

NAME..... INDEX NO.....

231/3

BIOLOGY

PAPER 3

(PRACTICAL)

TIME: 1¾ HOURS

CANDIDATE'S SIGN.....

DATE.....

CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM – 2015

Kenya Certificate of Secondary Education

BIOLOGY

PAPER 3

(PRACTICAL)

TIME: 1¾ HOURS

INSTRUCTIONS TO CANDIDATES:

- Write your **name** and **index number** in the spaces provided **above**.
- Sign** and **write** the date of examination in the spaces provided **above**.
- Answer all the questions in the spaces provided.
- You are required to spend the first 15 minutes of the 1¾ hours allowed for this paper reading the whole paper carefully before commencing your work.
- Additional papers must not be inserted.
- This paper has **three** questions and pages.
- Candidates may be penalized for recording irrelevant information and for incorrect spelling of technical terms.
- Candidates should answer all the questions in English.

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1	16	
2	12	
3	12	
Total Score	40	

test tubes, a beaker a white tile and these reagents iodine solution and Benedict's solution.

- (a) Using the appropriate reagents, carry out food tests to identify the food substances contained in L. Outline procedure used and record your observation and conclusions in the table below. (6 marks)

Test	Procedure	Observation	Conclusion

Securely tie one end of the visking tubing with the string and place solution L into it until it is about $\frac{3}{4}$ full. Ensure that it is not leaking and tie up the other end securely. Wash away all traces of solution L from the outside of the visking tubing. Place the visking tubing in the beaker and submerge in distilled water. Note the time and allow the set up to stand for at least 30 minutes. After 30 minutes take some of the water from the beaker and carry out similar food tests on it.

- (b) Record your observation and conclusions in table below.

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Test	Procedure	Observation	Conclusion

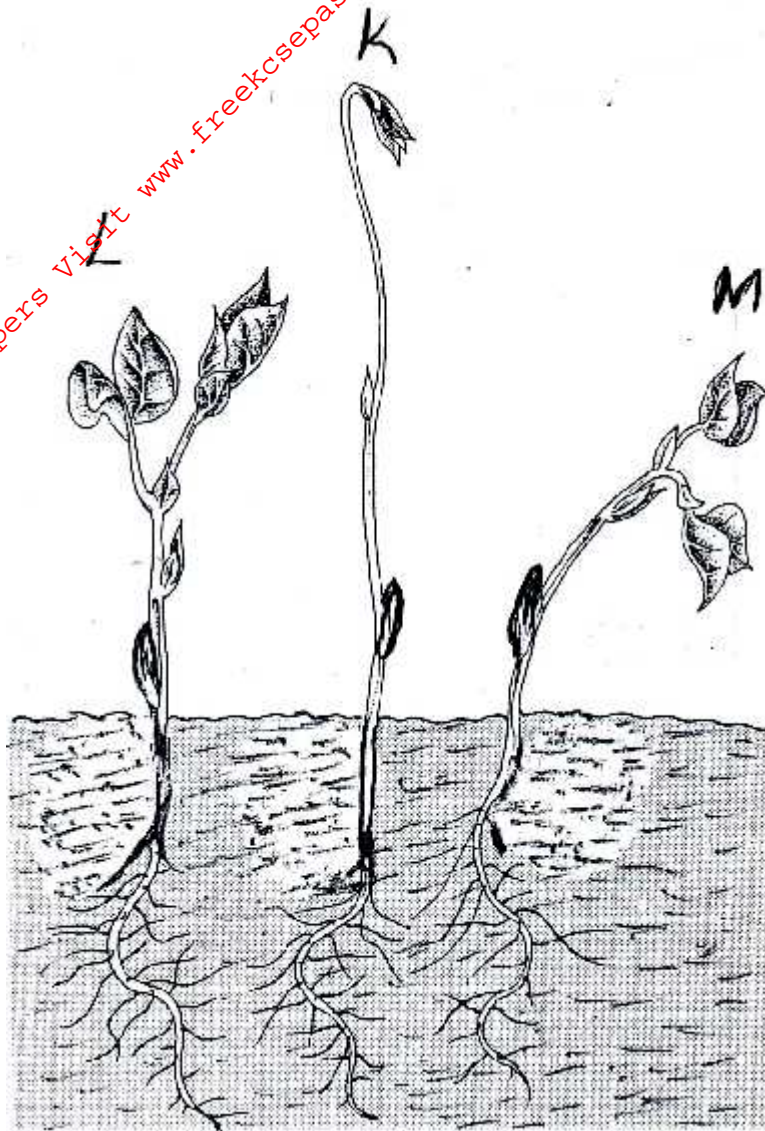
(c) Account for the results obtained (a) and (b) (3 marks)

(d) What physiological process is demonstrated by this experiment? (1 mark)

(e) (i) Name **one** part of the body where a similar process takes place. (1 mark)

(ii) What is the process you have named in e(i) above called? (1 mark)

2. The diagram below **K**, **L** and **M** show seedlings that were grown under different conditions. Examine them and answer the questions that follow.



- (a) Label any **three** parts of the seedling in diagram **L**. (3 marks)

- (b) (i) Name the type of germination exhibited by the seedlings. (1 mark)

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

- (c) State the conditions under which each seedling was grown. (2 marks)

K _____

L _____

M _____

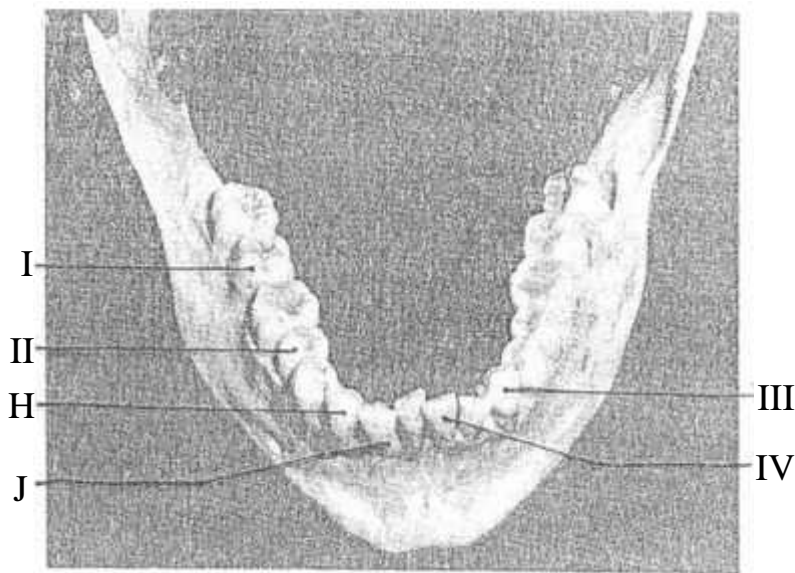
- (d) State **two** differences between seedling **K** and **L**. (2 marks)

K	L

- (e) Name the phenomenon exhibited by seedling in **K**. (1 mark)

- (f) Name the response exhibited by seedling **M**. (1 mark)

3. Below is a photograph of an adult human jaw with teeth. Study the diagram and answer the questions that follow.



- (a) State the mode of nutrition in man. (1 mark)

- (b) Name the type of teeth labeled **I** and **III**. (3 marks)

I _____

III _____

(c) Name the parts of teeth labeled **H** and **J**. (2 marks)

H _____

J _____

(d) Identify **one** distinguishing feature between teeth labeled **II** and **IV**. (1 mark)

(e) State **one** function of tooth **IV**. (1 mark)

(f) Write the dental formula from the jaw shown in the photograph. (2 marks)

(g) Explain why tooth I would be more prone to dental carries than tooth **III**. (2 marks)
