Name: _____ Index No. _____ Class _____

Signature_____

Date_____

231/2
BIOLOGY
Theory
PAPER 2
JULY - 2014
2 HOURS

STAREHE GIRLS' CENTRE
MOCK EXAMINATION JULY 2014

Instructions to Candidates:

1. Write your name, index number, date and signature in the spaces provided
2. This paper contains two sections A and B.
3. Answer all questions in section A in the spaces provided.
4. In Section B answer question **6** (Compulsory) and either question **7** or **8** in the spaces provided at the end of each question.

FOR EXAMINERS USE ONLY

Section	Questions	Max. Score	Candidate's score
	1	8	
A	2	9	
	3	5	
	4	8	
	5	10	
B	6	20	
	7 or 8	20	
	Total	80	

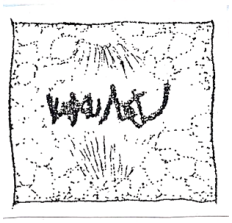
This paper consists of 10 printed pages. Students should check the question paper to ensure that all pages are Printed as indicated and that no questions are missing

SECTION A - (40 MARKS)

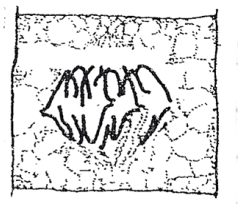
Answer all questions in the spaces provided after each question in the spaces provided after each question.

1. In rabbits the allele for black fur is dominant to the allele for white fur. What percentage of off spring would have white fur from a cross between heterozygous black rabbits and white rabbits. Show you working. (8 marks)

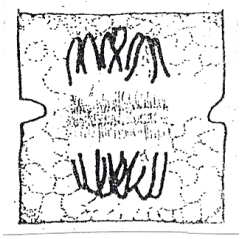
2. The diagram below represents some stages in mitosis.



A



B



C

a) Name the stages A, B and C (3 marks)

A……..

B……..

C……..

b) Draw a similar diagram to show how the cell would appear during stage B above in meiotic division. (4 maks)

c) List 2 significance of mitosis in living organisms. (2 marks)

i)……

……

ii)……

……

3. Outline five adaptations of zerophytic plants to their habitats. (5 marks)

a)……

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b)……

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c) ……

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d) ……

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e) ……

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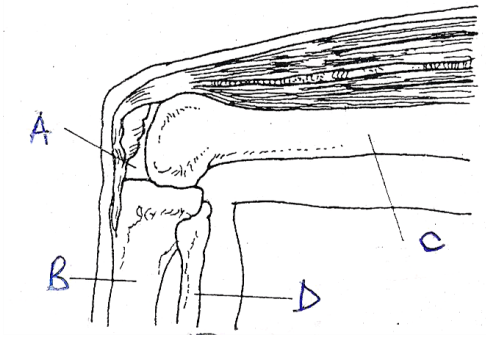
4. Study the diagram below carefully, then answer the questions below.



a) Name the bones labeled ; B, C, D (3 marks)

B……

C……

D……

b) i) Name the substance found in the place labeled A, (1 mark)

……

ii) State the function of the substance named in (b) (i) above. (1 mark)

……

……

c) Name the structure that joins the bones together at the joint. (1 mark)

……

d) State the difference between ball and socket joint and the one illustrated in the diagram above. (1 mark)

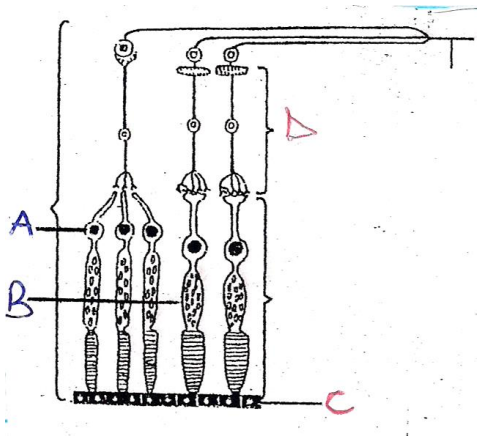
……

……

e) Name the structure at the elbow that performs the same function as the patella. (1 mark)

……

5. The diagram below is a section of a human eye retina. Study it carefully and answer the questions that follow.



a) i) Name the cells A , B, C, D. (4 marks)

A……

B……

C……

D……

ii) State the functions of A and B. (2 marks)

A……

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B……

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b) Explain the changes that occur in cell B when exposed to bright light. (4 marks)

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SECTION B – (40 marks)

Answer questions **6** (compulsory) and question **7** or **8** in spaces provided after each question.

6. During germination and growth of a cereal the dry weight of endosperm, the embryo and total dry weight were determined at two day intervals for fourteen days. The result are as tabulated below.

Time in (days)	Dry weight (mg)		
	Endosperm	**Embryo**	**Total**
0	47	5	52
2	44	5	49
4	39	8	47
6	22	17	39
8	10	28	38
10	4	35	39
12	2	42	44
14	2	44	46

a) Using the same axis, draw graphs for dry weight of endosperm, embryo, and total dry weight against time. (7 marks)

b) What was the average dry weight of the embryo from day 2 to day 12. (1 mark)

c) Account for the shape of the curve for ;

i) Embryo from day 2 to day 12. (2 marks)

ii) Total dry weight (gm) from day 0 to day 14. (3 m arks)

d) After how long was the dry weight of ;

i) Endosperm 30 gms (1 mark)

……

ii) Embryo 35 gms (1 mark)

……

e) Explain the role of water in seed germation. (3 marks)

i) ……

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ii) ……

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iii)……

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f) Other than water what other two environment factors are required for germination? (2 marks)

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7. How is the human female reproductive organ adapted to its functions? (20 marks)

OR

8. Explain how the sugar is regulate in the mammalian body. (20 marks)

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ANSWERS:

Order a copy of answers from www.schoolsnetkenya.com/order-e-copy

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