BONDO SUB-COUNTY JOINT EVALUATION TEST (BSJET)

BIOLOGY
PAPER 3
(PRACTICAL)
1¾HOURS

2024 JULY/AUGUST EXAMINATIONS

Kenya Certificate of Secondary Education (K.C.S.E.)

Name……. **Adm No…….**

Stream……. **Date …….**

Sign .....

BIOLOGY
PAPER 3
(PRACTICAL)
1¾HOURS

INSTRUCTIONS TO CANDIDATES
(a) Write your name and index number in the spaces provided above.
(b) Sign and write the date of examination in the spaces provided above.
(c) This paper consists of three questions
(d) Answer all the questions in in the spaces provided

1.(a)You are provided with the following:

- Specimen Y
- Hydrogen peroxide
- 2 test tubes in a test tube rack.
- 2 labels
- 10ml measuring cylinder.
- A scalpel.
- 2 wooden splints.
- 100ml beaker.

Procedure

(i) Label two test tubes **A** and **B**.

(ii) Measure $2cm^3$ of hydrogen peroxide and put in test tube **A**. Repeat the same procedure for test tube **B**.

(iii) Cut a small piece of specimen Y to two smaller pieces using a scalpel. Place one of the pieces in test tube A and retain the other piece for the subsequent procedure for test tube **B**.

(iv) Immediately, introduce a glowing splint into the mouth of the test tube. Record your observations in the table below.

(v) Put the other piece of specimen Y in an empty 100ml beaker then add 50ml boiling water from a hot water bath maintained at 80^0C. Leave the set up for 5 minutes

(vi) Remove specimen Y from the boiling water using a pair of forceps and place in test tube **B**. Immediately, introduce a glowing splint at the mouth of the test tube. Record your observations in the table below.

(a) Record your observations in this table

Test tube	**Observations**	
	On placing specimen Y	**On introducing a glowing splint**
A	(1mark)	(1mark)
B	(1mark)	(1mark)

(b) Explain your observations :.

(i) On placing specimen **Y** on test tube **A** (2marks)

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(ii) On introducing the glowing splint on test **B** (2marks)

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(c) State the role of experimental set up in test tube **B**. (1mark)

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(d) Specimen **Y** is an organ in animals. State its **one** other function apart from the one being investigated above. (1mark)

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(e) You are provided specimen **X**. Make a longitudinal section through one of the specimen X using the scalpel to obtain two halves.

(i) Carefully observe **one** of the halves and make a drawing. on the diagram label the position of the plumule and radicle. (3marks)

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(ii) State **one** internal factor necessary for the germination of specimen **X**. (1 mark)

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(ii) Using a mortar and pestle provided, crush the remaining pieces of **X** while adding water to form a solution. Transfer the solution into a 50ml beaker provided and label as solution **X**. Using the reagents provided, test for the food substance present in solution **X**. (3marks)

FOOD SUBSTANCE	**PROCEDURE**	**OBSERVATION**	**CONCLUTION**

(iv) Under what circumstance is the food present in solution **X** oxidized in the human body (1mark)

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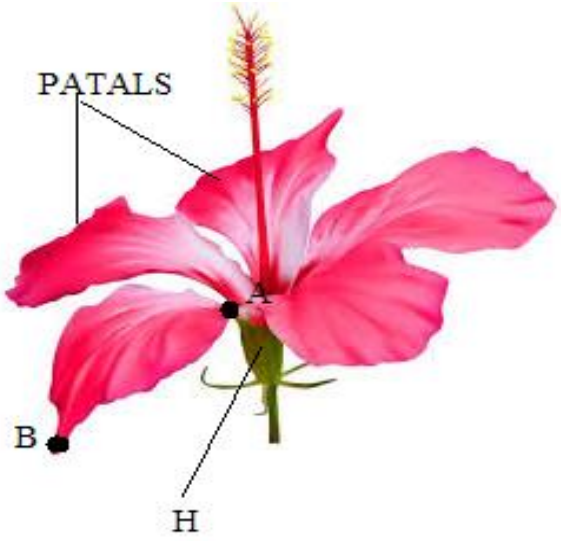
2.Below is a plant organ used in the study of biology. Study it and answer the questions that follow.



(a) Identify the organ above (1mark)

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(b) State the function of the part labeled **H** (1mark)

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……

(c) State the term used to describe the petals. (1mark)

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……

(d) State with a reason the class into which the organ belongs.

Class

……...…...… (1mark)

Reason

……..…….(1mark)

(e) (i) Using observable feature only, name the argent of pollination (1mark)

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……...…….

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

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(f) State the importance of the organ to a plant (1mark)

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(g) Measure the length of the petal from point A to B. (1mark)

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(h) If the actual length between A and B is 5cm, calculate the magnification of the photograph above. (2marks)

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3.(a) Below are photographs of **Venus flytrap** (an insectivorous plant). Study them and answer the questions that follow.

(i) Name **one** major nutrient that is deficient in the soil where the above plant grows.(1mark)

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(ii) Name the type of response shown by plate **C** (1mark)

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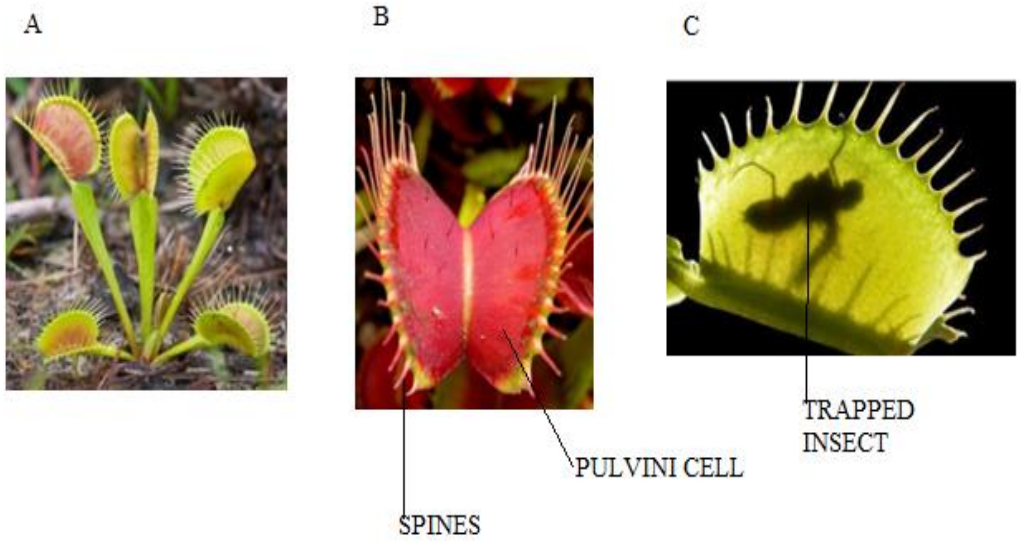

(iii) Describe how the above plant traps the insect (3marks)

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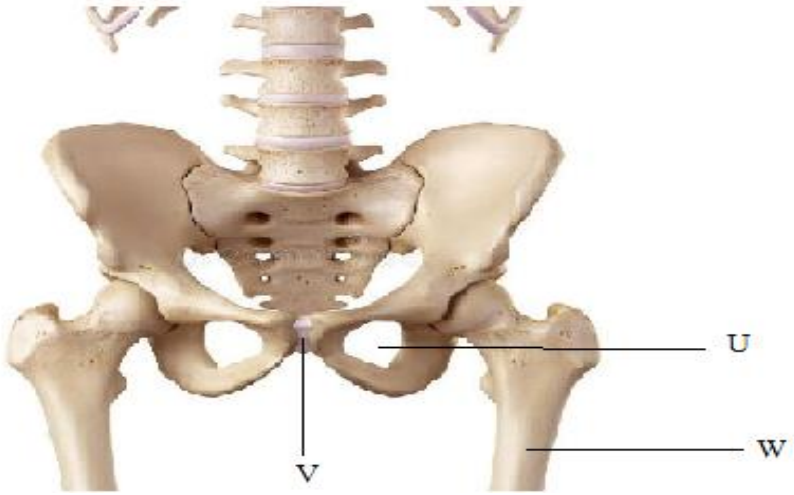
(b) Below is a mammalian skeleton. Study it carefully an answer the questions that follow.

(i) Name bone **W**
(1mark)



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(ii) Name the type joint formed by bone **W** at the distal end. (1mark)

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(c) The part labeled **V** has one major adaptation:

(i) Identify the adaptation (1mark)

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(ii) Explain the importance of the adaptation in (c)(i) above to females (1mark)

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(d) State the function of the part labeled **U** (1mark)

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(e) Distinguish between **pitching** and **rolling** as used in bony fish (1mark)

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