FORM FOUR TERM ONE EXAM 2017

BIOLOGY PAPER 1 MARKING SCHEME

SCHOOLS NET KENYA

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BIOLOGY 1

1a) Biochemistry; Imk b(i) First 1 . • Generic name written in capital letters; mark the 1° one 1mk 2a) Cell membrane contains a lipoprotein while cell wall contains cellulose; 1mk 2a) Cell membrane contains a lipoprotein while cell wall contains cellulose; 1mk 2a) Cell membrane contains a lipoprotein while cell wall contains cellulose; 1mk 3a) Haemolysis is the bursting of an animal cell/RBC when it absorbs water by osmosis from a hypotonic solution. 2mks 3. Haemolysis is the shrinking of a plant cell as a result of losing water by osmosis to a hypertonic solution. 2mks 4a) 1/2 mk each=2mks 2mks A-Diasteman B-Hard pad C-Lover jaw/mandible D-Molar D Turning of food by tongue/prevent mixing of chewed and unchewed food; 1 mk 5m Tarks aning of food by tongue/prevent mixing of chewed and unchewed food; 1 mk 6m Gensn't change pH of plasma/blood/body fluids; • prescace of hacmoglobin in RBC; 2mks 7 SuGAR/GLUCOSE CARBON(IV)ONID=ALCHOH2/ETHANOL + ENERGY/ATP; 1mk 7a) SUGAR/GLUCOSE CARBON(IVONID=ALCHOH2/ETHA	MARK	ING SCHEME								
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Y-Sternum; 2mks b) External intercostals muscles relax and internal intercostals muscles contract; Ribs /move downwards and inwards; 7a) SUGAR/GLUCOSE CARBON(IV)OXIDE+ALCOHOL/ETHANOL + Baking/manufacture of alcohol/manufacture of dairy products/biogas production; Imk b) Any 1 Imk Baking/manufacture of alcohol/manufacture of dairy products/biogas production; Imk 80 All glucose reabsorbed at proximal convoluted tubule; Imk b) Proteins not filtered into glomerular filtrate as molecules too large to pass through capillary pores; 1mk 9. 9. Stands upright when cold; trapping a layer of air that insulates body/skin against heat loss; 2mks 10. Higher light intensity closer to the surface thus more plants; providing food for more fish; 2mks 11. M-Male nuclei; Imk N-Tube nucleus; 2mks Imk 12(i) Cambium; Imk 13a) First 2 Imk Deoxyribose sugar; Phosphate molecule Imk Nitrogenous organic base; 2mks Imk c) spontaneous change in the genetic make up of an organism; Imk (iii) <t< td=""><td>6a)</td><td>W-Trachea;</td><td></td></t<>	6a)	W-Trachea;								
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b) Any 1 Baking/manufacture of alcohol/manufacture of dairy products/biogas production; Imk Baking/manufacture of alcohol/manufacture as molecules to large to pass through capillary pores; Imk Baking/manufacture of alcohol/manufacture of an organism; Imk Baking/manufacture, Imk Baking/manufacture, Imk Baking/manufacture, Imk Baking/manufacture, Imk Baking/manufacture, Imk Baking/manu	1 \	ENERGY/ATP;	lmk							
Baking manufacture of alconol/manufacture of dary product/ologas production; Imk 8a) All glucose reabsorbed at proximal convoluted tubule; Imk b) Proteins not filtered into glomerular filtrate as molecules too large to pass through capillary pores; Imk 9. Stands upright when cold; trapping a layer of air that insulates body/skin against heat loss; 2mks 10. Higher light intensity closer to the surface thus more plants; providing food for more fish; 2mks 11a) M-Male nuclei; 2mks b) Take part in fertilisation; 1mk 12(i) Cambium; 1mk 13a) First 2 1mk Deoxyribose sugar; Phosphate molecule 1mk Nitrogenous organic base; 2mks 2mks b) G-U-A-C-U-C-A; 1mk c) spontaneous change in the genetic make up of an organism; 1mk (ii) Type of evolution in which structures from different embryonic origins are modified to perform similar functions; 1mk (iii) Organisms best adapted reproduce and pass their characteristics to their offspring while those poorly adapted die out; 1mk (iii) Type of starch; 1mk (iii) Test	b)	Any I Deline (manufacture of electrolythere of deine and herte (his second betting)	11.							
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b)Take part in fertilisation;Imk12(i)Cambium;Imk12(i)Apical meristems;Imk13a)First 2Imk13a)First 2Poexyribose sugar;Phosphate moleculeZmksNitrogenous organic base;2mksb)G-U-A-C-U-C-A;Imkc)spontaneous change in the genetic make up of an organism;Imk14(i)structures which have become reduced in size as a result of losing their original function;Imk(iii)Type of evolution in which structures from different embryonic origins are modified to perform similar functions;Imk(iii)Organisms best adapted reproduce and pass their characteristics to their offspring while those poorly adapted die out;Imk15(i)Light;Imk(iii)Test for starch;Imk(iii)Uncovered part turned blue-black/contained starch while covered part remained brown/did not contain starch;		N-Tube nucleus;	2mks							
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 (ii) Organisms best adapted reproduce and pass their characteristics to their offspring while those poorly adapted die out; 15(i) Light; iii) Test for starch; iiii) Uncovered part turned blue-black/contained starch while covered part remained brown/did not contain starch; 	/····>	functions;	lmk							
Interview Imk 15(i) Light; Imk (ii) Test for starch; Imk (iii) Uncovered part turned blue-black/contained starch while covered part remained brown/did not contain starch;	(111)	Organisms best adapted reproduce and pass their characteristics to their offspring while those poo	riy adapted							
13(1) Light, Imk (ii) Test for starch; 1mk (iii) Uncovered part turned blue-black/contained starch while covered part remained brown/did not contain starch;	15(3)	Light:	1 fIIK 1 mk							
 (iii) Uncovered part turned blue-black/contained starch while covered part remained brown/did not contain starch; 	(ii)	Ligili, Test for starch:	1111K 1mk							
(iii) Cheovered part turned one onders contained staren wine covered part remained brown/did not contain staren,	(iii)	Uncovered part turned blue-black/contained starch while covered part remained brown/did not cov	ntain starch.							
Imk	()	encerter part tarried blue black contained staren wine covered part remained brown/did not co	1mk							

16a)	Sweep net;		a								1mk
b)	Population	=	first cap	oture 1	<u>X</u>	secon	d capture				
		_	600	numbe	r recapt	urea					
		_	000	<u>x</u> 100	300,						
		=	1800;	100							2mks
17.	Amphibia; Pisces;										2mks
18a)	First 1		.1								
1.)	Genetic experiments/cancer therapy; 1mk										
b)	FIISU I Meat tenderiser: 1mk										
10	Ovaries produce progesterone; for maintenance of pregnancy during the first four months of pregnancy ;aft which the function is taken over by the placenta; 3mks										
17.											
20a)	First 2										
_ • • • •)	• Adult and larvae exploit different food niches reducing competition for food;										
	 Pupa can survive adverse conditions; Dispersal of different stages prevents overcrowding; 2mks 										
b)	Removal of ter	rminal bu	id remov	es sour	ce of au	xins; th	us no inhib	oition of axill	ary buds w	hich spr	out/develop
	into branches; 2m									2mks	
21a)	A-Metaphase;										
	B-Anaphase;										
• \	C-Telophase;										3mks
b)	Fiirst -+										
2											
Ζ	Cambium/w	ascular ca	mbium/c	ork cam	hium/nh/	allogan					
	 Apical meri 	istem/shoc	ot tip/root	tip:	orum/pik	enogen,					2 mks
22a)	Any 1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	чр,							
	Vitamin D/Calci	iferol;									1mk
b)	First 1										
23	Nerve impulse ti	ransmissio	on;								Imk
23.	B-Aorta :										3mks
b) C-	Bumps bloods ov	ver a long	distance/	rest of th	ne body v	while cha	amber 8 bur	mps blood to a			C IIIII
shorter	distance/lungs;	U			•						(1mk)
24a)	Aerenchyma-Fre	esh water;		•• /							1mk
b)	Pneumatophores Storage of air fo	s- Salty wa	ater/salty	soils/sw /buovar	amps;					Imk	1mk
25.	First 3	n gaseous	exchange	Juoyai	icy,						TIIK
•	Stomata;										
•	Lenticels;										
•	Cuticle;										
•	Pneumatophores	s;									
•	Epidermis;	- ·	6								3mks
26.	I ransport role-I	ransport (of protein	s;	toins						1mk 1mk
27a)	Adenosine triph	osphate:	manulac	ure pro							1mk
b)	Require more ox	xygen duri	ing oxida	tion; ins	oluble in	water th	us not easil	ly transported t	to site of res	piration;	-
	-	-	-					*	2mks	-	
28a)	X - Epicotyl;										0 1
b)	Y-Radicle;	tion									2mks 1mk
c)	Absorption of w	vater and n	nineral sa	lts/anch	orage;					1mk	1111K