Name	 ••••••••		Index No	
School	 		Candidates Signature	
			. Date:	
*				

## PRE-MOCK

Kenya Certificate of Secondary Education

BIOLOGY

PAPER 1

(THEORY)

Time: 2 Hours

## INSTRUCTIONS TO CANDIDATES

Answer all the questions in the space provided.

Additional pages MUST not be inserted.

Candidates may be penalized for false information and even wrong technical terms.

## FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
1-24	80	
21	00	1 " A 1 " A 4 "

This paper consists of 10 printed pages.

Candidates should check to ensure that all pages are printed as indicated and no questions are missing

			,	
			1	1.
		e e		
1. During an ecolog	gical trip students four	nd a green plant w	hose height average	ed 20cm
growing on a damp	rock. The plant had	a long stalk which	hore a club-like co	neula The
	to the rock by means of			psate. The
Parati	to the rook by means (	or root like structu	res.	
(a)Name the Division	on to which the plant l	belonged.		(lmk)
(h)Name the long s	stalks on which the cap			
(b) rathe the long s	tarks on which the cap	osules were borne.	t t vig t	(lmk)
		•••••		C <sup>O</sup>
			-0/3	
(c)State the signific	cance of capsule to the	e life of the plant.	28	(1mk)
			SIP	
***************************************	***************************************			
2. The diagram belo	w represents a simple	endocrine feedba	k mechanism in h	mon mole
				man mare.
testes	X Hormone		dates secretion drogens	
		M.	ur og cario	
Normal level	gala.	an'		Normal
	nd			level
pituitary glan				
pituitary glan	L'181	<del></del> ]	Casandania	
pituitary glan	YHormo	ne	Secondary sexual	
pituitary glan	WHormo	ne	Secondary sexual characteristics	
pituitary glan	AHormo	ne		
	Dapers	one		
	AHormo	one		2mks
	Dapers	ne		
(a) Name the horme	Dapers	one		
(a) Name the horme	Dapers	one		
(a) Name the hormo	one labelled X and Y		characteristics	2mks
(a) Name the hormony X	ences that may be obs	erved between a n	characteristics	2mks e who is
(a) Name the hormony X	one labelled X and Y	erved between a n	characteristics	2mks
(a) Name the hormony X	ences that may be obs	erved between a n	characteristics	2mks e who is
(a) Name the hormony X	ences that may be obs	erved between a n	characteristics	2mks e who is

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c. If the testes were ovaries, what would be hormone Y.	(1mk)
d. State the hygienic practices which should be observed during menses.	(2mks
	col
3. The figure below shows a section through a mammalian kidney nephron.	
e in the second	6 <sub>6</sub> .
Protein CC	
Other	
6	
(a) On the diagram label X the part of the kidney ultra-filtration would occu	ır (1mk)
(b) State three components of substances that flow through E and not X	(2mks)

(2mks)

(c) Give a reason why there is a difference in diameters in E and F

		w	
		2	
(d) What happens on the lower	section of G?		(2mk)
*/			
4. A new born baby has genera	al heartbeat of 120 to 14	10 per minute while	that of adult is 70
per minute on average. Accoun			(2mks)
			<sup>3</sup> / <sub>6</sub> ,
5. It was observed that when ar	amoeba was transferre	ed to a certain enviro	nment, its
contractile vacuole became ver	y active.	SON	
(i) Suggest what this enviro	onment was likely to be	10ek	(1 mk)
(ii) Give two reasons for yo	our answer.		(2mk)
	ors y		
20	2		
6. Student smeared Vaseline je		A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
which had been kept in the dark			
hours. Starch test on the leaf w	as negative. Account fo	r the observation.	(2 mks)
401			
	7		
			<u></u>
7. Suppose you are asked to stu	idy population of fish in	a school pond.	
(a) Name the apparatus you we	ould need for this invest	igation.	(3 mks)

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			r in				
	4 4		**		* 3		
	3	Nº v.B.					
4			y B		a 9 1		
(i) Work ou	at a mathema	atical formula	you would us	e to calculate t	he total pop	ulation in	
						(2 mks)	1
pond.						(Z niks)	
			,,				
					n 1		
				9 6 6		OU.	
	••••••					0	
	2 ×				15		
				***************************************	- (A)		
			er V		SX	1000	
What assum	ptions are m	ade when usin	g formula in (	(b) (i) above?	XX .	(2 mks)	
			3	20	- 10		
			····	CS/			
	The state of the			. (6)			
		10 May 1		0			
		N.	1	Ø	a Jaile		
					*********		
*	v light inten	sity would affo	ect the distribu	ution of fish in	this pond.	(3 mks)	
	v light inten	sity would affo	ect the distribu	ition of fish in	this pond.	(3 mks)	
Explain hov	v light inten	sity would affo	ect the distribu	ition of fish in	this pond.	(3 mks)	
Explain hov	v light inten	sity would affor	7		``	(3 mks)	
Explain hov	v light inten	sity would affor	7	ition of fish in	``	(3 mks)	
Explain how	v light inten	sity would affor	7		``	(3 mks)	
Explain how	v light inten	sity would affor					
Explain hov	v light inten	sity would afford					
Explain hov	v light inten	Sarbet Sie					
Explain hov	v light inten	experiment ha	d the specifica	ations below: I	ow power		
Explain hov	v light inten	experiment ha	d the specifica		ow power		
Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power	1,500	
Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power		
Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power	1,500	
Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power	1,500	
Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power	1,500	
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Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power	1,500	
Explain how	v light inten	experiment ha	d the specification x500, a	ations below: I	ow power	1,500	

(1)

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			4.5			
					e, 2 v v	
Explain why t	he left ventrio	cle has thicl	cer walls than the rig	ht ventricle. (2	mks)	
		,				···· .
					_	
. State three v	vays in which	n seed dorm	ancy benefits a plan	it. (3 m	ks)	
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			٤.		,	
			1,5"	Si		
	,			COV		
In determining	ng the blood g	group of a p	oatient, it was seen the	hat it agglutinat	es with antisera	
	ng the blood g		patient, it was seen the	hat it agglutinat	es with antisera	
A and B but	not with anti	serum	nnn	hat it agglutinat	es with antisera	
A and B but	not with anti	serum	nnn	hat it agglutinat		
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the	not with anti	of the patie	nnn		(1mk)	
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the	not with anti	of the patie	in whi		(1mk)	
A and B but What was the A woman ga could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	
A and B but What was the A woman ga could have	not with anti	of the patie	in whi		(1mk)	
A and B but What was the A woman ga could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	
A and B but What was the A woman ga could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	
A and B but What was the A woman ga could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	
A and B but  What was the  A woman ga  could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	-
A and B but What was the A woman ga could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	
A and B but What was the A woman ga could have	not with anti	of the patie	of which were identi		(1mk)  in how this  (2mks)	

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			<u></u>			••••
		1.4	91			
. Form three studen	its carrying out	t a field work on	classification of	encountered	an animal	
with wings, fur on	the body, two	legs and ears. W	Vhich class doe	s it helong	(1 mk)	
				o it octong	(1 1114)	
					$C_{O}$	
4.				0,5	2 .	
		1.1%	est like	200		5 <sub>.</sub> ,
<b>3</b> 71				il?	7.2	
The oxidation of a	certain food su	ibstance is repres	sented by the	hemical equ	ation shown	
below:	A	1	COP		1. 1.	
1. 12. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14	Service and the service and th		* KC			
$C_{57}H_{104}O_6 + 80O_5$	2>	57CO <sub>2</sub> + 52 Hz	0+Energy			
				58 857		let.
			28			
		nn,	*******	N		
Coloulate the marrie		MAN				
Calculate the respir	ratory quotient	(RQ) of the food	d substance.		(2 mks	s)
Calculate the respir	ratory quotient	(RQ) of the food	d substance.		(2 mks	s)
Calculate the respir	ratory quotient	(RQ) of the food	d substance.		(2 mks	s) 
Calculate the respir	ratory quotient	(RO) of the food	d substance.		(2 mks	<b>)</b>
Calculate the respir	ratory quotient	(RQ) of the food	d substance.		(2 mks	 
Calculate the respir	ratory quotient	(RO) of the food	d substance.		(2 mks	
<b>√</b> 2	i Pareis	le.				
Calculate the respir	i Pareis	(RQ) of the food			(2 mks	
<b>√</b> 2	i Pareis	ubstance being or				
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.	ubstrate.		•
(i) Name the cl	lass of food su	ubstance being or	xidised above.	ubstrate.	(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.	ubstrate.	(1 mk)	•
<b>√</b> 2	lass of food su	ubstance being or	xidised above.	ubstrate.	(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•
(i) Name the cl	lass of food su	ubstance being or	xidised above.		(1 mk)	•

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×.		Ÿ		ž , .		(1 mk)
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					······································	
					Sec. 1	
(ii) Explain two ways in	which the blo	od vessels	named in	(a) (i) above	are adapte	d to
carry out their functions.						(2 mks)
						coll
		••••••	*****		· · · · · · · · · · · · · · · · · · ·	· <b></b>
					20	
				" . I	20/	r ji,
(b) State two differen	nces in the cor	nposition o	of blood in	the pulmons	ry venule	and
pulmonary arteriole.			100	-00	-J vonato	1 A
pullionary artoriolo.				500	100	(2 mk
		•••••		No.	Lindansan	2
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		1	•			
15 Nama arganisma whia	h anna tha fa	النواا		2 1	1917	ib
15.Name organisms which	n cause the 10	nowing di	seases:			(2 mks)
(a) Bilharzia	2,6				1 12 1	11,783 s.,
	20			***************************************		
as lena	~ 6.0.				100	
(b) AIDS	65)	······	•••••			
16 State three social and	r momio imulia					
16. State three social eco	monne implie	ations of r	apia numa	n population	growth rat	e.(3mks)
40,		100 B				
	***************************************		************		•••••	••••••••••••••••••••••
			•••••		4,74,3	
	,					STAN OF
17. Why is it dangerous to	o breath in mo	tor car ex	haust firme	-02		Omlea
and the same of th	o oroam m m	nor car car	iaust tuine			2mks
			45		* 0 5 5 5 3	
		8				
	(4)					1,54
			*		4.6	

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	- a	Sew		7 F 7			
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					1 pm ps	A.a.	
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					4.5		
10.0	1	la alea veitam	nin V ovnori	ences evces	cive bleedi	ng even	
18. Give reasons	wny when a perso	III lacks vital	min K experi	OHOUS CACUS			
from a small cut.					4.2	2mks	
						14.5	
				.,			
				* 1		-0/1	
					. i v 4	C	
••••••••••	••••••						
19. State one signif	ficance of interpha	se in cell divis	sion		*KASIGO.	(1mk)	
151000000000000000000000000000000000000				, 19 a	*.O.O.	i e i	
			1000	o.			
				200		······	
			the following	r organisme	4	(2mks)	
20.Name the struc	ctures used for loc	comotion in	the following	gorgamsms		(ZIIIKS)	
			3	to page	5 10 11		
			1999		100		41
		2		4.0			
. (a) Fugler	19		N				500
- (a) Eugler	na		an flo				n se n
- (a) Eugler	ıa		ing				
(c) Parameciu	ım	x	7				
(c) Parameciu 21 The table below	mv show the percent	x	7			naled and	
(c) Parameciu	mv show the percent	x	7			naled and	
(c) Parameciu 21 The table below exhaled in	mv show the percent	age composit	tion of carbon	(iv) oxide an	d oxygen inl	naled and	
(c) Parameciu 21 The table below exhaled in	mv show the percent	age composit	tion of carbon	(iv) oxide an	d oxygen inl led air	naled and	
(c) Parameciu 21 The table below exhaled in  Gases Oxygen	show the percent	inhaled air	tion of carbon	(iv) oxide an	d oxygen inl led air	naled and	
(c) Parameciu 21 The table below exhaled in  Gases Oxygen	mv show the percent	age composit	tion of carbon	(iv) oxide an	d oxygen inl led air	naled and	
(c) Parameciu 21 The table below exhaled in  Gases Oxygen	show the percent	inhaled air	tion of carbon	(iv) oxide an	d oxygen inl led air	naled and	
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I	v show the percent air V) Oxide	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen	v show the percent air V) Oxide	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
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(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I	v show the percent air V) Oxide	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I	v show the percent air V) Oxide	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
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(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I	v show the percent air  V) Oxide  Verences in percent	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air 20% 0.04%	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air 20% 0.04%	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air 20% 0.04%	tion of carbon	exha 17% 4.0%	d oxygen inl led air		
(c) Parameciu 21 The table below exhaled in  Gases Oxygen Carbon (I  (a) Explain the di  (i) Oxygen	v show the percent air  V) Oxide  Verences in percent	inhaled air 20% 0.04%	tion of carbon	exha 17% 4.0%	d oxygen inl led air		

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22. The Kenyan athletes anticipating to be involved in a Lone themselves in the slopes of Mt Kenya in most of the times for four months before actual competition. Explain	
	*
The state of the s	
23.A butterfly has a lifecycle involving both physical and pl	hysiological changes.
(a) Name the term used to refer to the above changes	(1mk)
	Q
	200
(b) What type of growth curve does it exhibit	(lmk)
	eQ
(c) State two advantages of these changes in the life of a but	erfly: (2mks)
	The Atlanta
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nin.	
in in the second	
nin.	
nin.	
un un	
nin.	l to what they consumed.
24. Young growing children excrete lesser nitrogen compared	
un un	to what they consumed.
24. Young growing children excrete lesser nitrogen compared	
24. Young growing children excrete lesser nitrogen compared	

**END**