Name……... Adm No…… Class…….

Index No…….. School…….. Sign ……..

DATE ……..

231/3
BIOLOGY
PAPER 3 (PRACTICALS)
JUNE 2024
TIME: 1 HOUR 45 MINS

MIRROR JET EXAMS 2024

TERM TWO 2024

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

INSTRUCTIONS TO CANDIDATES:

(a) Write your name, index number and school in the spaces provided above.
(b) Sign and write the date of examination in the spaces provided above.
(c) Answer all the questions in the spaces provided.
(d) You are required to spend the first 15 minutes of the 1¾ hours allowed for
(e) This paper reading the whole paper carefully before commencing your work.
(f) This paper has three questions.
(g) Students should check the question paper to ascertain that all the papers are printed as indicated and that no questions are missing.
(h) Candidates should answer the questions in English

FOR EXAMINER'S USE ONLY

Question	Maximum Score	Candidate's Score
1	16	
2	13	
3	11	
Total Score	40	

1. You are provided with three unknown solutions labeled S1, S2 and S3. You are also provided with Benedict's solution and iodine solution, together with other laboratory apparatus.

   (a) Procedure

   i. To about 2ml of solution S1 in a test tube, add an equal amount of Benedict's solution. Shake to mix and then heat the test tube over a Bunsen burner flame.

   ii. Repeat the same step in (i) with solutions S2 and S3

   iii. Record your observations and conclusions in the table given below. (6 mks)

Test tube	Observation	Conclusion
S1		
S2		
S3		

   (b) Based on your observation in (a) above, give the name of a common food substance belonging to the class disaccharides that may be present in S1. (1 mk)

   (c) From the experiment in (a) above, explain how you would carry out a test for someone with diabetes mellitus in a school laboratory. (3 mks)

   (d) (i) To about 2ml of solution S1 in a test tube, add three drops of iodine solution. Shake the tube mix the contents.

   (ii) Repeat the step in d (i) above with solutions S2 and S3.

   (iii) Record your observations and conclusions in the table given below. (6 mks)

Test tube	Observation	Conclusion
S1		
S2		
S3		

2. You are provided with specimen T. Examine it carefully and answer the questions that follow.
   (a) **Name** the sub division to which the plant belongs. Give a reason for your answer. (2 mks)

   (b) **Name** the **class** to which the flower belongs and give **a** reason for your answer. (2 mks)

   (c) Examine one flower with the help of a hand lens and describe the following floral parts.

(i) **Corolla** (3 mrks)

(ii) **Androecium** (3 mrks)

(d) Isolate the carpel of the flower and make a labeled drawing of the same. (3 mrks)

3. The photograph below represents an organism that lives in aquatic environment. Examine it carefully and answer the questions that follow.

(a) (i) Using observable features only, **name the class** to which the specimen belong (1 mk)

(ii) List **two features** on the lateral part of the organism you would use to identify the class apart from the fins. (2 mks)

(b) Briefly describe how the specimen moves in its habitat. (4 mrks)

(c) With reference to the specimen above, state what is meant by the following movements and name the structures that prevent each from occurring.
(i)Pitching (2 mks)

(ii) Rolling (2 mks)