

Name: Index no

School: Candidate's sign

Date:

231/3
BIOLOGY
PRACTICAL
PAPER 3
MARCH/APRIL 2011
TIME: 2 HOURS

BUTERE EAST ZONE JOINT EXAMINATION

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

Biology
Paper 3

INSTRUCTIONS TO CANDIDATES:

- Write **your name** and **Index Number** in the spaces provided.
- Sing and write date of examination in the spaces provided above
- Answer **ALL** the questions in section A and B

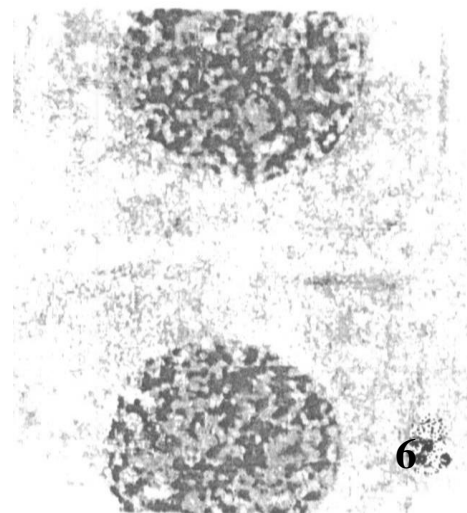
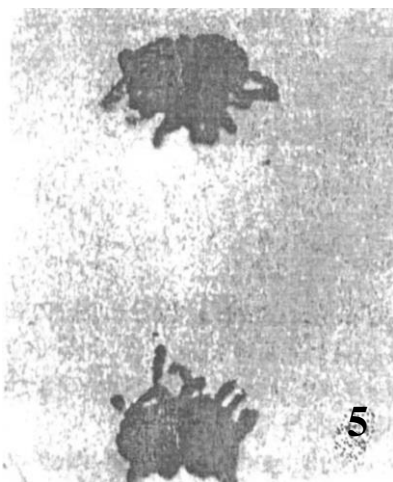
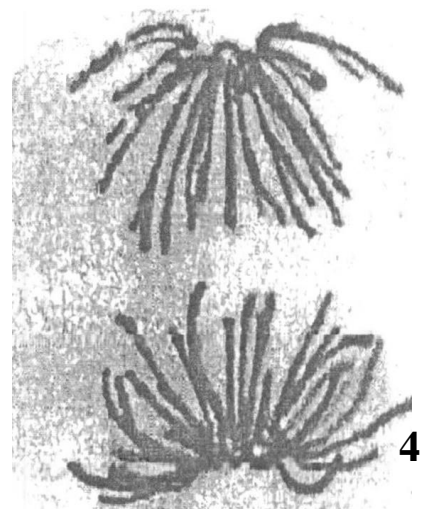
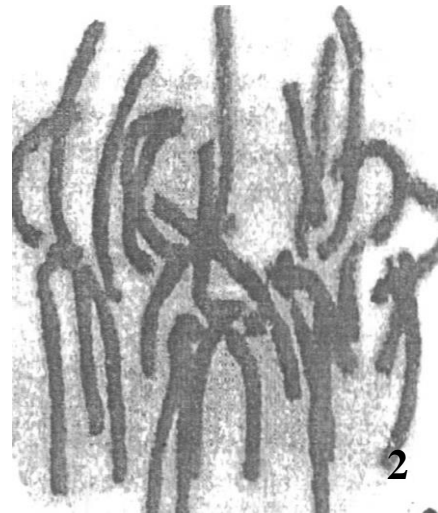
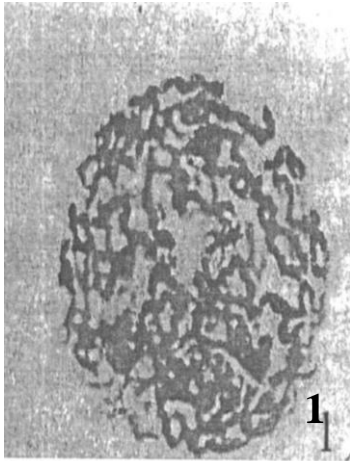
For Examiner's Use Only:

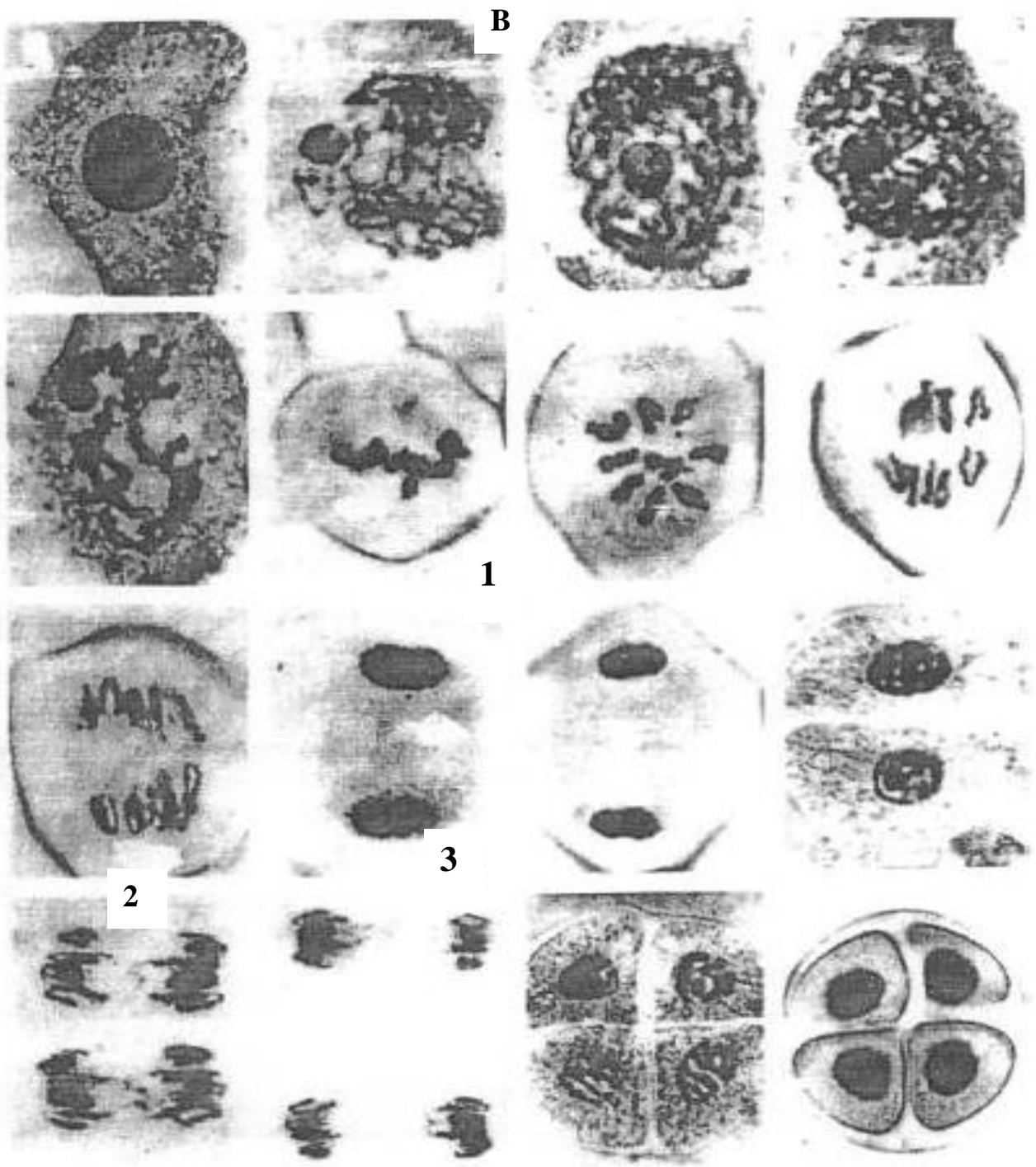
QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1	14	
2	14	
3	12	
Total	40	

This paper consists of 4 printed pages. Candidates should check to ascertain that all papers are printed as indicated and that no questions are missing

1. Below are two sets of photomicrographs **A** and **B** showing various processes of cell divisions. Examine them.

A





a) Using observable feature only, identify the type of cell division represented by the photomicrographs in set **A** and set **B**. Give a reason in each case. (4mks)

Cell division in set **A**

Reason;

Cell division in set **B**

Reason;

b) Name the division process represented by numbers 3 and 4 in photomicrographs of set **A** and number 1 and 3 in photomicrographs in set **B**. Complete the table below. (4mks)

Photomicrograph set	Label number	Identity of process
A	3	

	4	
B	1	
	3	

c) Name **one** region in higher plants where the cell division represented by photomicrographs set **A** and set **B** occurs (2mks)

Set **A**

Set **B**

d) Describe the process that is taking place at photomicrograph set **A** number 3 and photomicrograph set **B** number 2.

Set **A** number 4

Set **B** number 2

e) State the importance of each of the cell division in set **A** and **B** in the bodies of living organisms. (2mks)

Set **A**

Set **B**

2. You are provided with visking tubing labeled j, a piece of thread and a solution labeled K.

Dip the visking tubing in distilled water to moisten it, open it, and then tie one end tightly with the thread provided.

Half- fill the visking tubing with solution K then tie the open end of the tubing tightly. Ensure solution K does not spill out of the tubing.

Immerse the visking tubing into distilled water in a beaker. Ensure that the visking tubing is completely immersed in the distilled water.

Leave the set-up for 20minutes. Record your observation after 20 minutes.

a)(i) **Observation.** (1mk)

(ii) Explain your observation in (a) (i) above. (2mks)

b) Remove the visking tubing carefully, ensure the contents of the visking tubing do not mix with that of the beaker. Using the reagents provided, test for the food substance present in the visking tubing and the beaker.

I. Visking Tubing

Food test	Procedure	Observation	Deductions

I Beaker

Food test	Procedure	Observation	Deductions
Starch			
Reducing sugars			

c) Explain the observation and deductions in (b) above. (3mks)

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

3. You are provided with specimen **X**. Carefully study the specimen and use it to answer the questions that follow.

a) (i) What part of plant is it? (1mk)

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

b) (i) Split the specimen into two halves, draw and fully label one half of the specimen. (4mks)

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

c) State the type of placentation in the specimen. (1mk)

d) With reasons state the method of dispersal of specimen (**X**)

Method. (1mk)

Reasons (2mks)

e) What is the significance of seed and fruit dispersal in plants. (2mks)