P530/3	Name :
BIOLOGY PRACTICAL	Signature: Personal No:
Paper 3	
03rd Aug 2022	KWGSA
3 Hours	



## KAMPALA WAKISO GIANT SCHOOLS' ASSOCIATION (KWGSA)

National Joint Mock Examination 2022

# Uganda Advanced Certificate of Education BIOLOGY PRACTICAL

Paper 3

3 Hours

### INSTRUCTIONS TO CANDIDATES

This paper consists of three questions

Answer all questions

Answers to this must be written in the spaces provided

For Examiners' Use only				
Question Score				
1	en O bearbethan and a constant			
Maria expension displacement				
2				
ereredyk respublikaci	where the manufacture of the state of the same of the			
3	dmil bnit			

	illine the	ovided with specimens P as external features of the specimens	cimens.	
a)			men and state two reasons for	or the class of
	(i)	Phyllum of <b>P</b> .		
		Reason		
	(ii)	Phyllum of <b>Q</b>	ne su Charles de la company de la company La company de la company d	
			Linearia de abaro (f. 1811).	
		Reason		
			l.f	
b)				
b)		mine the ventral side of the r	ight fore limb and right hand	limb of Q
b)	Exar (i)		ight fore limb and right hand	
b)		mine the ventral side of the r State <b>two</b> differences betw	ight fore limb and right hand ween the two feet.	limb of Q
b)		mine the ventral side of the r State <b>two</b> differences betw	ight fore limb and right hand ween the two feet.	limb of Q
b)		State two differences between Fore limb	ight fore limb and right hand ween the two feet.	limb of Q (02 marks)
b)	(i)	Fore limb  State two ways in which of the results o	ight fore limb and right hand ween the two feet.  Hind Limb	limb of Q (02 marks)  o its function
b)	(i)	State two differences between two differences between two differences between two ways in which of Fore limb	ight fore limb and right hand ween the two feet.  Hind Limb	limb of Q (02 marks)  o its function (02 marks)
b)	(i)	Fore limb  State two ways in which of the results o	ight fore limb and right hand ween the two feet.  Hind Limb	limb of Q (02 marks)  o its function
b)	(i)	State two differences between two differences between two differences between two ways in which of Fore limb	ight fore limb and right hand ween the two feet.  Hind Limb	limb of Q (02 marks)  o its function (02 marks)
b)	(i)	State two differences between two differences between two differences between two ways in which of Fore limb	ight fore limb and right hand ween the two feet.  Hind Limb	limb of Q (02 marks)  o its function (02 marks)

al al (iii) a	Describe the attachment of the fore limb and hind limb Q and give the significance in each case	of specimen
	Fore limb	(01 mark)
	Significance	(01 mark)
	Hind limb	(01 mark)
	Significance	(01 mark)
(d)	Describe the shape of the head of specimen <b>Q</b> ar significance.	nd give the
	envided with solutions As And As which contains the and L contain living ingredients. Ned ore required to the	You now p
	LA POR LA REORDIA SE ROLL DE LA LINEA DE LA COMPANIO DEL COMPANIO DEL COMPANIO DE LA COMPANIO DEL COMPANIO DEL COMPANIO DE LA COMPANIO DEL COMPANIO DEL COMPANIO DE LA COMPANIO DE LA COMPANIO DE LA COMPANIO DEL COMPANION DEL COMPANION DEL COMPANIO DEL COMPANIO DEL COMPANIO DEL COMPANIO DEL COMPANIO DEL COMPANION DEL COMPANION DEL	7.10.510.116
(e)	Carefully examine the features on the dorsal sides of the thorax of specimen Q. Describe them and give their significant in the Co.	he head and
(2)Bolton	the survival of <b>Q</b> .	
	Test entirely	

(f) Disect the specimen P to display structures responsible for locomotion plus those used for transport of materials in the body of the specimen anterior to the 5<sup>th</sup> abdominal segment. Draw and label with dorsal cuticle displaced to the left of the specimen. (20 marks)

You are provided with solutions  $A_1$ ,  $A_2$  and  $A_3$  which contain food nutrients. Extracts K and L contain living ingredients. You are required to investigate the effects of K and L on the solutions  $A_1$  and  $A_2$ .

a) Using the reagents provided, carry out iodine test, buirets test and DCPIP test on the solutions A<sub>1</sub>, A<sub>2</sub> and A<sub>3</sub>. Record your tests, observations and deductions in the table below. (06 marks)

Table 1

	Test Iodine Test	Observation (s)	Deduction(s)
$\mathbf{A}_{1}$			
	ESTABLISHMENT PROPERTY AND ADDRESS OF THE PERSON OF THE PE	A Charles Control of the Control	CILC. Property

KWGSA Joint Mock Examinations 2022

A <sub>2</sub>		cA.
A <sub>3</sub>		

#### Table II

	Test Buiret's Test	Observation (s)	Deduction(s)
$\mathbf{A_1}$			
19164	Pr and Py. Prepare a	nibes Ti, Ta Ts, Pr (ween 35-40 C.	(r) Label six res
$\mathbf{A}_2$	e rest tubes and fundier	of the plus term of a	instructed.
	mot not beaucifules		To Tai add 2d
<b>A</b> <sub>3</sub>	minutes. After this ring	their contents (on 40) trickure and carry o	
	.woled-zoldo	nd doducti sin in the rai three's Tast	anoi avagedo Table IV : II

## Table III

	Test DCPIP Test	Observation (s)	Deduction(s)
Aı			154

KWGSA Joint Mock Examinations 2022

$A_2$		iku conz nat jeho i	FX 152		1	
<b>A</b> <sub>3</sub>						
C	at the air				Halder	

b)	Suggest the significance of carrying out the above tests.

(c) Label six test tubes T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub>, P<sub>1</sub>, P<sub>2</sub> and P<sub>3</sub>. Prepare a water bath and maintain it between 35-40°C.

Add  $2cm^3$  of solution **A** in each of the test tubes and further add contents as instructed.

To  $T_1$ , add  $1 \text{cm}^3$  of K plus  $1 \text{cm}^3$  of water.

To  $T_2$ , add  $2 \text{cm}^3$  of sodium hydroxide solution and then  $1 \text{cm}^3$  of K.

To  $T_3$ , add  $2cm^3$  of dilute hydrochloric acid solution and then  $1cm^3$  of K.

Carry out procedures above using solution  $A_2$  instead of  $A_1$  and incubate all test tubes and their contents for 40 minutes. After this time, obtain about  $2 \text{cm}^3$  of each mixture and carry out the following tests. Record your observations and deductions in the tables below. (06 marks)

Table IV: Buiret's Test

Observation (s)		Deduction(s)		
T <sub>1</sub>	Observation (s)	Test DCPIP Test		
T <sub>2</sub>		N.		

	T <sub>3</sub>			
	Table	V : Iodine test		(06 marks)
		Observation (s)	Deduction	(s)
	Pi			
	P <sub>2</sub>			
	P <sub>3</sub>			
	(iii)	Explain the results in table IV a	nd V.	(04 marks)
	or T			· · · · · · · · · · · · · · · · · · ·
3. You a	Descri P	vided with specimens P, Q, R, S ribe the specimens basing on obse	and T which are plant lead ervable features of the spe	ves. ecimens (02 marks)
KWGSA Joi	nt Mod	ck Examinations 2022	Storogramme 13. o	Page 7 of 8

	Q	(02	marks)
	R	(02	marks)
	(a)		
	S	(02	marks)
	***************************************		
	T		
		(02	marks)
b)	Use the above features to construct a biological dichotom	ious	key to
	identify the specimen P, Q, R, S and T.		marks)
(c)	Using observable features, state the importance of specimen	T to	a plant
	where it was obtained.		6 marks)
		• • • • • •	
	with a the openiment basing on observable reatures of the specials		
	•••••		
			END
KWGSA Jo	pint Mock Examinations 2022	Do	. 0 . 0.0
		rag	ge 8 of 8

Scanned with CamScanner