

Name.....

Index No...../.....

School.....

Date

Candidate's Signature.....

231/3

BIOLOGY

(PRACTICAL)

Paper 3

JULY / AUGUST 2012

Time: 1 ¾ Hours

BUTULA DISTRICT FORM FOUR JOINT MID YEAR EXAMINATIONS - 2012

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

231/3

BIOLOGY

(PRACTICAL)

Paper 3

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INSTRUCTIONS TO CANDIDATES

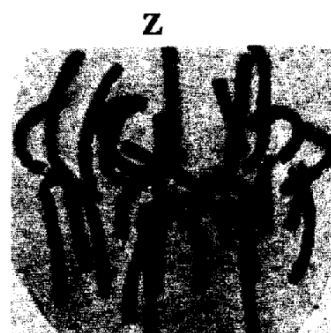
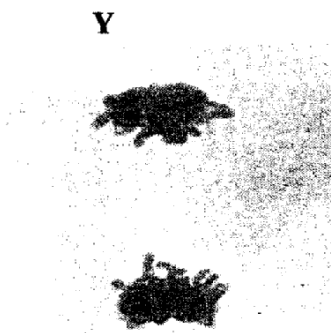
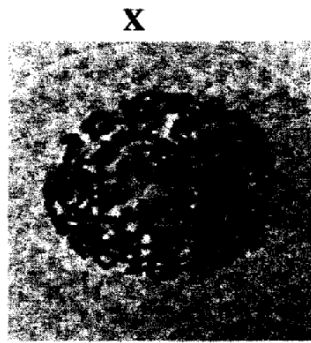
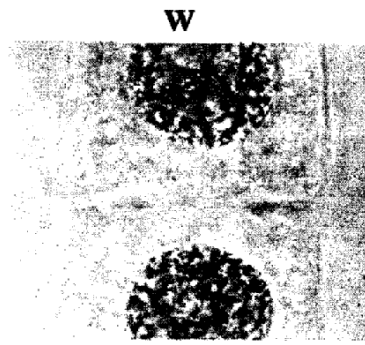
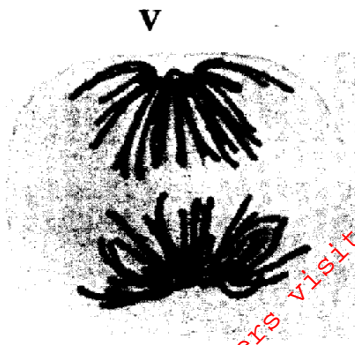
- Write your name and index number in the spaces provided above.
- Attempt all questions in this question paper
- You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper
- Answers must be written in the spaces provided in the question paper.

For Examiner's Use Only

<i>Question</i>	<i>Maximum score</i>	<i>Candidate's score</i>
<i>1</i>	<i>13</i>	
<i>2</i>	<i>13</i>	
<i>3</i>	<i>14</i>	
	<i>40</i>	

*This paper consists of 8 printed pages.
Candidates should check the question paper to ensure that all
pages are printed as indicated and no questions are missing*

1. The micrograph below shows stages in a type of cell-division that occurs in organisms.



(a) State the type of cell-division. (1mk)

.....

(b) Identify the stages indicated by letter: (4mks)

V.....

X.....

Y.....

Z.....

(c) Name the type of cells in which the above process occurs. (1mk)

.....

(d) State two significance of this type of cell-division. (2mks)

.....

.....

(e) From the micrograph, suggest with reason(s) whether the cell – division shown occurred in plants or animals (2mks)

.....
.....
.....

(f) Name three cellular activities that occurs in stage labelled W. (3mks)

.....
.....
.....

2. You are provided with specimen labelled H, which is a piece of mammalian organ. Squeeze the content in the lumen into a test tube. Add 3ml of water and shake the contents.

Reserve the piece of organ for question (b).

(a) (i) Use the reagents provided to test for the food substances present in the contents of the specimen H. Record the food substances tested, procedures, observations and conclusions in the table below. (6mks)

Food substance	Procedure	Observation	Conclusion

(ii) Account for the results obtained in (a) (i) above. (3mks)

.....
.....
.....

(b) Cut specimen H along its length to expose the inner surface.

(i) Feel the inner and outer surfaces of the specimen.

Record your observations.

(2mks)

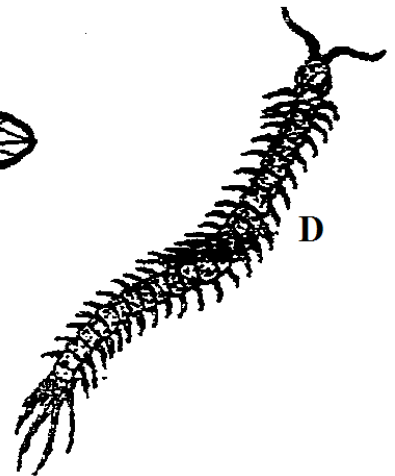
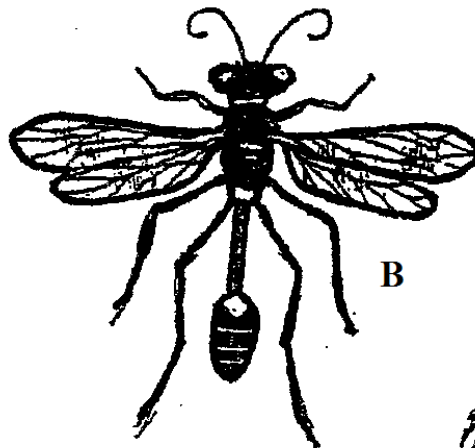
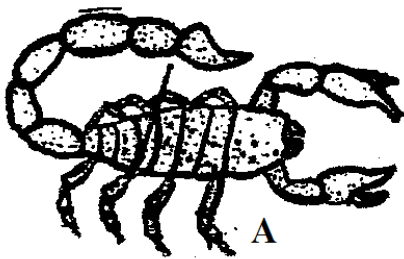
.....
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.....

(ii) Account for your observations of inner surfaces.

(2mks)

.....
.....
.....

3. Below are drawings of various organisms. Examine them.



(a) (i) Name the phylum to which B belongs.

(1mk)

.....

(ii) Give three reasons for your answer in (a) (i) above. (3mks)

.....

(b) Name the class to which specimen B and E belong.

B.....
 E.....

(c) Give three observable differences between specimen B and E. (3mks)

.....

(d) Use the dichotomous key provided to identify the organism.

1. (a) Jointed legs present..... go to 2
- (b) Jointed legs absent..... go to 7
2. (a) Have 3 pairs of legs..... go to 3
- (b) Have more than 3 pairs of legs..... go to 5
3. (a) With wings..... go to 4
- (b) Without wings..... Anoplura
4. (a) Have one pair of wings..... Diptera
- (b) Have two pairs of wings..... Hymenoptera
5. (a) Have 4 pairs of legs..... Arachnida
- (b) Have more than 10 pairs of legs..... go to 6
6. (a) With one pair of legs per segment..... Chilopoda
- (b) With two pairs of legs per body segment..... Diplopoda
7. (a) With body enclosed in a shell..... Mollusca
- (b) Body surface with spiny projections..... Echnoder

Identify steps followed to identify organism A, B, C, D, and E (5mks)

Specimen	Steps followed	Identity
A		
B		
C		
D		
E		

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