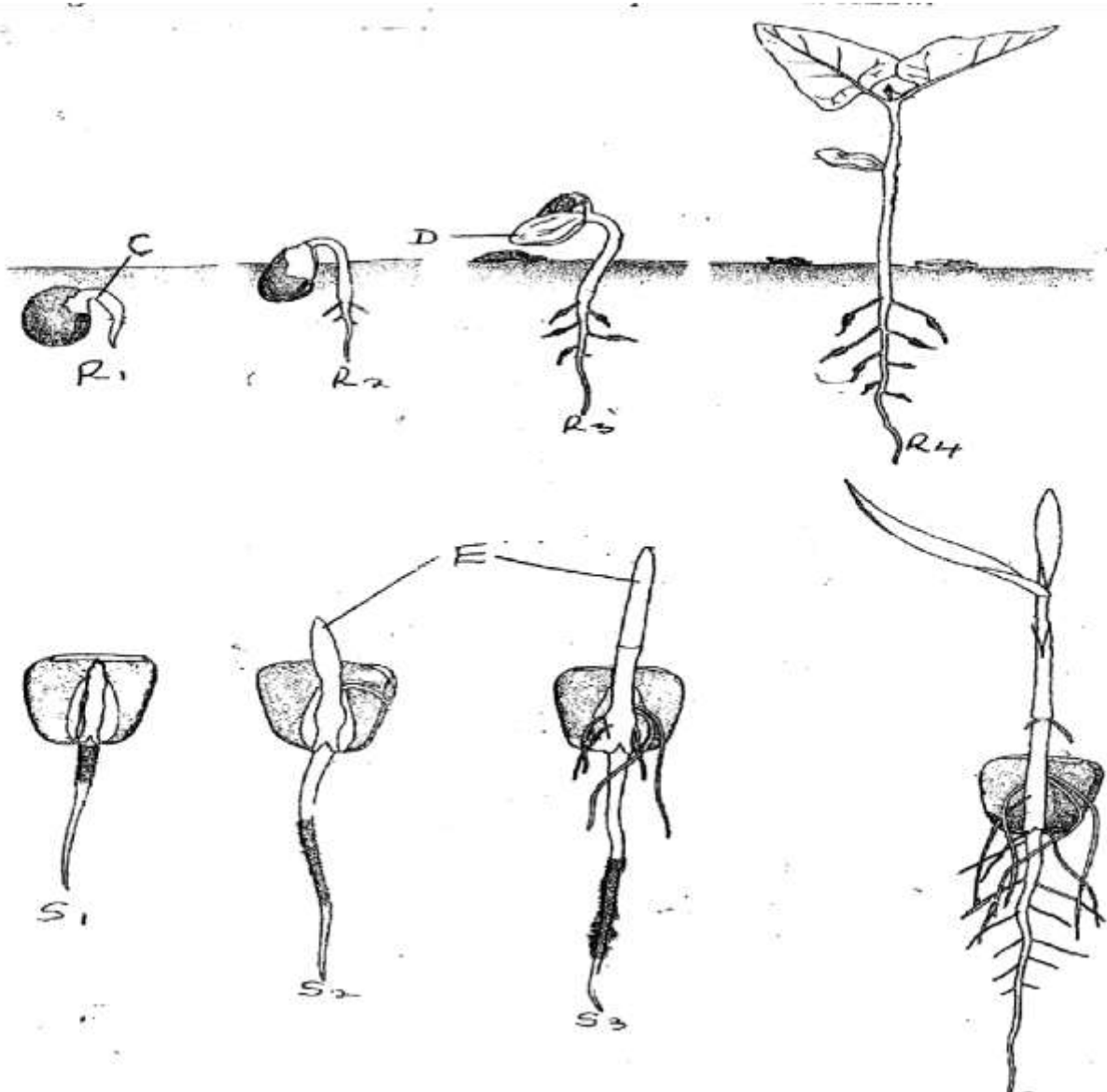
(ii) Name the parts of the specimen on the photograph that prevent it from  
rolling and yawing. (3mks)

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2. Examine the seedlings below and use them to answer the question that follow

a) (i) Name the parts labeled C and D.

C: ..... (1mk)



D. .... (1mk) (ii) State the importance of part E during germination. (1mk)

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.....  
b) The R series of seedlings form swellings on their roots later in its life:

(i) What is the name of the swelling:

.....  
(1mk)

(ii) Name the organisms that would be found in the swellings  
(1mk)

.....  
(ii) Explain the relationship that exists between the named organisms and the plant.  
(1mk)

.....  
(c) With a reason, name the type of germination shown in the R series of the seedlings.

(ii) Type of germination .....  
(1mk)

(ii) Reason ..... (1mk)

.....  
(d) State any two external factors necessary for germination. (2mks)

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3. You are provided with specimens labelled **E**, 0.01% DCPIP and 0.1% Ascorbic acid. Examine specimen **E**.

a) (i) What part of a plant is specimen **E**? (1mk)

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(ii) Give a reason for your answer in (a)(i) above. (1mk)

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.....

b) Cut a transverse section through specimen **E**. Draw and label one of the cut surfaces. (4mks)

(i) State the magnification of your drawing. (1mk)

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.....

(ii) State the type of placentation of specimen **E**. (1mk)

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c) Name the agent of dispersal of specimen **E**. (1mk)

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d) State how specimen **E** is adapted to its mode of dispersal. (2mks)

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e) (i) To 1cm<sup>3</sup> of DCPIP in a test tube, add 0.1% solution of ascorbic acid drop by drop until the colour of DCPIP disappears. Shake the test tube after addition of each drop. Record the number of drops used. (1mk)

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(ii) Squeeze out the juice from specimen E into a beaker. Filter and discard the residue. To another 1cm of DCPIP in a test tube add the juice from specimen E drop by drop, shake the test tube after addition of each drop until the colour of DCPIP disappears. Record the number of drops used (1 mk)

(iii) From the results obtained in (e)(i) above, calculate the percentage of ascorbic acid in the juice obtained from specimen E. Show your working.(2mks)

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(iv) State one factor that would influence the accuracy of the results (1 mk)

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