

HIGH SCHOOL EXAMS

FORM 3 M/SCHEMES



COMPLETE FORM THREE M/SCHEMES



HISTORY FORM 3 MARKING SCHEME

SECTION A – Answer all Questions. (20mks)

1. Define the term scramble for Africa. (1mk)

Refers to the rush and struggle among European power for colonies in Africa.

2. Give two diplomatic methods used by European power to acquire colonies. (2mks)

Signing of treaties

Treachery

3. State two European powers that were involved in the Egyptians question. (2mks)

Britain

France

4. Highlight any two terms of the Berline conference of 1884 – 1885. (2mk)

Declaration of sphere of influence

River congo and Niger to remain as free areas for navigation

Establishment of effective accupation

Stamp out slave trade.

5. Name the campaign method through which Kinjikitiles ideas spread in Tanganyika. (1mk)

Whispering campaign called jujila / Njwinyira

6. Give two reasons why Africans in Tanganyika were against the use of Akidas by the German colonial administrators. (2mks)

They were brutal

They were foreigners

7. Name two treaties signed between lobengula of Ndebele and the British. (2mks)

The moffat treaty

The Rudd concession treaty

8. Outline any two terms of the Heligoland ireaty of 1890. (2mks)

The sultan of Zanzibar retained 16km coastal strip

Germany abandon her, claim over witu in exchange of British Heligoland

Germany officially recognized Uganda as British sphere of influence

Germany acquired strip of land on lake Tanganyika and purchased the coast of Tanganyika from the sultan of Zanzibar.

9. Identify two groups whose special rights are catered for in the Kenyan constitution. (2mks)

Children

The Arrested

People with disabilities

Elder members of the society

Youth

10. Give two functions of the Kenya National Human Right and Equality Commission (KNHREC) . (2mks)

- **The promote respect for human right and develop culture of human right in the republic**

- **To promote gendre equality and equity generally.**

- **To monitor investigate complains about abuse of human rights.**

- **To report on complains investigated and to take remedial action.**

11. State two reasons for the establishment of local government in Kenya during the colonial period.

- **To provide a way for the government to understand the African better and top contain them**



- To ensure proper restriction of Africans in reserves.
- To encourage and develop a sense of responsibilities among African
- To provide a forum for Africa to air their view.

SECTION B

Answer any two questions in this section. (30mks)

12. a) Outline five major characteristics of Human Rights (5mks)

They are universal

They are indivisible

Human rights have limitations

They may be suspended under certain circumstances

They are inherent.

- b) Explain five principles of democracy. (10mks)

- Democracy should have an open and accountable mass media that can be held accountable by the public.

- It should have people's participation in matters of government through elections

- Another basic truth of democracy is Freedom of speech, debate and enquiry in order to create a healthy political culture among people.

- There should be equality before the law. All citizens should be given equal ability to seek justice.

- Economic democracy should be promoted. Economic democracy is enhanced by decentralization of economic power to empower citizens

13. a) Highlight five reasons why Lewanika of the Bulozi collaborated with the British. (5mks)

- Lewanyika wanted to maintain his position as a king/ leader of bulozi

- He wanted to preserve and maintain independence of his kingdom

- He was influenced by a missionary Francois coillando since missionaries would give him modern and western education.

- **He was advised by Chief Khama of the Ngwato community who had collaborated with Europeans earlier**
- **He wanted the British to protect him from Portuguese, Boer and the Germans.**
- **Lewanika saw futility of fighting the British.**

- b) Explain five reasons why Samori Toure resisted French Colonisation in west Africa. (10mks)

i. **Samori Toure wanted to safeguard the independence of his empire. He termed French force as intruders who wanted to acquire his land.**

ii. **He was not willing to lose the rich Bure mines which were his main sources of wealth.**

iii. **France was selling firearms to his enemies such as Tieba of sikassa.**

iv. **The British refused to assist him in fighting the French as they were bound by account of non interference.- state in the Berlin conference**

v. **The French came at a time when Samori empire was at its peak enjoying military supremacy and economy prosperity.**

vi. **Samori being a trader had economic prosperity which he obtained from free town. Being a trader had modern firearms.**

14. a) Give five reasons why the British used Imperial British East African Company (IBEA) to administer her possession. (5mks)

- i. **Lack of enough personnel to administer the colonies**



- ii. Unwillingness to incur huge cost of administration and occupation.
 - iii. It was a way of creating jobs for their citizens.
 - iv. Fear of resistance from the native Africans.
 - v. IBEA Company was willing to carry out the task thus benefit Britain economy.
- b) Explain five reasons for Nandis long resistance against British invasion of their territory between 1894 -1905. (19mks)
- i. The Nandi community received military assistance from their cousin the Kipsigis.
 - ii. They used guerilla warfare which was favored by the forested vegetation which they were familiar with.
 - iii. They were inspired by their leader Orkoiyot who was a symbol of unity.
 - iv. The Nandi were mixed farmers, this sustained them even when British applied the scotched earth policy.
 - v. The wet and cold climate caused tropical diseases among the British thus reducing their manpower.
 - vi. Availability of weapons which were locally manufactured from stolen materials from the rails and telegraph wires.



**FORM THREE
HISTORY & GOVERNMENT
MARKING SCHEME**

SECTION A: (20 MARKS)

Answer all the questions in the spaces provided.

1. Name two sub-tribes of the Mijikenda. (2 mks)
 - Jibana
 - Chonyi
 - Digo
 - Duruma
 - Rabai
 - Kauma
 - Giririama
 - Ribe
 - Kambe

2. Identify one custodian of oral traditions. (1 mk)
 - Old person
 - Official story teller
 - Well trained court worker

3. Give one main reason why the world is referred to as global village. (1 mk)
 - Revolutionized communication has reduced distance between different parts of the world.

4. Give one negative effect of scientific inventions in medicine. (1 mk)
 - Drugs are very expensive.
 - Have led to increased abortions
 - Drugs are open to abuse and misuse.
 - Careless disposal of medical waste may be harmful

5. State the main purpose of Eunoto ceremony among the Maasai community in Kenya. (1 mk)
 - To graduate Maasai moran from warriors to junior leaders

6. Give two terms of Anglo-Germany Treaty of 1890. (2 mks)
 - Germany abandoned her claim over within exchange of Heligoland
 - Germany officially recognized that Uganda was a British sphere of influence.
 - Germany acquired a strip of land in L. Tanganyika

7. Give the main reason why the British were able to conquer Kenyan communities during the 19th century. (1 mk)
 - Military superiority of the British

8. Give one main reason why Ethiopia was not colonized by Europeans in the 19th century. (1 mk)
 - Successfully defeated the Italians in the battle of Adowa

9. What do you understand by the terms plebiscite and initiative as ways through which direct democracy can be exercised today? (2 mks)
 - Initiative – This is a practice where citizens introduce bills for parliamentary discussions or debate , then refers the discussed bills back to the citizens for approval.

10. Identify the traditional oaths administered by the Agirama to unite them in their resistance against the British. (2 mks)
 - Mukushekushe for women
 - Fisi for men



11. State two political results of industrial revolution in Europe. (2 mks)
- **It led to scramble for and partition of Africa**
 - **It gave rise to Marxism ideology that condemned capitalism.**
12. Identify any two political reasons that led to the scramble for colonies in Africa. (2 mks)
- **The unification of Germany**
 - **Nationalism – public opinion**
 - **Militarism**
13. What was the role of Mekatilili wa Menza in the resistance against the British? (2 mks)
- **She encouraged the Agiriama by administering oaths to face British.**
 - **She presented grievances of the Agiriama**
 - **She rallied the people together against the enemy (British)**
 - **She highlighted the role of women in the struggle for independence.**

SECTION B: (30 MARKS)

Answer any two questions from this section.

14. (a) Identify the first three Christian missionaries to come to the Kenyan coast. (3 mks)
- **Ludwig Krapf**
 - **John Rebman**
 - **Jacob Erhardt**
- (b) Explain six factors that facilitated spread of Christianity in Kenya. (12 mks)
- **Some African communities were friendly to the missionaries.**
 - **Missionaries learnt the local languages of the people among whom they worked.**
 - **Missionaries enjoyed the support of Seyyid Said. He gave them introductory letter to the coastal rulers.**
 - **They used African converts in their work.**
 - **The missionaries used Kiswahili, the language widely spoken at the coast.**
 - **Building of Kenya-Uganda railway facilitated their movement.**
 - **Discovery of quinine enabled missionaries fight diseases.**
 - **Other activities such as education and health influenced Africans into conversion.**
15. (a) State five reasons for Maasai collaboration. (5 mks)
- **The Maasai were weakened by both human and animal diseases at the time of British penetration.**
 - **Natural calamities e.g prolonged drought destroyed grass and led to death of animals.**
 - **Severe famine brought by natural calamities led to high death toll in 1891 forced them to seek food from British.**
 - **The emergence of the Nandi as a strong power made them to seek help from British.**
 - **Lenana wanted the British to give him military support to overcome Sendeyo.**
 - **Lenana wanted to retain his resistance and that of his kingdom.**
 - **The Maasai wanted to get back their women and children from the Agikuyu.**



(b) Explain five results of the Maasai collaboration with the British. (10 mks)

- **The Maasai lost their independence.**
- **The Maasai were rewarded with cattle acquired from uncooperative communities like the Nandi.**
- **Their land was alienated and pushed to reserves**
- **The Maasai were employed as mercenaries to subdue resisting communities.**
- **It led to conflict between Lenana and Legalism over land given to British.**
- **They allowed the British to build their railway through their territory.**
- **The British supported Lenana against Sendeyo in 1894 disputes.**
- **They were protected against raids from their enemies.**

16. (a) Identify three objectives of the local native councils during the colonial period. (3 mks)

- **To provide forum through which the old, young, educated Africans could express themselves.**
- **To provide means through which the government could come to understand the Africans better to contain him.**
- **To ensure proper restriction of the Africans in their reserves.**

(b) Explain six causes of the Akamba resistance. (12 mks)

- **Lack of respect for traditions e.g. cutting down of the Ithembo treed for use as a flag post.**
- **The British prevented Akamba warriors from raiding the Agikuyu**
- **Loss of independence for the Akamba.**
- **The Akamba were forced to provide labour for public works.**
- **Misconduct of company officials who stole from the Akamba and raped women.**
- **Description of long distance trade, traders conspired to attack the British.**
- **Establishment of garrisons in Ukambani to prevent skirmishes between Akamba and their neighbours.**



JINA.....NAMBARI YA USAJILI.....KIDATO.....

MUDA-MASAA MAWILI

KIDATO CHA TATU

UFAHAMU

Soma taarifa hii kasha ujibu maswali yanayofuata.

Lugha inaweza kueleza kwa jumla kuwa ni mfumo wa mawasiliano.Haiyamkiniki kwa mtu ye yote kueleza chanzo au kiini cha lugha na sote tunakubaliana kuwa matumizi yake yameanza tangu kuumbwa kwa binadamu kwani ni vigumu kukisia kuwepo kwa jamii ya watu bila lugha ya mawasiliano yoyote ile.

Katika taifa lolote , huwapo na lugha moja au hata zaidi ya moja ambayo huwa ndicho chombo cha mawasiliano ya taifa katika nyanja za :elimu,maandishi,siasa na biashara.Kwa mfano, mataifa kama Kanada hutumia lugha mbili kwa usawa kama lugha za taifa na za kikazi.Maana ya lugha ya taifa ni lugha moja ambayo huteuliwa kutumika katika shughuli zote za taifa hasa katika nchi yenye lugha nyingi za kikabila.Lugha ya taifa ni muhimu sana kwa maisha na maendeleo ya taifa lolote lile.Lugha hii huwa ndiyo kiungo cha kuenezea umoja na uelewano mionganoni mwa jamii nyingi tofauti na huwa kama kitambulisho kwao kuwa wao ni ndugu wa jamii moja kubwa ,yaani taifa lao.

Kenya ni mfano mzuri wa taifa lenye lugha nyingi zinazozidi 40 za vikundi vidogo vidogovya kikabila.Hapo kabla ya miaka mia moja hivi iliyopita kila kimojawapo cha vikundi hivi kilijitambulisha kama khabila huru.Baada ya kuja kwa Serikali ya Kikoloni na hasa baada ya Kenya kujinyakulia uhuru,haja ya kuunganisha raia wote chini ya taifa moja lenye uongozi na shabaha moja ilikuwa ndilo jambo lililozingatiwa sana.Kwa hivyo utamaduni wa taifa la Kenya ni mchanganyiko wa tamaduni za watu wengi wenye mila,desturi imani na itikadi tofauti.Utamaduni humaanisha jumla ya amali na tabia za watu wa jamii fulani.Amali hizi zinafungamanisha fikira,ustaarabu,mila,taasisi na sanaa za aina zote za jamii inayohusika .Ili kuijeneza na kujiimarisha ,taifa huhitaji chombo hicho kuwasiliana na kuwaunganisha watu wake wenye asili mbalimbali.Chombo hicho huwa ni lugha ambayo siyo tu kwamba ni sehemu ya utamaduni wa jamii bali pia ni njia muhimu sana ya kutawanya na kustawishia ule utamaduni.

Katika taifa lenye lugha nyingi kama Kenya kwa mfano,lugha ya taifa inayozungumzwa na kueleweka na baadhi kubwa ya raia ambayo imekiuka mipaka na tofauti za kikabila ni njia muhimu sana ya kueneza maongezi ya taifa na kuleta ufahamikiano bora kote nchini.Kama zilivyo taasisi kama wimbo wa taifa ,bendera ya taifa au bunge la taifa,lugha ya taifa ndicho



kielelezo cha taifa lolote lile lililo huru.Lugha kama hiyo huvunja na kukomesha hisia za kibinafsi na kikabila na badala yake kuunda moyo wa uaminifu wa kitaifa.

Zaidi ya kuwa chombo cha mawasiliano,lugha ni kielelezo cha fikira na hisia za binadamu.Lugha ya watu fulani haituelezi tu ujuzi au maarifa yao bali pia mtazamo wao wa kimaisha falsafa na mawazo yao.Kwa ufupi lugha hutufahamisha namna akili za watu waizungumzaya ile lugha zinavyofikiri na kufanya maazimio.Lugha ni sehemu ya utamaduni wa taifa tulimozaliwa na lazima lugha hiyo ifunzwe katika muktadha wa maisha ya jamii ihusikayo.Utamaduni wa jamii havitenganiki na lugha yake.

Maswali

(a) Ni nini fasiri ya neno lugha ? (Alama 2)

Lugha ni mfumo wa mawasiliano 1×2

(b) Tofautisha baina ya lugha ya taifa na lugha ya kikazi. (Alama 2)

- i. **Lugha ya taifa ni lugha inayotumika katika shughli zote za kitaifa pia inaeneza umoja na uelewano mionganoni mwa jamii nyingi tofauti.1×2**
- ii. **Lugha na kikazi ni lugha inayotumiwa kuendeshea shughli rasmi za taifa. 1×2**

(c) Kwa nini lugha ya taifa huhitajika sana katika nchi kama Kenya. (Alama 2)

- i. **Huhitajika ili kueneza maongozi ya taifa na kuleta ufahamikiano kote nchini.1×2**
- ii. **Huvunjika na kukomesha hisia za kibinafsi na kikabila.**

(d) Taja kazi nne kuu zinazotekelawa na lugha ya taifa. (Alama 4)

Kuendesha elimu katika maandishi,siasa na biashara. 1×4

(e)Eleza maana za maneno na mafungu yafuatayo kama yaliviyotumiwa katika taarifa hii:

(i) Haiyamkiniki.

Haiwezekani

(ii) Amali na tabia za watu.

Matendo na hulka za kibinadamu.



(iv) Kielelezo.

Imepita/imevuka mipaka.

(v) Muktadha wa maisha ya jamii.

(Alama 5)

Mazingira.

(Jumla alama 15)

2.Sarufi na matumizi ya lugha(ALAMA 25)

(a) Taja vigezo viwili kuainisha konsonanti.

(Alama 2)

Mahali uhewa inapozuiliwa.

Jinsi hewa inavyozuiliwa.

Hali ya mtetemeko wa nyazi za sauti.

1×2

(b) Tofautisha sauti zifuaatazo

(i)/a/ na /i/

/a/Ni irabu ya chini kati nayo.

/i/ ni irabu ya mbele juu.

(ii)/e/ na /o/

(Alama 2)

/e/ ni irabu ya mbele kati

Na /o/ ni ya kati nyuma

Pia /e/ midomo hutandaza

Nayo /o/ midomo huviringa.

(c) Ainisha aina za vivumishi katika sentensi ifuatayo.

(Alama 2)

Mwalimu mzee alitufundisha vizuri ile mada ngumu.



Mzee-kivumishi cha sifa

Ngumu-sifa 1×2

(d) Bainisha kirai husishi. (Alama 1)

Paka alipanda juu ya mchungwa.

Kirai husishi-juu na 1×1

(e) Tumia o-rejeshi katika sentensi hii.

Mwanafunzi ambaye alitumwa nyumbani juzi hajarudi shulen. (Alama 2)

Mwanafunzi aliyetumwa nyumbani juzi hajarudi shulen. 1×2

(f) Onyesha muundo wa kiarifa.

Mama aliondoka jana asubuhi. (Alama 2)

Muundo wa kiarifa (KT)

KT(T+E+E) au KT(T+KE(E))

(g) Ainisha mofimu/sehemu za kisarufi.

Kililiwa. (Alama 3)

Ki-ngeli

li- wakati

l-mzizi

iw-kauli

a-kiishio

1×3

(h) Tunga sentensi yenyе sehemu.

KN(N+V+E)+KT(T+N) (Alama 3)

Mfano: Mwanafunzi mfupi sana alicheza mpira



N V E T N

Mwalimu akadirie majibu ya wanafunzi

(i) Taja matumizi mawili ya:

Kiambishi li.

(Alama 2)

li- ngeli ya Li-ya(umoja)

li-wakati uliopita

li-kiwakilishi myambuliko(kutendea)

li-kitenzi kiwakilishi ki

1×2

(j) Shungi ni kwa nywele na zabibu ni kikonyo. (kikonyo cha zabibu) (Alama 1)

(k) Geuza kwa usemi halisi. (Alama 3)

Rais wa nchi alisema kuwa matokeo ya BBI yataleta wiano katika taifa nzima.

Rais wa nchi alisema , “Matokeo ya BBI yataleta wiano katika taifa nzima.”

(l) Andika visawe vya: (Alama 2)

- i. Wakati-**njeo**
- ii. Damu- **ngeu**

1×2

Isimu jamii. (Alama 10)

1. Eleza mikakati ambayo serikali ya kenya imeweka ili kufanikisha ukuaji na uenezi wa lugha ya Kiswahili nchini. (Alama 10)

Kufanya Kiswahili lugha rasmi.



Kuwa somo la lazima.

Matumizi ya Kiswahil mbungeni na mikutanoni.

Kuboresha taasisi inayoendeleza lugha ya Kiswahili.

Kuidhirisha uchapishaji wa vitabu vya Kiswahili.

Kuunda sera au sheria endelezi za lugha ya Kiswahili.

5×2



**MATHEMATICS
FORM THREE
TIME: 1 HOUR**

INSTRUCTIONS:

Attempt all the questions in the spaces provided.

1. Form the quadratic equation whose roots are:

(a) -2 and -3

(2 mks)

$$(X+2)(X+3) = 0$$

$$X(X+3) + 2(X+3) = 0$$

$$X^2 + 3X + 2X + 6 = 0$$

$$X^2 + 5X + 6 = 0$$

(b) 7 and -11

(2 mks)

$$(X-7)(X + 11) = 0$$

$$(X + 11) - 7(X + 11) = 0$$

$$X^2 + 11X - 7X - 77 = 0$$

$$X^2 + 4X - 77 = 0$$

2. Find the minimum possible perimeter of a regular hexagon whose side measures 12.6cm to one decimal places.

(2 mks)

$$\text{error} = \frac{0.1}{2} = 0.05$$

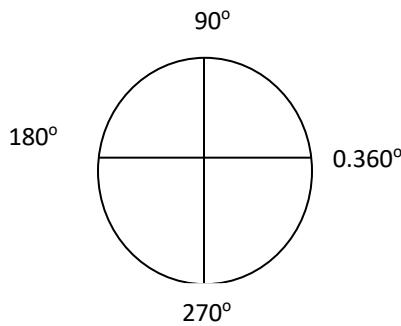
$$\text{Minimum length} = 12.6 - 0.05 = 12.55\text{cm}$$

$$12.55 \times 6 = 75.3\text{cm}$$

3. If θ lies between 0° and 360° and $\sin\theta = 0.5$, find all the possible values of θ . (3 mks)

$$\sin\theta = 0.5$$

$$\theta = \sin^{-1} 0.5 \quad \theta = 30^\circ, 150^\circ$$



$$\theta = 30^\circ \text{ and } 150^\circ$$

4. Find y if $\log_2 y - 2 = \log_2 92$

(3 mks)

$$\log_2 x = 2$$



$$X = 2^2 = 4$$

$$\log_2 y - \log_2 4 = \log_2 92$$

$$\log_2 \frac{y}{4} = \log_2 92$$

$$4 \times \frac{y}{4} = 92 \times 4$$

$$y = 368$$

5. Solve the following equation using completing the square method:

$$X^2 - 8X - 30 = 0$$

(2 mks)

$$X^2 - 8X = 30$$

$$X^2 - 8X + \left[\frac{-8}{2} \right] = 30 + \left[\frac{-8}{2} \right]$$

$$(X - 4)^2 = 30 + 16$$

$$(X - 4)^2 = 46$$

$$X - 4 = \pm 6.782$$

$$X = 4 \pm 6.782$$

$$X = -2.782 \text{ OR } 10.782$$

6. Simplify by rationalizing the denominator

(3 mks)

$$\frac{(3 - \sqrt{2})(3 - \sqrt{2})}{(3 + \sqrt{2})(3 - \sqrt{2})}$$

$$\frac{9 - 3\sqrt{2} - 3\sqrt{2} + 2}{9 - 3\sqrt{2} + 3\sqrt{2} - 2}$$

$$= \frac{11 - 6\sqrt{2}}{7}$$

$$= \frac{11}{7} - \frac{6}{7}\sqrt{2}$$

$$= 1\frac{4}{7} - \frac{6}{7}\sqrt{2}$$

7. Simplify the following without using table or a calculator:

(3 mks)

$$\frac{\log 27 - \log 9}{\log 3}$$



$$\begin{aligned} & \frac{\log 3^3 - \log 3^2}{\log 3} \\ & \frac{2\log 3 - 2\log 3}{\log 3} \\ & \frac{\log 3(3-2)}{\log 3} \\ & 3-2=1 \end{aligned}$$

8. A positive two-digit number is such that the product of its digits is 24. When the digits are reversed, the number formed is greater than the original number by 18. Find the number.(4 mks)

$$X \cdot Y = 24$$

$$YX - XY = 18$$

$$(10y + x) - (10X + y) = 18$$

$$9Y - 9X = 18$$

$$Y - X = 2$$

$$X = \frac{24}{5Y}$$

$$\frac{Y}{1} - \frac{24}{y} = 2$$

$$\begin{aligned} \frac{y^2 - 24}{y} &= 2 \\ y^2 - 24 &= 2y \\ y^2 - 2y - 24 &= 0 \\ y &= \frac{2 \pm \sqrt{4 - 4 \times 1 \times -24}}{2 \times 1} \end{aligned}$$

$$y = \frac{2 \pm 10}{y=6}$$

$$X = \frac{24}{6}$$

$$X = 4$$

$$XY = 46$$

9. (a) Round off 395.184 to four significant figures.

(2 mks)

395.2

- (b) Truncate to three decimal place: 17.3489

(2 mks)

17.348

17.348

10. Without using mathematical tables or a calculator, evaluate:

(3 mks)

$$\frac{5.4}{0.025 \times 3.6}$$

$$\frac{55.4 \times 10000}{0.025 \times 3.6 \times 10000}$$

$$\begin{array}{r} 1500 \\ \underline{-54000} \\ 25 \times 36 \\ \underline{1} \\ \underline{1500} = 60 \\ 25 \end{array}$$

11. Juma left his home at 8.30am. He drove a distance of 140km and arrived at his aunt's home at 10.15am. Determine the average speed in km/h, for Juma's journey.

(3 mks)

$$\mathbf{10.15 - 8.30 = 1hr 45 min}$$



$$\begin{aligned} S &= \frac{D}{T} = \frac{140}{1.75} \\ &= 80 \text{ km/hr} \end{aligned}$$

12. Given that $\sin 2x = \cos(3x - 10^\circ)$, find $\tan X$ correct to 4 significant figures. (3 mks)

$$2x + 3x - 10 = 90^\circ$$

$$5x - 10 = 90$$

$$5x = 100$$

$$X = 20^\circ$$

$$\tan 20^\circ = 0.3640$$

13. (a) A line L_1 passes through the points $(3, 3)$ and $(5, 7)$. Find the equation of L_1 in the form $y = mx + c$, where m and C are constants. (4 mks)

$$\text{gradient} = \frac{7-3}{5-3} = \frac{4}{2} = 2$$

$$\frac{y-3}{x-3} = \frac{2}{1}$$

$$y - 3 = 2x - 6$$

$$y = 2x - 3$$

- (b) Another line L_2 is perpendicular to L_1 and passes through $(-2, 3)$. Find;

- (i) the equation of L_2 (3 mks)

$$2m_2 = -1$$

$$m_2 = 1/2$$

$$\frac{y-3}{x+2} = -1/2$$

$$2y - 6 = -1x - 2$$

$$2y = -x + 4$$

$$y = \frac{-x}{2} + 2$$

- (ii) The x -intercept of L_2 . (2 mks)

$$\frac{-x}{2} + 2 = 0$$

$$2 \times 2 = \frac{-x}{2} \times 2$$

$$4 = -x$$

$$X = -4$$

- (c) Determine the point of intersection of L_1 and L_2 . (3 mks)

$$\frac{-x}{2} + 2 = 2x - 3$$



$$2x + \frac{x}{2} = 2 + 3$$

$$2 \frac{1}{2} x = 5$$

$$x = 5 \times \frac{2}{5}$$

$$x = 2$$

$$y = 2(2) - 3$$

$$y = 4 - 3$$

$$y = 1$$

$$(x, y) = (2, 1)$$



AGRICULTURE FORM 3 MARKING SCHEME

1. Give four human factors affecting agriculture. (2mks)
 - I. **Health**
 - II. **Economy**
 - III. **Government policy**
 - IV. **Transport and communication**
 - V. **Cultural practices and religious beliefs**
 - VI. **Market forces.**

b. state the three forms of soil water (1 ½)

 - I. **Superfluous water**
 - II. **Capillary water**
 - III. **Hyscopic water**
2. Give 5 reasons for maintaining farm tools and equipment(2 ½)
 - I. **To increase durability**
 - II. **To reduce the replacement cost**
 - III. **Increased efficiency**
 - IV. **To avoid injury to the user**
 - V. **To avoid damage to the tool.**
3. Name the six stages involved in water treatment (3mks)
 - I. **Stage 1 : filtration at water intake.**
 - II. **Stage 2 : softening of water**
 - III. **Stage 3 : coagulation and sedimentation.**
 - IV. **Stage 4 : filtration**
 - V. **Stage 5 : chlorination**
 - VI. **Stage 6 : storage**
4. Give 5 importance of keeping livestock healthy (5mks)
 - I. **Grow well and fast enough to reach maturity quickly.**
 - II. **Good health gives animals a longer economic and productive life.**
 - III. **Healthy animals gives animals maximum production which command high market value**
 - IV. **Healthy animals will not spread diseases to other animals or human beings**
 - V. **Healthy animals are economic and cash to keep.**



- b. Explain 5 predisposing factor to livestock diseases (5mks)
- I. The species of the animals- e.g. swine fever affects only pigs and Newcastle affects only poultry.
 - II. The breed of the animal- e.g. cancer of the eye only affects the therefore breed of cattle.
 - III. Age of the animals – e.g. piglet anemia only attacks piglets, calf pneumonia attacks piglets, calf pneumonia attacks calves
 - IV. Sex of the animals – e.g. mastitis only affects lactating female animals
 - V. Colour of the animals – eg. black animals are likely to suffer from heat stress
5. The diagram below shows the reproductive system of hen. Identify the labeled parts
- b. Define the following terms as used in livestock production
- I. Selection – is the process of allowing certain animals to be parents for future generation while culling others
 - II. Hybrid vigour- this is the increased vigour resulting from crossing two unrelated superior breeds
6. Explain 5 factors to be considered when selecting a breeding stock
- I. Age- young animals should be selected. They have a longer productive life
 - II. Level of performance- animals with highest production levels should be selected.
 - III. Physical fitness- animals selected shouls be free from animals physical defects.
 - IV. Health- animals selected must be healthy. Sick animals are expensive to keep.
 - V. Body conformation- animals selected should be according to their proper body conformation.
 - VI. Temperament or behavior- animals with bad temperament or undesirable behavior should be culled.
 - VII. Quality of products- selected animals should give products of high quality
 - VIII. Mothering ability – selected animals should have a good mothering ability.
 - IX. Adaptability- selected animals should be well adapted to the prevailing climatic condition in the area
 - X. Proficiency – animals selected should be highly prolific



- b. Name three methods used in selection of livestock for breeding
- I. Mass selection
 - II. Progeny testing
 - III. Contemporary comparison
- c. Give 4 reasons for breeding
- I. To expand the inherited potential
 - II. To introduce new genes to improve production
 - III. To overcome production problem
 - IV. To satisfy consumers taste
 - V. For economic reasons .
7. State four signs of heat in cattle.
- I. Refreshment
 - II. Mounting
 - III. A slight rise in body temperature
 - IV. Slight drop in milk yield in lactating animals
 - V. Vulva swells and become reddish
 - VI. Clear or slimy mucus from vagina
 - VII. Bellowing or moving frequently
- b. Give six advantages of artificial insemination .(3mks)
- I. Controls transmission of breeding diseases and parasites
 - II. Prevents large bulls from injuring small cows
 - III. Semen can be stored for a long period of time
 - IV. Reduces expenses of rearing a bull
 - V. It is easy to control inbreeding
 - VI. It eliminates dangerous bulls from the farm
 - VII. Semen of one superior bull can be used to serve many bulls
 - VIII. It's cheap to farmers who cannot afford to buy a superior bull
8. a). Explain the meaning of the following terms.(2mks)
- I. flushing and steaming up
-flushing is giving a high plane of nutrition to the animals around service time while steaming up is the practice of providing extra feed of high nutritive value to an animal during the last week of gestation
 - II. creep feeding
-this is the feeding of young animals from birth to weaning
- b. Identify four methods used in identification of animals in the farm
- I. Branding
 - II. Ear tagging
 - III. Tattooing
 - IV. Neck strap or chain



9. Define the term culling (1mk)
-this is the removal of unproductive animals from a breeding herd or flock with undesirable character trait and leaving the productive animals
- b. Give two reasons for castration
- I. To control breeding disease
 - II. For faster growth rate
 - III. To increase quality of meat in goats
 - IV. To control breeding
10. Give four reasons for rearing bees.(2mks)
- I. Production of honey
 - II. Bees are good pollinators for many crops
 - III. They require little capital and land to keep
 - IV. The honey and bees wax are sold to earn income to the farmer
- b. Highlight four factors to be considered in siting an apiary.(2mks)
- I. Availability of water
 - II. A sheltered place
 - III. A place free from noise and other disturbances
 - IV. Away from human beings and livestock
- c. Name four materials collected by bees.(2mks)
- I. Nectar
 - II. Pollen
 - III. Propels
 - IV. Water
11. Name four methods used in preserving fish.(2mks)
- I. Freezing
 - II. Salting
 - III. Sun drying
 - IV. Smoking



**FORM THREE
BIOLOGY
MARKING SCHEME**

1. Name the characteristic of living organism illustrated by each of the activities described below:
 - a) Dressing heavily (1mrk)
Irritability
 - b) Bursting of the sporangium in the *Rhizopus sp.*(1mrk)
Reproduction
2. The diagram below illustrate a specialized cell obtained from a certain tissue.
 - a) Name the cell (1mk)
Neuron/motor neuron
 - b) Name two ways in which the cell is structurally adopted to its function (2mks)
The cell body has extensions for impulse transmission
The cell has a nucleus to control cell activities
3. In investigating a certain physiological process, student set up the apparatus as shown below and made the observation after 30 minutes as illustrated.
 - a) Name the physiological process being investigated (1mk)
osmosis
 - b) Account for the observation made at the end of the experiment (3mks)
Solution E and F are of different concentration. Water/solvent molecule move from dilute solution F to concentrated solution E . the movement continues until equilibrium is established.
 - c) State the likely identity of G (1MK)
Semi-permeable membrane
4. Distinguish between chemical and mechanical digestion (1mk)

Chemical digestion is breakdown of food into simple nutrients by enzymes that can be used by the cells while mechanical digestion is physical breakdown of food into smaller pieces to increase surface for enzyme action.
5. i) Name the respiratory structure in amoeba (1mk)
cell membrane
 - ii) Give a reason for your answer in (i) above (1mk)

amoeba is small single organism with large surface area exposed to the environment therefore diffusion occurs across the cell membrane.
6. Explain the following physiological observation
A rabbit has higher oxygen demand than a camel (3mks)

A rabbit is smaller in size than a camel hence has a higher surface area to volume ratio. A rabbit loses more heat energy per unit to the environment than a camel.



Therefore, the rate of respiration is higher to replenish lost heat, consuming more oxygen.

7. A student placed a drop of pond water in a cavity slide and observed it under the light microscope. The student observed many fast moving organism , one of which is represented in the diagram below

- a) i) Name the kingdom to which the organism belong (1mk)

protoctista

- ii) Give a reason for your answer in a (i) above (1mk)

The organism is unicellular

Present of cilia

it is eukaryotic/present of nucleus

- b) Name the structure labelled N, P and Q (3MKS)

N- contractile vacuole

P- cilia

Q- gullet/cytopharynx

- c) State one observable features that enable the organism to move fast (1mk)

Cilia

Streamlined body

8. Below is a list of organisms which belong to classes Insecta, Diplopoda, Chilopoda and Archnida: Tick, Centipede, Praying mantis, Tsetse fly, Millipede and spider. Place the organism in their respective classes in the table below. Give a reason in each case (8mks)

Classes	Organisms	Reasons
Insecta	<i>Praying mantise</i> <i>Tsetse fly</i>	<i>3 body parts</i> <i>3 pairs of legs</i>
Diplopoda	<i>Centipede</i>	<i>1 pairs of legs per segment</i>
Chilopoda	<i>Millipede</i>	<i>2 pairs of legs per segment</i>
Archnida	<i>Tick</i> <i>spider</i>	<i>2 body parts</i> <i>4 pairs of legs</i>

9. (i) What is meant by the term Binomial Nomenclature (1mk)

it is a scientific principles of double naming system governed by a set of rules which are internationally recognized.

- (ii) Give two reasons why classification is important (2mks)

to identify living organisms into their correct group for reference

to arrange information about living organisms in an orderly manner to avoid chaos and confusion.

To understand evolutionary relationships between different organisms

- (iii) State two guidelines that should be followed when handwriting scientific names (2mks)

The name should be underlined as two separate words



Generic name should begin with a capital letter while specific name should start with a small letter.

10. The diagram below illustrate the structure of bread mole.

(i) Name the part labeled **J** (1mk)

Sporangium

(ii) State the function of the structure labelled **K** (2mks)

Absorption of soluble substances

Anchorage of the mould on substate

11. The diagram below illustrate the organisms of some flowering plants

State the class of the plants to which each belong (2mks)

A – Dicotyledonae

B – Monocotyledonae

12. (i) State two external features found in the class mammalia only (2mks)

Presence of mammary glands

Body covered with fur or hair

(ii) Name the taxonomic unit that comes immediately after a phylum in classification

(1mk)

Class

13. State four structural difference between millipede and centipede (4mks)

MILLIPEDES	CENTIPEDES
<i>Body is divided into 3 body parts: head, thorax and trunk</i>	<i>Body is divided into two body parts: head and trunk</i>
<i>Have a cylindrical body</i>	<i>Have a dorsa-ventrally flattened body</i>
<i>lacks poison claws</i>	<i>Have poison claws</i>
<i>Head has 2 clumps of many simple eyes</i>	<i>Head has pair of simple eyes</i>
<i>Trunk has many segments (9 to 100)</i>	<i>Trunk has fewer segments(15 or slightly more)</i>
<i>Each segment has 2pairs of walkinglegs except the first</i>	<i>Each pair has a pair of walking legs</i>
<i>Has anterior genital aperture</i>	<i>Has posterior genital aperture</i>

14. *Plasmodium vivax* and *Plasmodium ovale* are transmitted by a mosquito. State with a reason whether the two organisms can be inter bred (2mks)

No.

Because *Plasmodium vivax* and *plasmodium ovale* belong to the same genus but different species therefore, their offspring is infertile

15. (i) Beside venation, state one other external characteristics of leaves that can be used to classify plants (1mks)

Leaf margin

Leaf petiole

Leaf tip

Leaf shape



**BUSINESS STUDIES
FORM 3
MARKING SCHEME**

Instructions

Answer All questions in section A and Any Two in section B

1. State four ways through which the price of a commodity may be determined. (4mks)

- (i) Government interventions**
- (ii) Auction**
- (iii) Tendering**
- (iv) Haggling / Bargaining**
- (v) Price mechanism**

2. Using example, differentiate between a firm and an Industry. (4mks)

Firm – single unit of an organization that brings together the factors of production to produce any given commodity eg Bata

Industry – All those firm producing the same product for a specific market eg. In petroleum industry there is shell, Agip Total any right(definition plus examples 2mks)

3. Highlight four services offered by advertising agencies to organizations in product promotion. (4mks)

- **Help organization during their logos, trademark and advertising material.**
- **They book airtime for organization in various media.**
- **They advertise on behalf of their clients**
- **They offer advisory services to their clients on selling techniques.**
- **Choose appropriate media on behalf of their clients.**

4. Define the following terms used in business;

- a) Derived demand. (1mk)

- **Demand for a product arising from demand for another product. (1mk)**

- b) Joint demand. (1mk)

- **demand that exist for products that are consumed together. (1mk)**

- c) Complimentary. (1mk)

- **Commodities that are used together eg. Car and fuel**

- d) Substitutes. (1mk)

- **Commodities that can be used instead of each other eg. Tea can a substitute for coffee.**

5. a) Elephant enterprises acquired a building valued at Ksh. 1,000,000 on 1ST Jan 2007. The building was insured with two insurance companies Zebra and Simba for Ksh 600,000 and Ksh. 400,000 respectively. In may 2007, fire damaged the building causing Elephant enterprises to suffer a loss of 20% of the building's value. Determine contribution made by Zebra and Simba to cover loss. (4mks)



$$\text{Compensation} = \frac{\text{Value of Policy} \times 100}{\text{Value of Property}}$$

loss = $\frac{20}{100} \times 1000,000$
 $= \text{Rs } 200,000$

Zebra = $\frac{600,000}{1000,000} \times 200,000$
 $= \underline{\text{Rs } 120,000}$

Samba = $\frac{400,000}{1000,000} \times 200,000$
 $= \underline{\text{Rs } 80,000}$ Winkers

b) Name and explain the principal of insurance that apply to the above statement. (2mks)

Contribution - in case where the insured has taken an insurance cover with two or more insurance companies covering the same risk, each company contribute proportionately in order to indemnify the insured.

Or

**Indemnity – the purpose of insurance is to return the insured in his/her initial financial position he/she was before the risk occurred and not to benefit.
Samba and zebra insurance companies have indemnity elephant enterprises.**

c) State reason that may necessitate double insurance. (4mks)

- When the value of property is high
- When the insurance company wishes to spread risk share liability in event of major loss.
- When the government make it a legal requirement for an insurance company to re-insure.
- When the chances of loss through the insured risks are high.
- When there is a high number of risk covered by the insurance company.

6. State any four ethical issues in product promotion.



SECTION B.

7. Explain why the small businesses have managed to succeed the presence of large scale firms. (10mks)

-No disclosing side effects that a product may have on the consumer.

- False pricing**
- Cheating on ingredients of the product.**
- Cheating on permanence of the product**
- Social cultural conflicts.**
- Negative effect on environment/ pollution**

8. Explain features of a perfect competition market. (10mks)

- Small firm are flexible – more adaptable to changing circumstances.**
 - Quick decision making- small firms involve less consultation in fast**
 - Less cost of production – small firm incur less cost of production compared to large firm have maximum profits.**
 - Simplicity of small firm – small firms are easy to manage compared to large firms/ easy to raise capital/start**
 - Availability of large market to be served by both small firms and large firms.**
- NB: do not award reason for existence of small firm but success of small firms.**

9. Explain ways in which size of a firm may be determined. (10mks)

- Large number of buyers and sellers whose action no effect on the market.**
- Uniformity of the product – commodities from different producers are identical and there is no advantage or disadvantage of buying from a particular producer**
- Freedom or exit the market at will.**
- Uniformity of buyer and sellers. All buyer are identical in the eyes of the sellers and all the sellers are identical in the eyes of the buyer.**
- Perfect knowledge of the market. Each buyer has perfect knowledge of market and increases of price other than equilibrium sellers may lose all customers.**
- No government interference prices are determined strictly by demand and supply and there is no quotas price control and other regulation.**
- No transport cost.**
- No excess supply or demand seller are able to sell all that they supply into the market and buyer are able to buy all that they require.**
- Perfect mobility of factor of production.**

10. Explain ways in which size of a firm may be determined. (10mks)

- Number of employees**
- Floor area covered by the premises**
- Capital invested**
- Sales volume**



- **Market served**
- **Production methods**
- **(give 10 mks for the explained points)**



MARKING SCHEME CRE FORM 3

1. a) Describe the triumphant entry of Jesus into Jerusalem. (7mks)

- **As Jesus entered Jerusalem, He passed through Bethphage, Bethany and the Mt. Olives.**
- **He sent two of his disciples to him a donkey which had never been ridden.**
- **He gave them instructions to tell the owner that the master needs it.**
- **The disciples brought the donkey and Jesus sat on it.**
- **As he rode on, the people spread cloaks on the road**
- **The people sand and proclaimed him as king.**
- **Some Pharisees ordered Jesus to tell people to be quite**
- **Jesus replied that if they kept, the stone s would shout.**
- **Jesus no longer hid his Messiahship.**

b) What lessons can a Christian learn from the cleansing of the temple? (5mks)

- **Christians should respect the house of God.**
- **The Church be used as a house of prayers**
- **Christians should have courage to condemn evil practices in the church and society like Jesus.**
- **The church should be free from all evils**
- **Christian should not exploit the member by asking for excessive contributions.**
- **Christians should pay more attention to righteousness than external observance.**

2. a) Outline the events that took place on Mount Olives before the arrest of Jesus. (7mks)

- **Jesus told the disciples to pray.**
- **Jesus moved a distance away from the disciples**
- **Jesus knelt down and prayer.**
- **An angel from heaven strengthened him.**
- **The disciples fell asleep**
- **Jesus awoke the disciples**
- **Judas kissed Jesus**
- **One of the disciple struck of a slave's ear.**
- **Jesus healed the man's ear**
- **Jesus asked the religions leaders why they had come to arrest him as if he was a common criminal**

b) Give six reasons why Jesus appeared to his disciples after his resurrection. (6mks)

- **To fulfill old testament prophecies about his resurrection**
- **He wanted to strengthen their faith.**



- In order to empower them to serve
- So as to commission them to be his witnesses
- To confirm to them that he was alive/power over death
- He wanted to tell them about the coming of the Spirit Spirit.
- He wanted to reassure them that he was the messiah.

3. a) Give seven reasons why Jesus sent the Holy Spirit to the disciple after his Ascension. (7mks)

- The Holy Spirit would comfort the disciples
- He was to counsel the disciples
- He would guide the disciples on what is right
- He was to convict people of their sins.
- To remind the disciples on what Jesus had taught them
- He would enable the disciples to witness Christ through the world.
- He would replace Jesus/ stay with disciples forever.
- He would empower the disciples to able to speak with courage.

b) Outline the activities that Christian engage in which demonstrate their love for God. (6mks)

- They surrender their lives to the service of God.
- They obey God's commandments.
- They worship God.
- They build places of worship.
- They spread Gospel
- They give offering to the church and material support for her programmes.
- They forgive each other
- They help the poor and the needy
- They celebrate the sacraments

4. a) Explain what the teaching of Jesus about the vine and the branches in John 15; 1 – 10 reveal about the unity of believers. (7mks)

- God is the vine dresser/ Jesus is the true vine
- Christian are the branches
- Christians are related to God through Jesus
- Unfaithful Christians are unfruitful branches which are cut away.
- The faithful Christians are pruned so as to produce more fruits
- Christians can only bear fruits if they remain united to Christ
- Christians should rely on God for providence
- Christians should keep God's commandments
- Through Christ all Christians are joined together.



B) State five causes of disunity among Christian today. (5mks)

- **Mode of worship**
- **The partaking of Holy Communion**
- **Church leadership styles**
- **Discrimination among church members**
- **Dressing styles**
- **Baptism**
- **Singing styles**
- **The gift of the Holy Spirit**
- **Forms of marriage- some accept gay marriages while others not.**



ENGLISH FORM THREE

MARKING SCHEME

1. Cloze Test

1. has

2. arising

3. Fuel

4. down

5. However

6. supply

7. to

8. hoarding

9. cause

10. price/cost

2. i) Oloisudori informs Resian of the benefits she will get for marrying him. Resian gets very annoyed and speechless. Resian learns that her father has already received dowry for her marriage to Oloisudori. He reports to her that their fate is sealed.

ii) Contemptuous. “He asked, the contemptuous quiet of his voice a menace by itself.”

Proud. He feels superior and egocentric. “No one plays games with Oloisudori. Asked your father, he will tell you.”

iii) She is feeling disappointed and desperate of her father’s action of receiving dowry with an aim of sealing her marriage with Oloisudori. She feels really betrayed.

iv) Extortion, assassinations, shadowy businesses, sexual immorality, robber, smuggler, and poacher.



v) It is ironical that Oloisudori who is older than Resian's father plans to marry Resian, a young girl even after he is told her wish is to study at the university. It is also ironical that Kaelo has already received dowry from Oloisudori and has never bothered to inform Resian of it.

vi) He told her that she was her wife from then henceforth.

vii . a) Insane

b) Grand/ like a palace

c) Strong loathe

d) Treat with excessive care

viii) Resian runs blindly knocking a chair and a table and disappears past Oloisudori's driver. She goes to her father's shop. She is raving mad with indignation. She becomes very disappointed with her father.

3. Oral Skills

a). For each of the following words, write another that is pronounced the same as the one given.

(4mks).

i). Miner *minor*

ii). Suite *sweet*

iii). Throws *throes*

iv). Flew *flu/flue*

4.i) aaab cccd I t is a regular rhyme scheme.

ii) a) Falling intonation

 b) Rising intonation

iii) alliteration your, young

assonance gladly, love



consonance veil, light

iv) I would point at myself and wear a smile as I say the words “my wedding” to show happiness.

v) wear, dress and veil because they are content words.

5.i) Transitive

ii) Intransitive

6.i) cancelled

ii) malfunctioned



GEOGRAPHY

FORM 3

MARKING SCHEME

INSTRUCTIONS TO CANDIDATES:

1. (a) Distinguish between a meteor and a meteorite. (2 mks)

- A meteor is a small glowing heavenly body that enters the earth's atmosphere at a very high speed, burns up and disappears, WHEREAS a meteorite is a fragment of a meteoroid that reaches the earth surface after failing to burn completely in the earth's atmosphere.

- (b) State three weaknesses of the passing star theory. (3 mks)
 - The theory does not reveal the origin of the sun and the passing star.
 - The high temperatures would have made the materials drawn from the sun by the passing star to disperse instead of cooling and condensing.
 - Chances of another star nearing the sun's vicinity are minimal or next to nil.
 - The hot gaseous materials drawn from the sun by the passing star would have flowed the passing star as it disappeared since it had more gravitational pull than that of the sun.
 - The effect of the passing star, which made the planets such as the earth to start orbiting around the sun, would have stopped or reduced by now .

2. (a) Name two forces that result in the lateral earth movements. (2 mks)
 - Tensional forces
 - Compressional forces
 - Tear or shear forces

- (b) Explain how gravitational force causes earth movements. (3 mks)
 - Force of gravity pulls everything that is on the earth's surface inwards towards the centre of the earth.
 - When magma is forced out of the interior of the earth into the earth's crust or onto the surface of the earth empty cavities are left in the mantle
 - Due to the force of gravity, parts of the crust lying above the voids/cavities may sink into the cavities causing the earth to move vertically.

3. (a) Differentiate between weathering and denudation. (2 mks)
 - Weathering is the breaking down/decomposition of rocks at or near the earth's surface in situ by physical or chemical processes, WHEREAS denudation is the sum total of the processes which cause destruction, wastage and removal of parts of the earth's surface.

- (b) Mention three mechanical weathering processes which are caused by temperature changes. (3 mks)
 - Block disintegration
 - Exfoliation/Onion skin weathering/spalling
 - Granular disintegration

- (c) Briefly describe the following chemical weathering processes.
 - (i) Solution. (4 mks)
 - Affects soluble minerals like rock salt



- The mineral dissolves in water
- It is removed in solution
- This weakens the rocks, which disintegrate. This is solution.

(ii) Carbonation.

(4 mks)

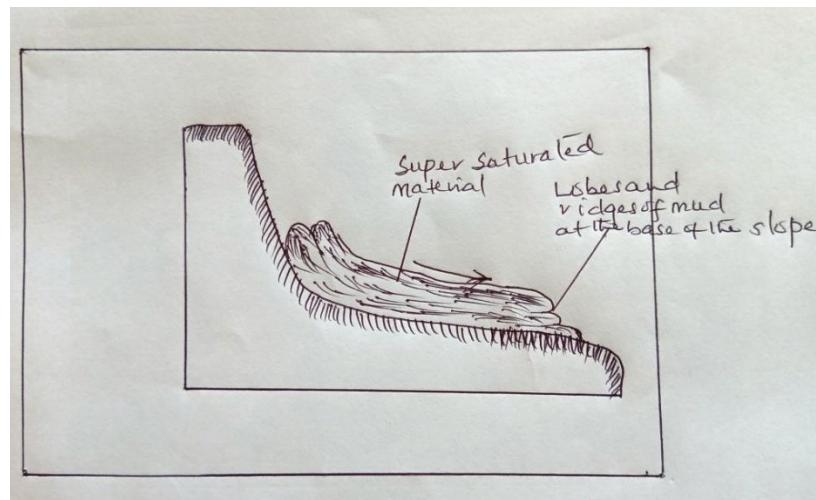
- Common in rocks containing calcium carbonate.
- Rainwater dissolves CO₂ in the atmosphere forming a weak carbonic acid.
- The weak acid reacts with calcium carbonate in the rocks.
- The rocks are dissolved and thus decompose. This is carbonation.

4. (a) Apart from mudslides, name two other processes of rapid mass wasting. (2 mks)

- Earth flows
- Landslides
- Avalanches

(b) Using a well labeled diagram, describe how a mudslide occurs. (5 mks)

- Common in arid and semi-arid regions.
- Occurs where the slope is gentle
- Wet and loose soil materials are super-saturated with water after heavy rains.
- They become plastic and flow.
- As it moves downhill, it collects more materials.
- It becomes too heavy and rests at the foot of the slope. This is mudslide.



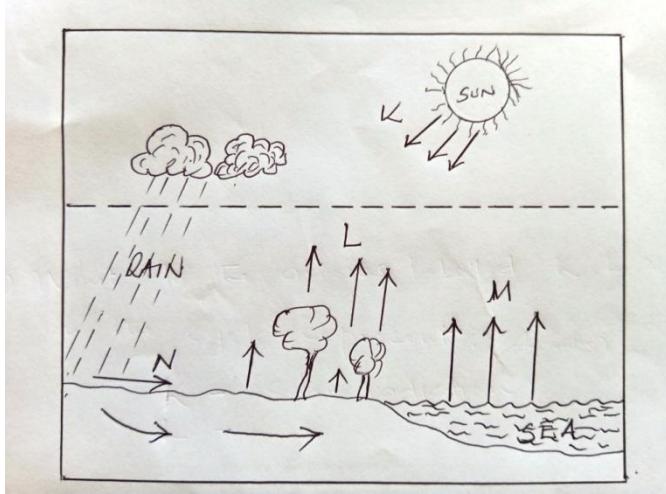
(c) Explain two effects of mass wasting on the physical and human environment.

(4 mks)

- Mass wasting leads to the formation of derelict land/scars which spoils the beauty of the land.
- Facilitates the loosening of the top soil increasing soil erosion.
- Materials from landslides may create barriers across river valleys, leading to the formation of lakes/reservoirs.
- Rapid mass wasting cause damage to property.
- Rapid mass wasting may lead to loss of life.
- May create scenery that may become tourist attractions.



5. The diagram below shows a hydrological cycle.



(a) What do the arrows labeled K, L, M and N on the cycle represent? (4 mks)

- K – Solar radiation
- L – Evapotranspiration
- M – Evaporation
- N – Surface run off

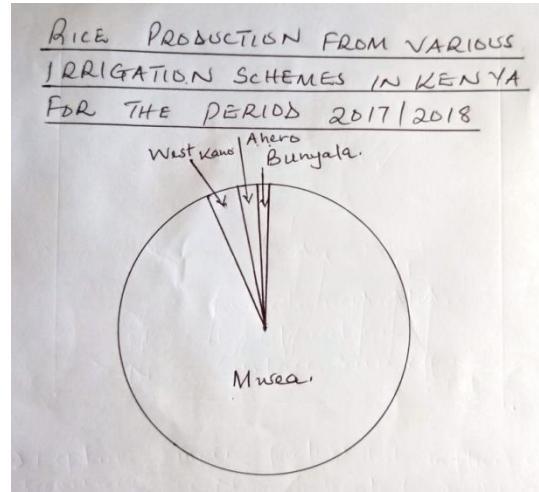
(b) Explain three factors that influence the occurrence of N as indicated on the cycle. (6 mks)

- Amount of water/Nature of the rainfall- There should be sufficient rainfall to make the soil saturated in order to allow the excess water to flow on the surface.
- Gradient of the slope/Land. The gradient of the slope should be steep to allow the flow of water by gravity.
- Nature of the rocks/soil. The rocks/soil should be impermeable to allow for limited infiltration and percolation for the excess water to form surface run off.
- Water table/Level of saturation. It should be high to reduce infiltration.
- Vegetation cover. Presence of vegetation increases the rate of infiltration and absence of vegetation increases the surface run-off.

6. The table below contains data on rice production from various irrigation schemes in Kenya for the period 2017/2018.

SCHEME	PRODUCTION IN TONNES
Mwea	45810
Ahero	1222
West Kano	1742
Bunyala	491
Total	49265

Using a radius of 4cm, draw a simple pie chart to represent the data in the table above. (6 mks)



$$\text{Mwea} = \frac{45810}{49265} \times 100 = 93\%$$

$$= \frac{93}{100} \times 360 = 335^\circ$$

$$\text{Ahero} = \frac{1222}{49265} \times 100 = 2.48\%$$

$$= \frac{2.48}{100} \times 360 = 9^\circ$$

$$\text{Kano} = \frac{1742}{49265} \times 100 = 3.5\%$$

$$= \frac{3.5}{100} \times 360 = 13^\circ$$

$$\text{Bunyala} = \frac{491}{49265} \times 100 = 1\%$$

$$= \frac{1}{100} \times 360 = 4^\circ$$