BIOLOGY PAPER 3 (*PRACTICAL*)

END OF TERM 3 – 2024

231/3

TIME: (1¾ HOURS) **FORM 3**

NAME……ADM NO……CLASS……

INSTRUCTIONS TO CANDIDATES:

- Write your name, Admission number and class in the spaces provided
- Sign and write the date of examination in the spaces provided above.
- Answer all questions in the spaces provided in the question paper.
- You are required to spend the first 15 minutes of first hours allowed for this paper reading the whole paper before commencing your work.
- Answers MUST be written on the spaces provided after each question
- Candidates may be penalized for recording irrelevant information and incorrect spelling especially of technical terms.
- **PROVIDE COLOURED PHOTOGRAPHS WHERE SUITABLE**

FOR EXAMINERS USE ONLY QUESTION:

QUESTION	Max Score	Candidate Score
1	14	
2	14	
3	12	
TOTAL SCORE	40	

1. You are provided with solution W, Solid Q, Iodine solution, Benedict's solution, Hydrochloric acid and hot water bath.

a) Using reagents provided carry out tests to determine the food substance present in solution W.

Record the procedure, observation and conclusion in the table below

▪ **Food substance**	**Procedure**	**Observation**	**Conclusion**
½ mk	1mk	1mk	½ mk
½ mk	1mk	1mk	½ mk

b) Label three test tubes as A, B and C. Place 3ml of Solution W into each test tube. Divide solid Q into three equal portions.

- To the test tube A add one portion of solid Q and shake thoroughly
- To the test tube B add the second portion of Solid Q shake thoroughly and heat to boil.
- To the test tube C add the third portion of solid Q, followed by 8 drops of 2M hydrochloric acid and shake to mix.

Place the three set ups into a water bath maintained at 37^{o}c for 40 minutes. Add equal amounts of Benedict's solution to each of three test tubes and heat to boil. Record your observation.

Set up **A** **(1mk)**

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Set up **B** **(1mk)**

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Set up C **(1mk)**

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Account for your observations above. **(3mks)**

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c) Name any other factor that affects the reaction above**.** **(1mk)**

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d) Give a reason why temperature of the water bath was maintained at 37^{o}c **(1mk)**

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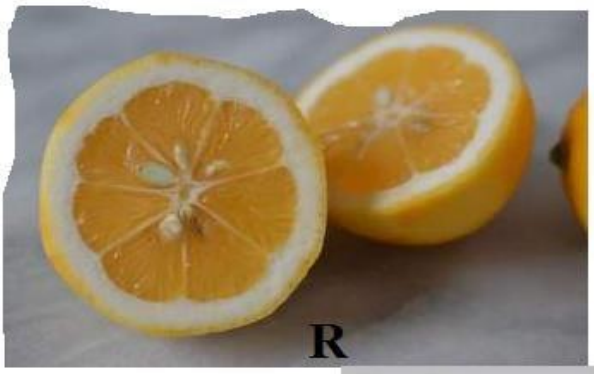
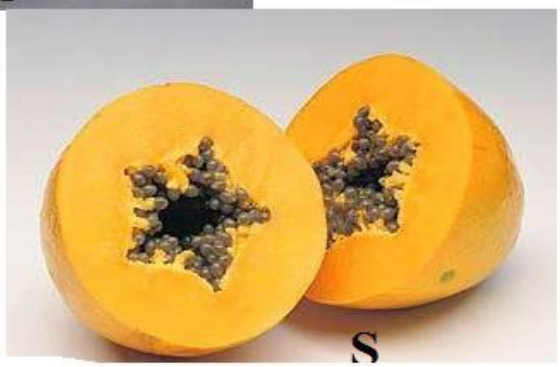
2. The photographs labelled **Q, R** and **S** are sections of some plant parts.



Q



a) Name the type of placentation in the specimens shown in photographs **Q, R** and **S** .With reasons (6 marks)

Fruit	**Placentation**	Reason
Q	1mk	1mk
R	1mk	1mk
S	1mk	1mk

b) Giving a reason in each case, name the mode of dispersal of the specimen in photograph **Q** and **S** **(4marks)**

Q: Mode and Reason

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.....

S: Mode and Reason

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c) What type of fruit is **R.** Give a reason**.** **(2mks)**

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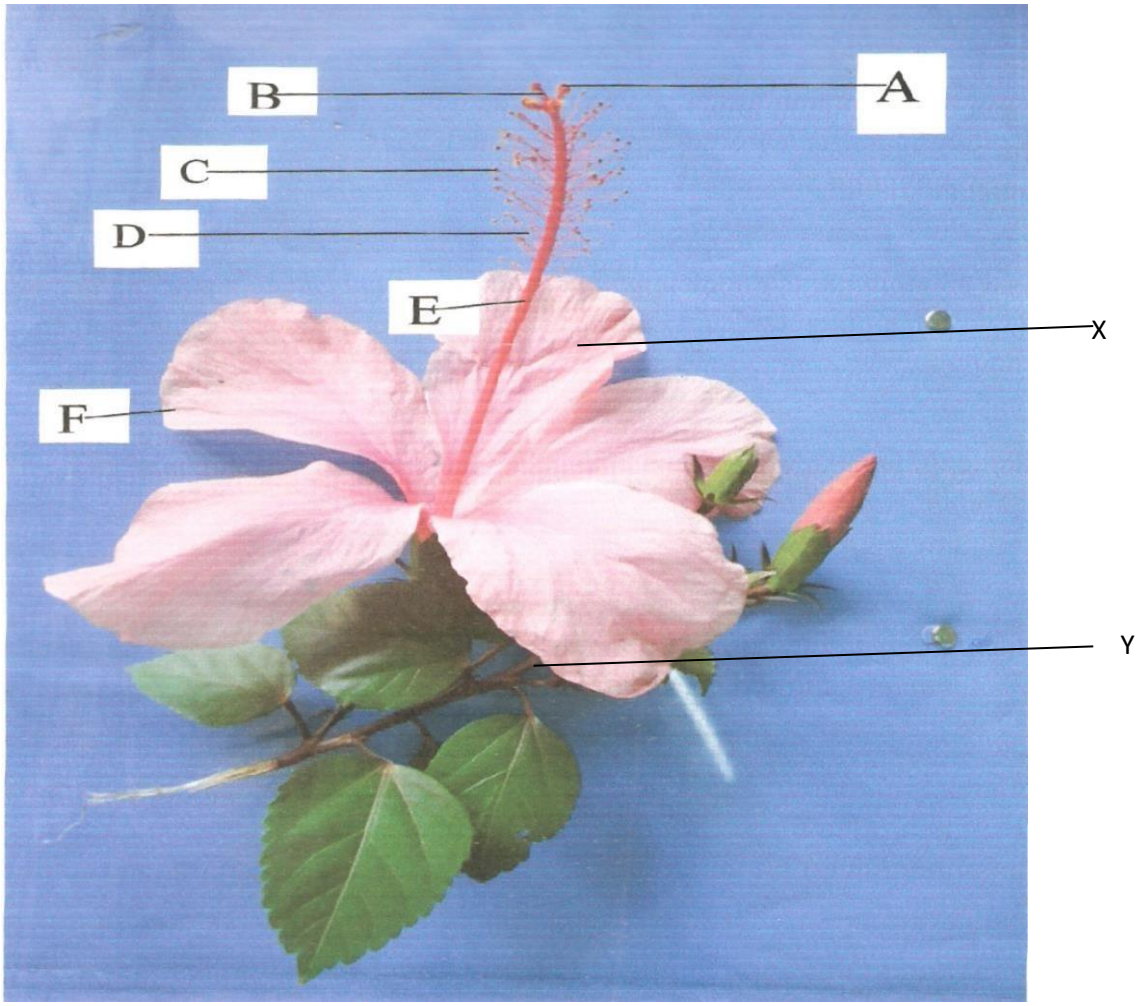
d) With reference to photograph R make a well labelled diagram of the specimen (2 marks)..

3. You are provided with a photograph of a flower of a higher plant.



(a) With reasons, state the class of kingdom Plantae from which the specimen in the diagram was obtained.

Class (1 mark)

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Reasons (2 marks)

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(b) Name the parts labeled **A, E**, and **F.** **(3mks)**

A: ……

E: ……

F: ……

(c) Using observable features state how the specimen shown in the photograph is adapted to its mode of pollination (2 marks).

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(d) Label the structure in the photograph (using letter G) which protects the flower before it blooms (1 mk).

(e) Which letter in the photograph represents structure where the male gametes are produced **(l mk)**

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(f) Calculate the image magnification of the leaf from point X to Y if its actual length was 2cm. show your working **(2mks)**