

MERRYLAND HIGH SCHOOLS ENTEBBE
HOLIDAY WORK
S.3

BIOLOGY

1. Describe how the human eye is adapted to its function.
2. (a) Which parts of a flower constitute the non-essential parts? (1 mark)
(b) Outline the differences between the following terms:(2 marks)
 - (i) Self-pollination and cross pollination
 - (ii) Protandry and protogyny.
(c) Describe the series of events that lead to fertilization in a flowering plant.
- 3.(a) Draw the internal structure of the right human kidney. (3 marks)
(b) Define the term nephron
(c) Describe how the mammalian urinary system produces and excretes urine.
(12 marks).
4. Describe the adaptations of the following organisms to their habitats:
 - (i) Mesophytes
 - (ii) Halophytes

S3 CHEMISTRY HOLLIDAY WORK

1. Explain each of the following observations clearly.
 - (a) Lead (II) bromide in molten state conducts electricity whereas solid lead(II) bromide does not.
 - (b) Aqueous solution of hydrogen chloride reacts with Zinc producing hydrogen gas where as a solution hydrogen chloride in methyl benzene has no effect on zinc.
 - (c) Dilute sulphuric acid is not suitable for preparing carbon dioxide gas in the laboratory from calcium carbonate.
 - (d) When aqueous ammonia is added dropwise to Zinc Sulphate solution in a test tube, a white precipitate is formed which dissolves in excess ammonia forming a colourless solution.
- 2.(a) Define the following terms and give an example of each.
 - (i) a normal salt
 - (ii) an acid salt
(b)(i) Describe briefly how a pure dry sample of Lead(II) nitrate crystals can be prepared from Lead(II)oxide.
(ii) Name two other compounds from which lead(II)nitrate crystals can be prepared other than lead(II) oxide.
(c) Lead(II) ions reacts with Sulphate ions according to the ionic equation:
$$\text{Pb}^{2+}_{(\text{aq})} + \text{SO}^{2-}_{4(\text{aq})} \longrightarrow \text{PbSO}_{4(\text{s})}$$

State;
 - (i) What is observed when lead(II) nitrate solution is added to a solution containing Sulphate ions.
 - (ii) One practical application of the reaction shown by the ionic equation above.

(d) 25cm³ of IM sodium Sulphate solution was added to 40cm³ of a 0.5M lead(II) nitrate solution and the mixture stirred.

- (i) Determine the moles of Sulphate ions that reacted.
- (ii) the mass of Lead(II) Sulphate that was formed.

3. (a) Spathic iron ore is one of the ores from which iron can be manufactured. Roasted ore and two other substances are introduced into the blast furnace from the top and hot air is fed into the furnace from below.

- (i) Write the chemical name and formula of spathic iron ore
- (ii) State the purpose of roasting the ore.
- (iii) Name the other two substances introduced into the blast furnace with roasted Iron ore
- (b) Describe with the aid of equations how iron is obtained in the blast furnace
 - (i) Iron is obtained from the roasted ore.
 - (ii) the major impurity in the ore is removed.
- (c) Steel is an alloy of Iron.
 - (i) Name the other common component of steel besides Iron.
 - (ii) Give two reasons why steel is used in construction industry more than Iron.

S3 MATHS

1. The tax structure in a certain country on taxable income is as follows:

Taxable Income (shs)per month	Tax Rates (%)
120,001 – 280,000	9.5
280,001 – 480,000	12.5
480,001 – 880,000	20
Above 880,000	28

Mr. Anguyo's gross monthly income is 850,000/=. He is entitled to the following allowances;

- Transport..... 40,000/= per month
- Medical 120,000/= per annum
- Insurance 150,000/= per annum
- Housing 80,000/= per month
- Family a tenth of gross pay.

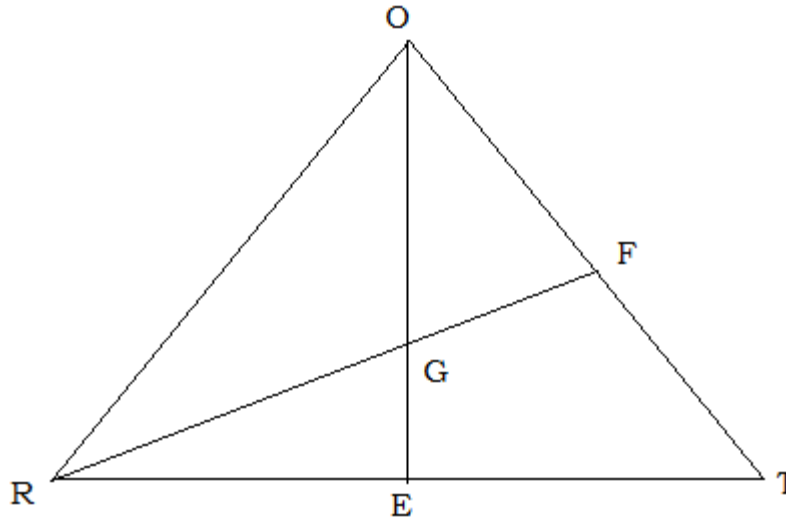
Calculate;

- (a) His monthly taxable income
- (b) Tax paid annually
- (c) His monthly net income to the nearest dollar if 1\$(US dollar) =UGX.3650/=.

2. Town A and B are 600km apart. At 9.30am Mubaka was 120km away from town A moving towards Town B on a motor cycle at a speed of 80km/hour, when Byakuno set off from town A in a saloon car moving nonstop at 100km/hour towards town B. At Byakuno overtook Mubaka and they continued their journey. By using calculations without drawing the graph, determine;

- (i) The distance from A when Byakuno overtook Mubaka.
- (ii) The time when Mubaka set off from town A.
- (iii) The time(s)when Byakuno and Mubaka arrived at Town B.

- (iv) Difference in time(s) of arrival of the two men.
4. In the figure, E is a midpoint of RT, F is on T such that $\overline{OF} : \overline{OT} = 3 : 5$ and G is the point of intersection of lines OE and RT.



- (a) Given that $\mathbf{OR} = \mathbf{r}$, $\mathbf{OT} = \mathbf{t}$, express in terms of \mathbf{r} and \mathbf{t} the vectors \overrightarrow{OE} and \overrightarrow{RF}
- (b) Given that $\overrightarrow{RG} = m \overrightarrow{RF}$ and $\overrightarrow{OG} = n \overrightarrow{OE}$. Find the scalars m and n .
- (c) Find the ratio in which G divides RF .

S3 HISTORY

- 1(a) Describe how the British applied indirect rule in East Africa.
- (b) What were the effects of indirect rule?
- 2(a) Explain the Organisation of the Zulu state in the 19th Century.
- (b) What led to the collapse of the Zulu State?

S3 ENGLISH

Choose one question.

1. (a) Write a story based on the saying “patience Pays”
1. (b) Write a story beginning “it was late at night and everybody had gone to sleep. I was very frightened

S3 COMMERCE

1. a) Explain the meaning of the following terms as used in stock exchange.
- i) Gilt edged securities
 - ii) Blue chips
 - iii) Bulls
 - iv) Stags
- b) Outline the differences between **shares** and **debentures**

- c) Explain any **four** roles of stock exchange in the development of a country.
2. a) What is meant by the term **consumer protection**
 b) Explain any **five** reasons why the government of Uganda protects the consumers.
 c) Outline any **four** methods employed by the government of Uganda to protect consumers.
3. a) Describe the **major** types of ware houses.)
 b) Farmers from Kyomya west Budondo who produce maize have agreed to construct a ware house in their village to store maize however they don't know the key things that a good ware house should have. Advise them on what it should have to make it good.
4. a) Distinguish between **standing order** and **credit transfer**.
 b) What are the factors a commercial bank manager may consider before giving a loan to any member of the public?
 c) Mutaka was given a cheque by Nkolwa and Mutaka took it to Stanbic bank. However, the bank refused to pay Mutaka. What could have gone wrong?
5. a) Explain any **six** factors considered when choosing a means of transport.
 b) A trader wants to transport gold and glasses from Uganda to United States of America (U.S.A)
 i) Identify a suitable form of transport that he can use.
 ii) Outline **four** advantages and **three** disadvantages of using that form of transport.

S3 IRE

1. How did Islam in Uganda benefit from the emergency of the following groups?
 (a) The Nubians.
 (b) Muslim refugees.
2. Show the factors for the spreading of Islam in the following areas;
 (a) Bunyoro.
 (b) Eastern Uganda.
3. (a) Give the contributions of Mutesa I to the spread of Islam in Uganda.
 (b) Give the influence of the Arabs and Swahili Muslims to the spread of Islam in Buganda.
4. (a) Describe how the Juma-Dhuhr sect was established in Uganda.
 (b) How has it contributed to the growth of Islam in Uganda?
5. Outline the prohibited foods and drinks, giving reasons for their prohibition.
6. (a) Explain the Islamic teachings regarding work.
 (b) Why is work so much emphasized in Islam?
7. "Islam very much emphasizes the health living of mankind."
 How is the health of the following categories of people being compromised in your society?
 (a) Women

- (b) Children
- 8. (a) Account for the rampant defilement and fornication among the youth?
- (b) What guidance does Islam offer to solve the above?

S3 GEOGRAPHY

6. Study the table below showing the number of tourist in East Africa (2004 – 2008) and answer the question that follow:

Year	Number of tourists
2004	350,981
2005	380,321
2006	439,846
2007	456,388
2008	475,201
Total	2,102,739

- a) i) Draw a line graph to show the above information.
 - ii) Describe the trend in the number of tourists as portrayed in the table and graph drawn in (a) i) above.
 - b) Explain the factors which have led to the trend in (a) (ii) above.
 - c) Outline the problems facing the tourist industry in East Africa.
 - d) Outline the measures being taken to improve the tourist industry in East Africa.
2. Study table I. below showing climate of station A and answer the questions that follow:

TABLE I CLIMATE OF STATION A

Months	J	F	M	A	M	J	J	A	S	O	N	D
Temp (0C)	30	31	31	30	29	28	28	28	28	29	30	30
R/F (mm)	25	25	50	100	275	500	900	925	700	300	125	25

Source: W.J. Means: A Geography of Africa Pg 37.

- a) Draw a suitable graph to show the climate of station A.
- b) Calculate the:
 - i) mean annual rainfall of station A.
 - ii) Annual range of temperature for station A.
- c) Describe the climate of station A.
- d) i) State the Hemisphere in which station A is located.
- ii) Outline the economic activities that can be carried out around station A.

Physics

ANSWER ALL QUESTIONS

Where applicable use:

Acceleration due to gravity	g	=	10ms^{-2} .
Density of water		=	1000kgm^{-3} .
Density of mercury		=	13600kgm^{-3} .
Speed of light in vacuum	c	=	$3 \times 10^8\text{ms}^{-1}$.
Speed of sound in air	v	=	300ms^{-1} .
Specific heat capacity of water		=	$4200\text{Jkg}^{-1}\text{C}^{-1}$.
Specific latent heat of ice		=	336000Jkg^{-1} .
Specific latent heat of steam		=	2260000Jkg^{-1} .

1. (a) (i) State the laws of refraction of light. (2)
(ii) Define refractive index of a medium. (1)
(b) Describe an experiment to determine the refractive index of a glass block. (6)
(c) With aid of a ray diagram explain the terms real and apparent depth. (4)
(d) A ray of light travels from air to water of refractive index 1.33. Find the angle of incidence when the angle of refraction in water is 30° . (3)
(e) Describe the construction and working of the prism periscope. (4)
2. (a) Define the terms:
(i) Tensile stress. (ii) Tensile strain. (iii) Young's modulus of elasticity. (3)
(b) (i) Distinguish between a ductile and a brittle material giving one example of each. (3)
(ii) Sketch a labeled strain-stress graph for a typical ductile material. (4)
(c) Explain why bicycle frames,
(i) are hollow steel pipes but not solid steel rods. (3)
(ii) are made in triangular structures instead of rectangular ones. (2)
(d) (i) Distinguish between a strut and a tie. (2)
(ii) Describe how concrete is reinforced. (3)
3. (a) Define principle focus and focal length of a converging lens. (2)
(b) With aid of ray diagrams distinguish between spherical aberration and chromatic aberration. (4)
(c) Describe how to estimate the focal length of a converging lens. (3)
(d) An object 4cm tall is placed 8 cm from a convex lens of focal length 12cm. By means of an accurate ray diagram determine:
(i) Image position. (ii) Image size. (iii) Image nature. (5)
(e) With aid of diagrams describe the two eye defects and how they are corrected. (6)

LUGANDA
KOLA EBIBUZO BYONNA MU LUPAPULA LUNO
EKITUNDU A

1. Soma embooji eno n’oluvannyuma oddemu ebibuuzo ebigikwatako

OLUVANNYUMA lw’amaka ga Ssaabalabirizi okuzindibwa n’asongwamu n’emmundu, Abalabirizi baawandiikira pulezidenti Idi Amin ebbaaluwa ku ebyo ebyaliwo era nga bamusaba okumusisinkana. Wabula eno ye *yavaako akabasa* akavaako okuttibwa kwa Ssaabalabirizi. Ebbaluwa eno ekyusiddwa n’efunzibwa Edward Sserinnya, egenda bweti:

Ekkanisa ya Uganda, Rwanda,
Burundi ne Boga Zaire, P.O Box 14123,
Kampla, Uganda.

10th February, 1977

Eri Omukulembeze w’eggwanga, Al-Haji, Field Marshal, Dr. Idi Amin Dada, V.C, D.S.O,
Pulezidenti wa Uganda Obulamu Bwonna,

Ofiisi y’omukulembeze, Kampala – Uganda.

Ow’ekitiibwa Pulezidenti, okusenziira ku lukiiko lw’abalabirizi ba kkanisa ya Uganda, Rwanda, Burundi ne Boga-Zaire, lwe twatuddemu nga February, 8, 1977 n’obuwombeefu tusaba okukutuusaako okunyolwa kwaffe ng’ekkanisa n’Abakristayo eri gwe pulezidenti era tukusaba obeeko ky’okola. Mu kiwandiiko kyaffe kino, tetugenderera kuwakanya ddembe lya gavumenti kwaza na kukwata oyo yenna aba azzizza omusango, era tukkiriza nti Gavumenti yateekawo enkola n’emitendera egiwa abatuuze baayo okumanya ekyo kye bagisuubiramu. Enkola n’emitendera gino giwa poliisi, ebitongole ebikessi n’eby’okwerinda engeri gye zirina okukolamu emirimu gyabyo, singa emitendera gino bagigoberera nga bakola emirimu gyabwe kiwa omuntu waabulijjo essuubi nti *ebyokwerinda biri gguluggulu* ate ne kiteekawo omukwano n’obwesigwa wakati wa b’ofiisa n’omuntu waabulijjo. Wabula ate bwe bava ku mulamwa gwe balina okutambulizaamu emirimu gyabwe, kino kisobera abantu n’okulowooza nti obulamu bwabwe *buli mu matigga*.

Tukyalina okunyolwa okw’amaanyi ku byaliwo ku Lwomukaaga lwa February 05, 1977, ab’ebyokwerinda bwe baawaguza ekikomera ne bayingira mu luggya lw’amaka ga Ssaabalabirizi e Namirembe. Ow’ekitiibwa Pulezidenti ekyagwaawo tekibangawo mu byafaayo bya kkanisa ya Uganda wadde Uganda ng’ensi. Abaserikale bano okumanya bazibu, baddirira omusajja gwe baali bakutte nga bamaze okumutulugunya ne *bamukozesa ng’akanyeebwa* okusikiriza Ssaabalabirizi okuggulawo kuba yalaajanira ku luggi

ekyamuleetera ekisa okuggulawo okuyamba omuntu ali mu bulumi. Okukozesa omusajja amaze okutulugunyizibwa okusobola okufuna amawulire kuba kubonyabonya okuteetaagisa eri abantu abatalina musango.

Ssaabalabirizi olwali okubandulawo oluggi, abasajja ababagalidde emmundu abaali beekwese ne bakukunukayo ng'eno bwe bakokiinga emmundu nga bwe bamusaba aleete emmundu z'alina. Wadde nga Ssaabalabirizi yagezaako okubuuza 'mmundu ki?' naye nga tewali amuwuliriza. Omusajja omu yamutunuzaamu omumwa gw'emmundu mu lubuto n'amusindika n'agwa munda mu nnyumba, nga bwe bamupeeka okuleeta emmundu z'alina. N'olw'ensonga eyo, tutuusa okutya n'okuwakanya engeri omukulumbeze ow'oku ntikko mu kkanisa ya Uganda, Rwanda, Burundi ne Boga-Zaire gye yayisibwamu era tujja kulaga kino kye kitegeeza eri Abalabirizi abalala n'Abakulisitaayo bonna okutwaliza awamu.

Ow'ekitiibwa Pulezidenti, obadde ojja okyogera lunye ku mikolo mingi nti abakulembeze b'eddiini ba njawulo mu nsi muno, obakwata n'ekitiibwa ekya waggulu, nga kino kibadde kitusanyusa, naye ate kati olinga eyeekuba endobo ku by'ozze oyogera n'enneeyisa y'abaserikale bo, kino nga kkanisa kitusobedde. Tetukirinaako mutawaana okwaza amaka ga Ssaabalabirizi singa wabaawo obwetaavu, wabula bandizze misana ate wandiweerezza b'ofiisa ab'obuvunaanyizibwa abagya mu kitiibwa kye, naye okujja ekiro ne batandika okwaza ennyumba ye ekiro ate ku mudumu gw'emmundu kiwa ekifaananyi ekibi ne kiteeka eby'okwerinda bya Ssaabalabirizi n'Abalabirizi abalala mu bwerinde.

Embeera eno etadde ebyokwerinda kw'omuntu waabulijjo mu kaseera akazibu, kuba kino ekituuse ku Ssaabalabirizi n'Omulabirizi w'e Bukedi ntikko y'ebyo ebizze bituuka ku Bakristaayo kubanga tuziise bangi abakubiddwa amasasi, abamu emirambo gyabula ate abalala babuziddwaawo n'emmotoka zaabwe naye nga byonna birina akakwate ne basajja bo abakulira eby'okwerinda. Mu kuwumbawumba, ow'ekitiibwa Pulezidenti, tuli basanyufu olw'okutuwa omukisa okutuusa ensonga zaffe gy'oli.

“Ku lwa Katonda n'ensi yaffe”

- i. Ppulezidenti abalabirizi baamuwandiikira ku nsonga ki enkulu?
(Obubonero 3)
- ... ii) Ebbaluwa eyawandiikibwa yaleetera etya ekanisa ya Yuganda obuzibu? (Obubonero 3)
- iii) Ab'ebyokwerinda baava batya ku mulamwa okusinziira ku balabirizi? (Obubonero 5)
- iv) Ppulezidenti Idi Amini yeekuba atya endobo? (Obubonero 5)
- v) Ekiba ekisembayo kiraga bizibu ki ebyali mu Yuganda? (Obubonero 2)

vi) Ebigambo bino bitegeeza ki? (Obubonero 6)

- Yavaako akabasa
- Ebyokwerinda biri gguluggulu
- Baamukozesa ng'akanyeebwa
- Birina akakwate ne basajja bo
- Okyogera lunye
- Mu kuwumba wumba

(vi) Emboozi eno giwe omutwe (akabonero 1)

EKITUNDU B

Kola nnamba 2 (a) ne 2 (b)

2. (a) Maliriza engero zino nga bwezoogerebwa.
 - i. Omukazi muggya kabugo kakadde
 - ii. Bw'osika ekitajja.....
 - iii. Atabubira nsiko ye
 - iv.akazinyisa atanywedde mwenge
 - v. Omukazi muggya nsingo ya munya
 - vi. Ssenkusigule nkusigule
 - vii. Kabbo ka muwala
 - viii. Ennindiriza
 - ix. etuusa mugenyi.
 - x. Atunda ayolesa

2(b) Nnyonnyola amakulu g'enegro zino wammanga

- i. Akwana akira ayomba
- ii. Togaya kyama kya muto
- iii. Akusigula takugula
- iv. Omusango teguvunda
- v. Embwa enjizzi ezaala enkolya.

MERRY X-MASS AND HAPPY NEW YEAR