FORM 4 TERM 1 OPENER

ALL SUBJECTS

A standard compilation of test examinations for form 4 entry trials in preparation for KCSE.

Inclusive of All subjects

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FORM 4 TERM 1 OPENER ENGLISH

101/1

ENGLISH PAPER 1

(FUNCTIONAL SKILLS)

IAME
NDEX NUMBER
ANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDIDATES

- I. Write your name and index number in the spaces provided at the top of this page.
- II. Sign and write the date of examination in the spaces provided above.
- III. Answer all the questions in this question paper.
- IV. All your answers must be written in the spaces provided in the question paper.
- V. This paper consists of 5 printed pages.
- VI. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- VII. Candidates should answer all the questions.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIJMUM	CANDIDATE'S
-	SCORE	SCORE
1	20	
2	10	
3	30	
	TOTAL	

SCORE

1. <u>FUNCTIONAL WRITING (</u>20MKS)

A wanted criminal has been hiding in your Koko village, three kilometers from Kerugoya town. Write an e mail to three officers in the police directing them where he has been hiding. This information is highly confidential and should be treated such, so none of the officers should know that you sent that information to the other. Also briefly describe the criminal so that it would be easy for the officers to identify him.

2. <u>CLOZE TEST (10MKS)</u>

The Constitution of Kenya 2010 was promulgate	d (i)years of agitation for
better rights and equality for (ii)	Kenyans. According to Article 43,
every person (iii)	the right to the highest attainable standard of health,
adequate housing, freedom(iv)	hunger and other economic
(v)social rights.	
This mandate implies certain economy capacity	of both the national and county
governor(vi)becau	ise the rights conferred to the people are functions of
the two (vii)	
The success of devolution in Kenya is pegged on	(viii)ability of the
county governors to (ix)	the functions assigned to them as
(x)	.the Fourth Schedule of the Constitution.
(Daily Nation, Wednesday March 20,2013).	

3. ORAL SKILLS (30MKS)

Read the oral narrative below and answer the questions that follow. The monkey and the crocodile.

The Crocodile asked the monkey to visit him. The Monkey asked the Crocodile, "How shall I reach your home when I don't know how to swim?" the Crocodile told the monkey to jump on his back.

On the way, the Crocodile felt hungry and asked the Monkey, "Can you give me your heart? Because I am feeling hungry." The Monkey told the Crocodile. "This is what we are going to do: We are going to go back because when we become friendly to somebody we leave our hearts at home." Now the Monkey told the Crocodile, "You see, I am very weak, I cannot be eaten. So we have to go back and I'II get you my heart.

The Crocodile agreed that they should turn back. When they reached the shore, the monkey climbed into a mango tree and picked a mango. He threw it and said to the Crocodile, "There is the heart," but the mango got into the water. He picked another one, but when the Monkey threw this one the Crocodile dived into the water.

That is the end of our story.

Assuming you were narrating this story to a mixed audience during the Kirinyaga District Education Day.

(a) What grooming mistakes would you be careful to avoid? (2mks)

 	 	 	 • • •

(b) How would you differentiate the words of Monkey from those of Crocodile? (2mks)

(c) During your narration, how would you tell that the audience is attentive.(4mks)

(B) State whether you would use a rising or a falling intonation in the following sentences.

(4mks)

- (i) When were you born?
- (ii) Did you complete your work?
- (iii) What a beautiful car you have bought!
- (iv) James, come here.

(C) Group the following words according to the sound of the underlined letters.(4mks)

V <u>ai</u> n	p <u>ear</u>	p <u>a</u> ne	s <u>ay</u>
G <u>ear</u>	b <u>ear</u>	d <u>are</u>	c <u>ure</u>
S <u>ure</u>	h <u>ere</u>	p <u>oor</u>	f <u>are</u>

(D) Study the following item and answer the questions that follow.

A small gourd full of blood.

- (i) Classify the above item.(Imk)
- (ii) Mention the components that form this item.(3mks)

(iii) State one function of the item.(Imk)

E) Read the following dialogue and then answer the questions that follow.(5mks)

Nurse: (standing with a syringe in her hands)

You student, turn.

Student: (looking confused and rolling up the sleeve on his left arm) I am sorry, Sister.

Nurse: look here, I am not your sister. I said turn!

Student:	what am I supposed to do? Turn what? Where?
Nurse:	where does one get injected?
Student:	My arm. I have a choice.
Nurse:	your behind of course, you fool. Is this the way you trouble your teachers?
Student:	I am sorry. I just needed to understand what you meant by 'turn'.
Nurse:	Okay. Next time you need to know what is done at the hospital.

Explain why the nurses instructions are unclear. (5mks)

FORM 4 TERM 1 OPENER KISWAHILI

102/1

KISWAHILI PAPER 1

INSHA

NAME
INDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

MAAGIZO

- a) Andika insha mbili . Insha ya kwanza ni ya LAZIMA.
- b) Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.
- c) Kila insha isipungue maneno 400.
- d) Kila insha ina alama 20
- e) Karatasi hii ina kurasa **mbili** zilizopigwa chapa.
- f) Wahahiniwa ni lazima wahakikishe kuwa kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

- 1. Wewe ni rais wa nchi. Andaa hotuba utakayoitoa siku ya kuathimisha miaka hamsini ya uhuru.
- 2. "Dawa za kulevya ni tatizo sugu kwa taifa" Jadili
- 3. Katika kisa fafanua methali kwamba –kila mwamba ngoma ,ngozi huivuta kwake.
- 4. Malizia na.....ni vyema kutahadhari kabla ya hatari.

FORM 4 TERM 1 OPENER KISWAHILI

102/2

KISWAHILI PAPER 2

LUGHA

NAME	•••••••••••••••••••••••••••••••••••••••
INDEX NUMBER	2
CANDIDATE'S S	IGNATURE
ADM NO	,

MAAGIZO

Andika jina lako na nambari yako katika nafasi ulizoachiwa hapo juu.

Weka sahihi yako na tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.

Jibu maswali yote katika nafasi zilizoachwa katika kijitabu hiki cha maswali.

SWALI	UPEO	ALAMA
1	15	
2	15	
3	40	
4	10	
JUMLA	80	

UFAMAHU

Soma ufahamu huu kasha ujibu maswali

Ulemavu

Udereva ni kazi ambayo nimeifanya kwa muda sasa. Kunao wsle ambao huiheshimu na wengine huiona kama kazi ya wale ambao hawakuptata elimu ya kutosha. Kwangu najenzi kwani imeilisha na kuelimisha familia yangu kwa muda sasa. Kila siku asubuhi mimi hurauka kulipangusa gari la tajiri wangu Ruguu, ana historia ndefu kutokana na maumbile yake. Mwenyewe hunieleza kuwa hana mikono lakini sasa hana mguu mmoja wa kulia pia. Baada ya kumdadisi kuhusiana na mguuwake wa kulia alinieleza, "mwendo , mimi nilizaliwa na miguu yote miwili na hata mguu wangu wa kulia kwa zaidi ya miaka ishirini na mitano ndio ulikuwa mikono yangu. Siku moja kidudu-mtu mwingine aliyekuwa dereva wangu wa kwanza akaumaliza. Sijui wewe nawe utaninyang'anya mdomo ai nini." Alitamatisha huku akichekacheka.

Ruguu alikuwa mcheshi wakati wote isipokuwa akiwa mgonjwa. Utampata anasema, "leo kinyima watu hamu ya kula kimeniweza!" akiashiria ugonjwa. Alinieleza kuwa binadamu anastahili kuwa na mtazamo chanya wa kimaisha ili awe na raha kwani maisha ni mafupi huku akinigongagonga mguu wangu wa kushoto akitumia wake wa kipekee! Ungeshangaa! Leo ukimwona akiwa ofisini mwake akidundadunda bodi ya dota ya tarakilishi yake na kukizungusha kipanya kuiweka kasa atakapo akitumia kile kile kiguu chake cha kushoto! Utamaizi umelaza damu na mikono yako miwili.

Hadithi yake inayoelezea yaliyofanyika akakatwa mguu wake wa kulia uliokuwa tegemeo lake yaweza kukutiririsha machozi ukielezwa na mwingine, lakini akikweleza yeye Ruguu mwenyewe machozi yatakutoka ya furaha bali sio ya huzuni! Stadi yake ya ucheshi! Alipata ajali ya barabarani kutokana na dereva wake Masipidi kujifanya bingwa wa kuendesha magari kwa kasi. Masipidi alikuwa ametoa kidhibiti mwendo cha gari la Ruguu. A jail hiyo ilichukua uhai wa Masipidi na wa mtoto wa Ruguu Mapendo. Ruguu kweli amepitia mengi makuu hadi ukuu wa kaburi lakini kinachonisangaza ni kwamba umwonapo hutatambua masaibu katika maisha yake.

Angekuwa amejikunyata kila siku akilalamikia Mungu aliyemkosea.

Siku moja nikiwa namwendesha Ruguu kwenye gari lake aina ya Prado katika barabara ya Nyagakiri jijini Nebu nikiwa nampeleka kanunue bidhaa za kampuni yake kwenye duka la bwanyenye Mndihil, niliona

maajabu! Ni kama walemavu wote walikubaliana kuwa ombaomba wa barabara hiyo. Wenye kikono, kiguu,nundu mgogoni, chongo, kengeza, vipofu walioongozwa na wenye macho-viwete hawa! Kikono mmoja alikuja na wimbo wake karibu na gari letu;

/ 2

"saidia, saidia, ndugu saidia, saidia masikini wa Mungu, cheki sina mkono boss saidia."

Ruguu alipoteremsha kioo cha dirisha lake kwa mguu wake na kuukunja kutoa noti ya shilingi elfu moja kwenye mfuko wa shati, Yule kikono alibadili kauli yake baada ya kumwona mlemavu mwenzake akasema. "Asante ndugu" na akatoweka huku akiongeza, "kumbe afadhali mimi! Huyu jamaa hana viungo vyote!" wote walisongea karibu na Prado yetu kwa nia ya kuomba walitoweka mmoja mmoja hadi wakaisha. Hata walioongoza vipofu waliwaharakisha kuondoka .

Nilimwangalia tajiri wangu bila kunena lolote, naye akanitazama macho yetu yakakutana katikati ya hatua aliyotutenganisha mle garini kasha kwa ghafla akaangua kicheko akisema, "Na liwe funzo kwao na wengine wenye tabia na nia za kuwapuja watu pesa zao wakijidai kuwa ni maskini wa Mungu. Ha ha ha haaaa!" alicheka hadi machozi yakamtoka.

"Hapo umekosea. Wajua boss watu hawa hupewa mapeni si noti!" nilikata kicheko chake.

"Wapi, nimpe pesa gani? Zangu za kazi gani? Si heri nikupe wewe umenifanyia kazi, kama angeleta mkono wake ningemuuliza kama ni heri mkono uupe mguu pesa ama mguu uupe mkono pesa, ha ha ha haaa!" ALipasua hewa tena kwa kicheko chake hata name nikajikuta ninacheka.

Nilishika nikazunguka kwenye buti ya gari nikatoa kiti cha magurudumu cha Ruguo nikakiweka vizuri kasha nikamnyanyua na kumkalisha vizuri. Nikaanza kumsukuma kuelekea dukani.

MASWALI

- 1. Ipe taarifa hii anwani mwafaka.(alama 1)
- 2. Elezea ulemavu wa Ruguu (alama 2)

- 3. Kwa nini Ruguu aliupoteza mguu wake wa kulia.(alama 2)
- 4. Ni mafunzo gani unayoyapata kutokana na taarifa hii?(alama 2)
- 5. Kwa nini walemavu walitoweka ghafla? (1mk)
- 6. Ni mbinu zipi za lugha zilizotumiwa katika taarifa hii?(alama 3)
- 7. Eleza maana ya maneno yafuatayo kama yaliyotumiwa katika taarifa hii
 a) Kipanya
 - b) Kidhibiti mwendo
 - c) Kasa
 - d) Bodi ya dota

SEHEMU YA B

<u>UFUPISHO</u> SOMA MAKALA HAYA KISHA UJIBU MASWALI.

Ufalme uliokuwa kwenye matumaini ya maisha yangu yqa siku za usoni ulididimia baada ya kukatiza masomo ya shule ya upili ghafla bin vuu. Nilikuwa nimeazimia kuwa mfalme wa kisiwa cha 'fanaka'

endapo ningemudu kuyakamilisha masomo ya shule ya shule ya upili. Licha ya lengo hilo mwafaka, nilikuwa na ari ya kuwatilia upendo akina yakhe kuyakwamua maisha yao kwenye mkondo wa uchochole. Faulu ningelivuka daraja la umaskini na kuingia kwenye kisiwa hicho cha 'fanaka' ningefanya kila la heri ili kutimiza matlaba ya walio kwenye himaya ya 'ufukara'

Ijapokuwa nilijifunga nira kuyaopoa maisha yangu kutoka kwenye kilinge cha lindi la matatizo, katu sikufua dafu.

Maisha ! maisha ni nini? Oandashuka tu za shabuka zilizoko katika aushi yangu. Mara hii nilijihisi kana kwamba nimepigwa dhoruba ya dhahiri.

Laity ningalikuwa na uwezo ningaliugeuza mchanga kuwa ngwenje sufufu. Haidhuru! Sikufa moyo, nilijua fika kuwa ujapokosa la mama hata la mbwa huamwa.Kwa jino na ukucha nilitia jitihada na kuweka mikakati kabambe, lakini yote haya yalikuwa bure bilashi yananijia bongoni kwamba jitihada za mja hazishindani na kudura za Mkawini.

Ingawa yakija yapokee, sikuchoka bilikuli. Taratibu kama tabibu mpasuaji, niliziendesha shughuli zangu kama kawaida huku nikiupiga moyo konde kwa ukakamavu ambao ungeniwezesha kulisukuma gurudumu hili la maisha. Ustahimilivu wenyewe haukuja kimazingaombwe bali ni kwa falsafa za atafutaye hachoki na akichoka keshapata.

Usiku kucha sikupata hata lepe la usingizi, niliyaangaza macho yangu hadi upeoni mwa ozi angalau nipate njia, lakini macho yenyewe yalikuwa na kiwi. Hakika maisha yaliniendea tenge tahanani hata nikabaini kuwa dunia hii ya mnyonge msonge hainiweki asilani.

Nilivuta nadhari nyuma, na hapo ndipo ikanijia picha kamili ya hayati wavyele wangu. Kabla ya Rabana kuwaepusha kwenye dunia hii ya maisha chekwachekwa walikuwa adinasi wenye hali zisizomithilika. Kwenda gangeni ni kiza kurudi ni giza lakini marehemu walikula jasho lao.

Keshatoka kwenye lindi hilo la fikra zilizonibubujisha machozi si haba, niliazimia kumtupa jongoo na mti wake na kuamua liwe liwalo. Nilikata shauri kufanya vibarua vya sulubu hadi mwia ambao ningeupata upenyu.

Siku ayami zilinipa kisogo, lakini hatimaye mvumilivu hule mbivu. Nililala maskini nikaamka tajiri. Darahimu nilizozipata kutokana na vibarua hivyo vya shokaa ziliniauni pakubwa. Baadhi nilizitumia katika matakwa yangu ya kila uchao na kuziweka zilizobaki kama akiba. Haba na haba hujaza kibaba. Sikuyaamini macho yangu.

Ngwenje hizi nilizitumia kama karo. Vitabu sikuwanavyo, lakini kwa itikadi za mbasi wangu, niliweza kudurusu vyao. Taib, maulana hamtupi mja wake. Nilipohitimu chuo kikuu, nyadhifa zilikuwa zikinitumbulia macho. Lakini niling'amua mgaagaa na upwa hali wali mkavu, nilipojijkuta nimevalia koti jeupe huku nikisema,"Ingieni mmoja mmoja ".

Maswali

a) Andika muhtasari wa masuala muhimu katika aya sita za kwanza za makala haya.(maneno 70) (alama 6)

b) Eleza namna mvumilivu alikula mbivu ukirejelea aya tatu za mwisho za makala haya.(maneno 40) alama 3

SEHEMU C MATUMIZI YA LUGHA. (ALAMA 40)

(a) <u>I</u>) vikwamizo ni sauti zipi? (Alama 2)

- (ii) Onyesha vikwamizo vinne (alama 1)
 - (b) Tambua mzizi katika neno lifuatalo.(alama 1) Karibisha

(c) Changanua sentensi kwa njia ya matawi (alama 4) Tulifika jana jioni

- (d) Ukitumia kiunganishi 'sembuse' tunga sentensi sahihi. (alama 2)
- (e) Tunga sentensi kubainisha kihusishi cha ala.(alama 2)

(f) Andika wingi wa sentensi ifuatayo.(alama 2) Toto lililoingia darasani lina shida ya kuona.

(g) (i) kirai ni nini? Alama 2

(ii) Tunga kirai chenye muundo wa Nomino na kivumishi.(alama 2)

h) Tunga sentensi tatu kuonyesha matumizi tofauti ya kiambishi 'ku' (alama 3)

I (i) Eleza sentensi changamano.(alama 2)

(ii) Andika sentensi moja changamano.(alama 1)

j) kanusha sentensi (alama 2) jengo hili likianguka watu wengi wataangukiwa na vifusi.

k) onyesha chagizo katika sentensi inayofuata:(alama 2) ukiongoza kwa vitisho utausambaratisha utawala wako.

- l) zingatia maagizo ya mabano ukitumia neno ulilopewa katika sentensi (alama 2) mwanamke (kivumishi)
- M) geuza vitenzi kuwa katika kauli ya kutendesheana.(laama 2) (i) kumbuka

(ii) uliza

N) katika mifano madhubuti, eleza matumizi ya nukta pacha/koloni.(alama 3)

- O) Tumia vitate vifuatavyo katika sentensi mbili kutofautisha maana (alama 2) Ziwa na siwa
- P) Bainisha yambwa katika sentensi Nduati alimjengea nyumba babu yake kwa mawe.(alama 3)

Q) Tumia vitenzi vya shina moja katika sentensi tatu.

(i) cha

(ii) nya

(iii) Ja

SEHEMU YA D ISIMU JAMII

Fafanua sifa kumi za lugha ya sehemu za kuabudu.

FORM 4 TERM 1 OPENER KISWAHILI

102/3

KISWAHILI PAPER 3

FASIHI

NAME
NDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

<u>Maagizo</u>

(a) Jibu maswali manne pekee.

- (b)Swali la **kwanza** ni la **lazima**.
- (c)Maswali hayo mengine matatu yachaguliwe kutoka sehemu tatu zilizobaki..
- (d)Usijibu maswali **mawili** kutoka **sehemu moja**.
- (e)Majibu yote lazima yaandikwe kwa lugha ya Kiswahili.
- (f)Karatasi hii ina kurasa 7 zilizopigwa chapa.

(g)Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

SEHEMU A: RIWAYA

CHOZI LA HERI(ASSUMPTA K. MATEI)

1. "Wewe ni mfuata mvua..."

a) Eleza muktadha wa dondoo hili. (alama 4)

b) Taja na ufafanue sifa tano za msemezwa. (alama 10)

c) Je, ukabila umeathiri vipi jamii inayosawiriwa katika Riwaya hii? (alama 6)

SEHEMU B: TAMTHILIA

TAMTHILIA YA KIGOGO (PAULINE KEA)

2. "Ukitaka kula asali,kaa na nyuki."

a) Eleza muktadha wa dondoo hili. (alama 4)

b) Bainisha mbinu ilivyotumika katika dondoo hili. (Alama 2)

c)Eleza jinsi wahusika wafuatao walivyofaidika kwa kukaa na nyuki. (Alama 14)

i) Chopi

- ii) Kenga
- iii) Ngurumo
- iv) Mamapima

au

3. Tamthilia ya Kigogo ni kioo cha uhalisia wa maisha ya jamii nyingi za Kiafrika. Thibitisha.

SEHEMU D: USHAIRI

4 . SHAIRI LA KWANZA

Soma shairi hili kisha ujibu maswali.

Jukwani naingia, huku hapa pasokota,

Kwa uchungu ninalia,hii tumbo nitaikata,

Msiba mejiletea, nimekila kiso takata,

We tumbo nitakupani,uwe umetosheka?

Wazee hata vijana,wote umewasubua, Huruma nao hauna,heshima kawakosea, Ukambani na Sagana,hata mbwa wararua, We tumbo nitakupani,uwe umetosheka?

Wahasibu ofisini,kibwebwe mejifunga, Miaka mingi vitabuni,ili wasikose unga, Nadhari wanadhamini,hesabu wanazirenga, We tumbo nitakupani, uwe umetosheka?

Wapenzi wa kiholela,pia wanakuogopa, Baada yao kulala, wana wao wanatupa, Wakihitaji chakula,wanachokora mapipa, We tumbo nitakupani,uwe umetosheka?

Wafugaji hata nao,kama dawa wakwamini, Hawajali jiranio,wamesusia amani, Wanaiba ng'ombe wao,na kuzua kisirani, We tumbo nitakupani,uwe umetosheka?

Nayo mizozo ya maji, kaonekana kwa mara, Hiyo nayo ni dibaji,sababu sio harara, Njaa wahepe wenyeji, huo ndio mkarara, We tumbo nitakupani,uwe umetosheka?

Ningeweza kukuuza,ingekuwa siku njema,

Tena kwa bei ya meza, sokoni nimesimama,

Wala tena singewaza, kuhusu wali na sima,

We tumbo nitakupani,uwe umetosheka?

Hatima umefikika,naenda zangu nikale,

Mate yanidondoka,kwa mnukio wa wale,

Naomba kwenda kukaa,wala sio nikalale,

We tumbo nitakupani,uwe umetosheka?

Maswali

i	Lipe anwani mwafaka shairi hili.	(Alama 2)
ii	Shairi hili ni la aina gani? Toa sababu.	(Alama 2)
iii	Huku ukitolea mifano mwafaka, taja arudhi zilizotumiwa katika ubeti wa tatu.	(Alama 4)
iv	Andika ubeti wa nne kwa lugha nathari.	(Alama 4)
v	Thibitisha kuwepo kwa idhini ya ushairi.	(Alama 2)
vi	Taja madhila anayoelezea mtunzi wa shairi hili yaletwayo na tumbo.	(Alama 4)
vii	Elezea maana ya maneno yafuatayo.	(Alama 2)
(a)	Dihaji	

(a) Dibaji

(b) Harara

au

5. SHAIRI LA PILI

Soma shairi lifuatalo kwa makini kisha ujibu maswali.

Niokoa Muokozi, uniondolee mashaka.

Kuyatukua siwezi, mjayo nimedhikika

Nimekithiri simanzi, ni katika kuudhika

Mja wako nasumbuka, nipate niyatakayo.

Mja wako nasumbuka, nataka kwao afua

Nirehemu kwa haraka, nami nipate pumua Naomba hisikitika, na mikono hiinua Mtenda ndiwe Moliwa, nipate niyatakayo.

Mtenda ndiwe Moliwa, we ndiwe Mola wa anga Mazito kuyaondoa, pamoja na kuyatenga Ukauepusha ukiwa, ya pingu zilonifunga Nikundulia muwanga, nipate niyatakayo

Muwanga nikundulia, nipate toka kizani Na huzuni n'ondolea, itoke mwangu moyoni Mambo mema niegheshea, maovu nisitamani. Nitendea we Manani, nipate niyatakayo.

Igeuze yangu nia, dhaifu unipe mema Nili katika dunia, kwa afia na uzima Moliwa nitimizia, yatimize yawe mema Nifurahike mtima, nipate niyatakayo.

(a) Shairi hili ni la bahari gani? Eleza.	(alama 2)
(b) Taja madhumuni ya shairi hili.	(alama 3)
(c) Eleza muundo wa shairi hili.	(alama 4)
(d) Thibitisha namna uhuru wa kishairi unaibuka katika shairi.	(alama 4)
(e) Andika ubeti wa pili katika lugha sufufu.	(alama 4)

- (f) Toa maana ya:
 - (i) Nimedhikika
 - (ii) Muwanga nikundulia

SEHEMU D: FASIHI SIMULIZI

6.

Ewe kilizi

Ulozowea kujificha

Nyuma ya mama kujikinga, dhidi ya milio

Ya radi lo juu mbinguni

Jua kesho ni siku ya siku

Siku ya kujua mbichi na mbivu

Kutofautisha jogoo na vipora,

ngariba taposhika, chake kijembe

Ndipo utakapojua bayani

Ukoo wetu si wa kunguru

Ikiwa hu tayari

Kisu kikidhihaki

Sithubutu kamwe, wanjani kuingia

Sije kuniaibisha miye, amiyo na akraba nzima!

a) Nani anaimba wimbo huu? Thibitisha. (alama 2)

b) Wimbo huu ni wa aina gani? (alama 2)

c) fafanua sifa tano za nyimbo za aina hii. (alama 5)

d) Nyimbo za aina hii zina majukumu gani katika jamii? (alama 5)

e) Thibitisha mbinu tatu za kifasihi zilizotumiwa katika utungo huu. (alama 6)

au

7. "Dhima ya pekee ya hadithi ni kuburudisha." Jadili. (alama 20)

FORM 4 TERM 1 OPENER BIOLOGY

231/1

BIOLOGY PAPER 1

NAME..... INDEX NUMBER..... CANDIDATE'S SIGNATURE..... ADM NO....

INSTRUCTIONS:

Answer all the questions in the spaces provided

1. Name the part of a flower that develops into:

[i] Seed

[ii] Fruit

[1mk]

[1mk]

2. State two ways in which floating leaves of aquatic plants are adapted to gaseous exchange. [2mk]

3. The diagram below represents a stage during cell division



[a] [i] Identify the stage of cell division	[1mk]
[ii]Give two reasons for your answer in [a] [i] above	[2mk]
[b] Name the structures labeled M	[1mk]
[b] Name the class to which millipede belongs	[1mk]
4[a] Distinguish between the terms Homodont and heterodont	[2mk]

[b]what is the function of the carnassial teeth

5.An A blood group patient involved in a road accident required an urgent blood transfusion. His relatives were invited to donate blood.

[a]Name the possible relative who would not donate blood to him [2mk]

[b]State why the others would not be in a position to donate blood to him [2mk]

6. The flow chart shows a part of a food relationship in an ecosystem

Aminal I Aminal 2] [Animal 3]
	- cond
Kessit	remented by K
Green	1 plants]
[a] _[i] Name the food relationship shown	[1mk]

[ii] How many trophic levels are shown in the diagram

[b]What is the main source of energy in the ecosystem

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

[2mk]

[1mk]

[1mk]

7. Name the only epidermal cell in plants that contain chloroplast	[1mk]
8. The equation below represents a metabolic process that occurs in the mamm Amino Acids Enzyme x organic compound	alian lives
[a]Name the process that represents the above equation	[1mk]
[b]Identify the enzyme represented by x	[1mk]
[c] What is the importance of the process to the mammal9. [a] Name the carbohydrate that is stored in mammalian muscle	[1mk] [1mk]
[b]What name is used to describe removal of indigestible and undigested food n	naterial from the alimentary canal [1mk]
10.[a]Carl Linnaeus developed the taxonomic units of classification [i]What is taxonomy	[1mk]
[ii]Why was the system of classification by carl linneaus described as	natural system of classification [2mk]

11. Phagocytes also called granulocytes or polymorphs are cells found in the blood whose they ingest pathogens and cell debris

[ii]Name the cell organelle most abundant in phagocytes to enable them function effectively [1mk]

- 12. Name the:
 - [a] Material that strengthens xylem tissue [1mk]
 - [b]Tissue that is removed when the part of a plant is ringed [1mk]

13. The diagram below represents a cell organelle.



A	[1mk]
В	[1mk]
14. In which two ways do guard cells differ from other epidermal cells	[2mk]

15.Through cellular respiration, the chemical energy stored in glucose molecule is converted into which specific molecule [3mk]

[b]Name the substance that speed up chemical reaction without being used up in those reactions

[1mk]

16.During germination and early growth, the dry weight of endosperm decreases while that of embryo increase explain [2mk]

17. The diagrams below show changes in the life cycle of flowering plants



[i]Complete the table below by choosing the letters from the diagram which refers to each of the stages given [4mk]

STAGE OF LIFE CYCLE	LETTER
Male gametophyte	
Tube nucleus	
Female gamete	
Male gamete	

[1mk]

[2mk]

3 [a]. State 2 characteristics of kingdom Monera that are not found in other kingdoms

19.State three ways by which plants compensate for lack of the ability to move from one place to another [3mk]

20. State three physiological processes that are involved in movements of substances across the cell membrane [3mk]

21. If the human pancrease is not functional:

[a]Name the hormone which will be deficient [1mk]

[b]Name the disease the human is likely to suffer from [1mk]

22. The oxidation state of a certain food is represented below by a chemical equation

 $2C_3 H_2O_2N + 6O_2 \qquad (NH_4)_2 CO_2 + 5CO_2 + 5H_2O$

[a] Calculate the respiratory quotients[RQ] of the food substance [2mk]



[ii] M-RNA strand copied from this DNA strand

[i] Complementary DNA strand

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

[1mk]

[1mk]

[1mk]

27. How does nutrition as a characteristic of living organism differ in plants and animals	[2mk]
28 State the function of the following parts of a light microscope	
[i] Body tube	[1mk]
[ii] Diaphragm	[1mk]
29. State three characteristics of gaseous exchange surfaces	[3mk]

30. State two sources of variations [2mk]

FORM 4 TERM 1 OPENER BIOLOGY

231/2

BIOLOGY PAPER 2

NAME. INDEX NUMBER. CANDIDATE'S SIGNATURE. ADM NO.

INSTRUCTIONS TO CANDIDATES: ANSWER ALL QUESTIONS IN THE SPACES PROVIDED

1. The diagram shows two types of cells placed in a certain solution. Study them and answer questions that follow



a. Name the physiological process responsible for the observed results. [1 Mark]

- b. Give the correct biological term used to describe cells A & B. [2 Marks] A – B –
 2. The equation below shows a chemical reaction that takes place in plants. Carbon (iv) oxide + water _______ A + water
 a. Identify substance A. [1 Mark]
 b. Name the process represented by the equation. [1 Mark]
 - c. Other than the reactants state <u>two</u> conditions necessary for this reaction. [2 Marks] i.
 - ii.
- 3. The diagram below illustrates an experiment used to determine rate of respiration in a small insect.



a. Name the chemical compound labeled X and state its function.[2 Marks]
Compound –

Function -

- b. Why is the conical flask placed in a water bath? [1 Mark]
- c. What would happen to the level of coloured water after 5 minutes? Explain: [2 Marks]

[1 Mark]

- d. How can a control experiment be set?
- 4. In a biology lesson a student collected the animal in the diagram below. Use it to answer questions that follow;

ii.

5. The diagram below represents a plant in the division Byrophyta:



a. Name the parts labeled

[5 Marks] U W Х Y Ζ

b. Name one function of part labeled.

Х Y Ζ

6.

a. It is observed that when apical bud of a plant is removed, lateral buds sprouts, where as they do not sprout in presence of the apical bud;

[3 Marks]

i. What is the biological term used to describe this? [1 Mark]

	ii. Give one application of this phenomena in agriculture.	[1 Mark]
b.	State four roles of IAA in plant growth and development:	[4 Marks]
c.	In epigeal germination the cotyledon is brought above the soil surfaces; Explain	
		[2 Marks]

d. State 2 structural modifications of nephrons in desert mammals. [2 Marks]

- e. State a kidney disease whose symptom is coloured and turbid urine [1 Mark]
- In a biological experiment; a cross was made between a tall pea plant & dwarfs plants; their progeny was selfed and the resulting plants were in a mixture in the ratio of 3:1. Make a biological cross to show these outcomes. [4 Marks]

8. Explain geographical distribution as evidence of organic evolution. [2 Marks]

SECTION B Answer Questions 10 (Compulsory) and either question 11 or 12 in the Spaces Provided

9. The table below shows the changes observed in the dry weight in milligrams of a barley seedling, its embryo and Endosperm during the first ten days after the onset of germination.

	Dry weight in milligrams				
Time (days)	Embryo	Endosperm	Whole seedling		
0	2	41	45		
2	2	39	43		
4	7	32	41		
6	15	21	38		
8	22	11	35		
10	35	6	43		

a. Using a suitable scale and on the same axis, plot a graph of dry weight of embryo, endosperm and whole seedling against time. [8 Marks]

- b. State and account for the changes in dry weight shown by:
 - i. Endosperm

[4 Marks]

ii. Embryo

[4 Marks]

c. Explain the role of water during germination

[4 Marks]

10.

a.	Describe how the mammalian heart is adapted to its function	[10 Marks]
b.	How does gaseous exchange take place in terrestrial plants?	[10 Marks]
11.		
a.	How is the Epidermis of a green plant adapted to its function?	[6 Marks]
b.	Describe how structural factors affect rate of transpiration in plants	[8 Marks]
		-

c. Describe how xerophytes adapted to minimize water loss in their habitat. [6 Marks]

FORM 4 TERM 1 OPENER CHEMISTRY

233/1

CHEMISTRY PAPER 1

THEORY

NAME
NDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDITATES

- a) Write your name and index number in the spaces provided above
- b) Answer all the questions in the spaces provided in the question paper
- c) Mathematical tables and silent electronic calculators may be used
- d) All working must be clearly shown where necessary.

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1-29		

- 1. Element A and B with atomic numbers 12 and 17 respectively react together
 - a) Write the electronic configurations of each

A ------ (½ mk)

B ------ (½ mk)

- b) Write the formula of a the compound formed between A and B (1mk)
- 2. The table below shows the PH values of solutions A, B, C and D

SOLUTION	РН
Α	2.0
В	7.0
С	10.0
D	14.0

- a) Which solution is likely to be that of ammonia solution (1mk)
- b) Select a solution in which a sample of aluminium oxide is likely to react. Give a reason for your answer (2mks)
- 3. A hydrocarbon was found to contain 92.3% carbon, and the remaining is hydrogen. If its molecular mass is 78, determine its molecular formula (C =12, H=1) (3mks)

4. In an experiment, sulphur (IV) oxide was bubbled into water followed by chlorine gas. The resulting solution gave a white precipitate when mixed with Barium chloride. Explain these observations. (3mks)

5. Below is a set up of apparatus used to react ammonia gas with iron(II) chloride



Dilute solution of iron (II) chloride

- a) State the observation made in the beaker (1mk)
- b) State the reason for using a funnel to deliver the ammonia into the beaker (1mk)
- c) Write an ionic equation for the reaction that takes place (1mk)
 - 6. a) State Graham's law of diffusion (1mk)

b) 200cm³ of methane diffused through a porous pot in 40secs. Calculate the time taken for the same volume of hydrogen chloride gas to diffuse under the same conditions (H = 1, C=12, Cl = 35.5) (2mks)

7. In an experiment, soap solution was added to three separate samples of water The table below shows volumes of soap solution required to form lather with 100cm³ of which sample of water before and after boiling.

	SAMPLE I	SAMPLE II	SAMPLE III
Volume of soap before	25.0	5.0	10.0
water is boiled (cm3)			
Volume of soap after	25.0	5.0	5.0
water is boiled			

- i. Which water sample is likely to be soft? Explain (1mk)
- ii. Explain the change in the volume of soap solution used in sample III (2mks)
- 8. Study the flow chart below and use it to answer the questions that follow



Identify using chemical formula substances L,P,Q and X	X
L	(½ mk)
Р	(½ mk)
Q	(½ mk)
Х	(½ mk)

a)

- b) write an ionic equation for the reaction between T and silver nitrate solution (1mk)
- 9. The following thermo-chemical equations show the combustion of carbon and hydrogen. The heat of formation of ethane is also given.

С	+	O ₂ _	 $\rm CO_2$	∆HC	$= -394 \text{KJ} \text{ mol}^{-1}$
(s)		(g)	(g)		
H ₂ (g)	+	¹⁄₂ O₂ (g)	 	H ₂ O (g)	\triangle HC = -286KJ mol ⁻¹
2C (s)	+	2H ₂ (g)	 • C ₂ H ₄	∆ _{Hf}	= + 52.3 KJ mol ⁻¹

Using the above information calculate the heat of combustion of ethane (3mks)

10. Starting with nitric (v) acid, distilled water, lead (II) carbonate and sodium sulphate crystals. Describe how you can prepare solid lead (II) Sulphate (3mks)

- 11. a) State the observation made when chlorine gas is bubbled through aqueous potassium iodide (1mk)
 - b) When chlorine water is left under sunlight its bleaching property is lost. Explain (1mk)
 - c) Workout the oxidation state of chromium in $Cr_2 O_7^{2-}$ (1mk)
- A solution of hydrogen chloride in methyl benzene goes not react with carbonates. However a solution of hydrogen chloride in water produces a vigorous effervescence with carbonates Explain the above observation (2mks)

13. The experiment below was used to study the effect of electric current on molten compound mx_2



- a) Identify from the above diagram the anode (1mk)
- b) Write the equation of the reaction taking place at
 - i. Cathode (1mk)
 - ii. Anode (1mk)
- 14. Hydrogen sulphide was passed through aqueous lead nitrate
 - a) State and explain the observation that was made (2mks)

- b) Write an ionic equation for the above reaction (1mk)
- 15. Ammonia gas in solution dissociates according to the equation below

NH3	+	H_2O		$NH4^+$	$+ OH^{-}$
(g)		(1)	$\overline{\setminus}$	(aq)	(aq)

a) Identify the acidic species in the above equation (1mk)

- b) Write the formula of the complex ion formed when ammonia is added to copper (II) Sulphate solution until in excess (1mk)
- 16. Solubility of Potassium chloride at 100°C is 39.8g/100g of water and at 80°C is 35.9/100g of water. If a saturated solution of Potassium chloride dissolved in 70g of water at 100°C is cooled to 80°C, Calculate the mass of potassium chloride which will be deposited (3mks)

- 17. When excess carbon (II) oxide gas was passed over heated lead (II) oxide in a combustion tube, lead(II) oxide was reduced.
 - a) Write an equation for the reaction which took place (1mk)
 - b) What observation was made in the combustion tube when the reaction was complete (1mk)
 - c) Name another gas which could be used to reduce lead (II) Oxide (1mk)
- 8 g of methanol require 178 KJ to vaporize completely. Calculate the heat required to vaporize one mole of methanol completely (C = 12.0, H =1.0, O =16.0) (2mks)
- 19. Given a sample of concentrated sulphuric acid was left in an open beaker in a room for two days, the volume was found to have increased slightly.
 - a) What property of concentrate sulphuric acid is shown by the above reaction (1mk)
 - b) State one use of concentrated sulphuric acid that depends on the above property (1mk)
 - c) State another use of sulphuric acid. (1mk)

20. Study the information given in the table below and answer the questions below the table.

BOND	BOND ENERGY KJ mol ⁻¹
С-Н	414
CI-CI	244
C-Cl	326
H-Cl	431

Calculate the enthalpy change for the reaction (3mks)

CH_4	+	Cl_2	>	$C H_3 Cl$	+	HCl
(g)		(g)		(g)		(g)

21. The set up below shows a reaction between magnesium ribbon and steam.



- a) Identify gas X (1mk)
- b) Write an equation for the reaction between the magnesium ribbon and steam (1mk)
- c) Name two other metals that react with steam. (1mk)
- 22. The molecular formula of a hydrocarbon is C_6H_{14} . The hydrocarbon can be converted into two other hydrocarbons as shown below

heat

 C_6H1_{14} + Cl_2 \longrightarrow X + C_3H_8

- a) What name is given to the above process (1mk)
- b) Draw the possible structure of X (1mk)
- c) State the observations made if a few drops of bromine water are added to a sample of X (1mk)
- 23. The table below shows some properties of some elements in period 3 of the periodic table

ELEMENT	SODIUM	MAGNESIUM	ALUMINIUM
Melting point	97.8	650	660
Atomic radii (nm)	0.152	0.136	0.125

Explain the trend of

- a) Melting points from sodium to aluminium (1 ¹/₂ mks)
- b) Atomic size of atoms from sodium to aluminium $(1 \frac{1}{2} \text{ mks})$
- 24. Red hot carbon was found to remove oxygen from the oxides of metals A, B, C but not from the oxide of D. metal C removes oxygen from the oxide of metal A but not from the oxide of metal A but not from the oxide of metal B. Arrange the metals A, B,C, D in increasing order of their reactivity (2mks)



25. Study the flow chart below and use it to answer the questions that follow.

- a) Write the formula of the metal ion in solution K (1mk)
- b) Name the white precipitate L (1mk)
- c) What property of the white precipitate is illustrated in steps I and II (1mk)
- 26. 25cm^3 of 0.12m Potassium hydroxide was neutralized by 30.0cm^3 of a solution of a dibasic acid (H₂x) containing 3.15 g per 500 cm³. Calculate
 - a) The morality of the acid solution (2mks)
 - b) The relative formula mass of the acid (1mk)
- 27. Oxygen can be prepared in the laboratory using the set up below



R _____ (½ mk)

b) Complete the set up to show how the oxygen gas produced is collected (1mk)

- c) Write an equation to show how oxygen is obtained from liquid Q and solid R (1mk)
- 28. The atomic numbers of element W and X are 14 and 17 respectively. W and X are not the actual symbols of the elements) illustrate the type of bonding present in the compound formed when the two react using dots

(•) and crosses (x) (3mks)

29. Hardwater reacts with sodium stearate which is a soapy detergent to form scum. Given that the chemical formula of sodium stearate is c_{17} H₃₅ COONa, write the chemical formula of scum (1mk)

FORM 4 TERM 1 OPENER CHEMISTRY

233/2

CHEMISTRY PAPER 2

THEORY

ΙΑΜΕ
NDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDITATES

- e) Write your name and index number in the spaces provided above
- f) Answer all the questions in the spaces provided in the question paper
- g) Mathematical tables and silent electronic calculators may be used
- h) All working must be clearly shown where necessary.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	10	
2	13	
3	12	
4	11	
5	11	
6	10	
7	13	
TOTAL	80	
SCORE		

This paper consist of 9 printed pages candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no questions are missing.

EI EMENT	ATOMIC DADIUS	Is a is a diver (a ma)	Esamento of orido	Malting raint of
ELEMENI	ATOMIC RADIUS	Ionic radius (nm)	Formula of oxide	Melting point of
	(nm)			oxide
А	0.364	0.421	A ₂ O	-119
D	0.830	0.711	DO ₂	837
Е	0.592	0.485	F_2O_3	1466
G	0.381	0.446	G ₂ O ₅	242
J	0.762	0.676	JO	1054

1. Study the informatio given below and answer the questions that follow.

i. Which elements are nonmetals? Give a reason (2mks)

- ii. What type of bond exists between J and A (1mk)
- iii. Write the formula of the compound formed when J combines with A (1mk)

iv. Explain why the melting point of the ocide of E is higher than that of the oxide of G. (2mks)

- v. Give two elements that would react most vigously with each other. Explain your answer (2mks)
- vi. Which element may be suitable for making untensilx for boiling water? State the property that make the element suitable for this use. (2mks)

2. a) Two hydrocarbons compounds are represented by the formula C_3H_8 and $C3H_6$

 C_3H_6

- i. To which homologous series does each of them belong? $C_{3}H_{8} \tag{1/2 mk}$
- ii. Describe a chemical test that could be used to distinguish between the two compounds above. (2mks)

(¹/₂ mk)

b) The scheme below shows a series of reactions starting with ethanol. Study it and answer the questions that follow



a)	Give	the names of the reactions talking place in		
	i.	Step I	(1mk)	
	ii.	Step II	(1mk)	
b)	Identif	Ty the reagent necessary for the reaction in Step W to take place	(1mk)	
c)	Name	compound K and state the type of reaction involved in its forma	tion	
	Name-			(½ mk)
	Туре о	of reaction		(½ mk)
d)	Give the	he name and the stuctural formula of compound X		(2mks)
	Name			(1mk)
	structu	ral formula		(1mk)

e) If the relative molecular mass of K is 44800, determine the value of n (2mks)

- f) What is the industrial importance of the reaction taking place in Step II (1mk)
- g) State one use of compound K (1mk)
- 3. In an experiment, 1 g zinc powder was added to copper (II) Sulphate solution of volume 50cm³ in a plastic beaker after taking the initial temperature reading immediately the zinc powder was added the temperature was recorded after a time interval and the values recorded in the table below. Use the table and the data given to answer the questions that follow.

Time (minutes	0	1⁄2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1⁄2	5	5 1/2	6	6 ½	7
Temperature	20	21	22	23	24	25	26	27	27	27	27	27	27	26.5	26
(°C)															

- a) Plot a graph of temperature against item (3mks)
- b) From the graph determine the highest temperature change (1mk)
- c) Write an ionic equation for the reaction taking place. (1mk)
- d) Draw an energy level diagram for the above reaction (2mks)

e) Calculate the amount of heat given out during the reaction specific heat capacity of the solution is
 4.2Jg⁻¹ k⁻¹ and density is 1g/cm³) (2mks)

- f) If the molar heat for the displacement displacement reaction is 209 KJ/mole, calculat
 - i. the moles of copper (II) Sulphate that reacted (1¹/₂ mks)
 - ii. The molarity of the copper (II) Sulphate solution (1¹/₂ mks)

- 4. A mixture of iron fillings and sulphur was heated strongly. A red glow spread throughout the mixture and a black residue was formed. The cold residue reacts with dilute hydrochloric acid and a gas, which gives a black precipitate with lead (II) Nitrate solution was given off.
 - a) i) What did the red glow indicate (1mk)

ii) Identify the gas evolved when the black solid reacted with dilute hydrochloric acid (1mk)

- iii) Write the formula of the black solid (1mk)
- iv) State the observation made when the gas mentioned above is reacted with chroline gas. (1mk)

b) i) When chlorine gas is passed over heated iron wool, a chloride of iron is formed. Write an equation for the formation of the chloride (1mk)

ii) Calculate the mass of iron required to react completely with 0.12 litres of chlorine at room temperature and pressure. (Fe = 56, Cl=35.5, molar gas volume at r.t.p = 24dm³) (3mks)

iii) Calculate the amount of chloride of iron formed in (II) above (Fe – 56, Cl =35.5, molar gas volume at $r.t.p = 24 dm^3$) (3mks)

5. Aquesous copper (ii) sulphte was electrolysed using the set up represented by the diagram below.



a) i) Name gas x (1mk)

ii) Write an ionic equation for the reaction which produces gas x (1mk)

iii) What is the confirmatory test for gas x? (1mk)

iv) What happens to the PH of the electrolyte during electrolysis? Explain your answer (2mks)

b) If the above set-up copper electrodes were used instead of platinum electrodes, write the electrode half equations at the anode and cathode

Anode ______ (1mk)

Cathode ______(1mk)

c) What happens to the colour of the electrolyte during electrolysis using platinum electrodes. Explain (2mks)

d) State two applications of electrolysis (2mks)

6. Study the flow chart below and answer the questions that follow



Residue V was Reddish brown when hot and yellow when cold

- a) identify
 - i. White PPt. I (1mk)
 - ii. the anion present in colourless solution II (1mk)
 - iii. Residue V (1mk)
- b) write an ionic equation for the reaction of colourless solution I with few drops of NaoH soution (1mk)
- c) Write the observation that would be made when ammonia solution is added dropwise till in excess to the colourless solution I (1mk)
- d) i) Define heat of solution (1mk)
 - ii) Use the information in the nergy cycle diagram below to answer the questions that follow.
 - a) Give the name of the nergy represented by

 Δ H1 (1mk)

 Δ H2 (1mk)

b) Given that $\Delta H1 = 2237 \text{KJ}$ Mol amd $\Delta H3 = -2378 \text{KJ}$ mol Calculate the value of $\Delta H2$ (2mks)

7. Use the flow chart below to answer the questions that follo



	Na ₂ Co ₃
a)	i) Name the substances labelled
	X (½ mk)
	Y (½ mk)
	ii) Name two subsances being recycled in the process reperesented by the flow chart.
	(½ mks)
	(½ mk)
	iii) Name the process that take plac in
	S (1mk)
	R (1mk)
	iv) Give one use of calcium chloride (1mk)
	v(Write the equations for the reactions taking place in
	Q (1mk)
	T (1mk)
b)	Write an equation to show how sodium carbonate can be used to soften hardwater. (1mk)
c)	Give another commercial use of sodium carbonate besides softening hard water. (1mk)
d)	X grams sodium carbonate reacted completely with 30cm^3 of dilute hydrochloric acid to produce 672cm^3 of carbon (iv) oxide gas at S.T.P (1 mole of gas occupies 22.4dm ³ at S.T.P) C =12.0, O = 16.0, Na = 23.0)
	i. Write the equation for the reaction (1mk)

ii. Calculate the concentration of the acid in moles pe litre (2mks)

iii. Calculate the value of x (2mks)

FORM 4 TERM 1 OPENER PHYSICS

232/1

PHYSICS PAPER 1

NAME.....

INDEX NUMBER.....

CANDIDATE'S SIGNATURE.....

ADM NO.....

Take: $g=10m/s^2$

Density of mercury = 13600Kg/m^3

Density of water = 1000kg/m^3

Instruction to candidates

- Write your name and index number in the spaces provided.
- Attempt all the questions in section A and B.
- All your answers must be written in the spaces provided in this question paper.
- All working must be clearly shown.
- Non-programmable silent electronic calculators may be used.

For examiners use only.

Section	questions	Max score	Candidates score
A	1-12	25	
В	13	10	
	14	10	

SECTION A

1. Figure 1 shows part of the scale of a micrometer screw gauge,



Record the reading indicated (1mk)

- 2. Explain why raindrops falling freely are spherical. (1mk)
- 3. Pressure at a certain place is found to be 750mmHg using a simple mercury barometer. What would be its pressure in meter of water? (3mks)

- 4. Gases are easily compressible as compared to liquids and gases. Explain. (2mks)
- 5. Concrete beams are reinforces with steel rods and they do not crack. Explain. (1mk)

6. Figure 2 shows a simple fire alarm.



Briefly describe how it works (3mks)

7. Figure 3 shows three identical springs each with a spring constant of 150N/m, and a weight of 10N suspended.



Assuming that the springs and the rod have negligible weight, determine the total extension (3mks)

- 8. A person feels cold when sitting on a metallic chair than on a wooden one during cold weather. Explain. (1mk)
- 9. Figure 3 shows a uniform metal bar of weight 5N and length 0.8 m is balances by weights of 8N and 2N.



Determine how far the 8N weight if from the pivot. (3mks)

 A wooden rod of cross section area 16cm² is made to float upright in a liduid of density 1000kg/m³. If the depth of rod below the liquid surface is 10cm, calculate the weight of the rod. (3mks)

11. Figure 4 shows a tube of a light paper air is blown through the pipe as shown by the arrow and the tube collapses.



Explain the observation above. (2mks)

12. When a fast moving vehicle is suddenly brought to rest, the passages are jerked forward. Explain. (2mks)

SECTION B (55MARKS)

Answer all questions in this section in the spaces provided.

13. a) state the Boyles law for the ideal gas. (1mk)

b) Figure 5(i) shows a column of air trapped by a mercury thread of 240mm long. When in the horizontal position the air column is 240 mm long.



(i) The tube is then inverted such that it is vertical with the open end up. Figure 5(ii). Determine the length *l*1 of the air column. (Atmospheric pressure=760mmHg.)



(ii)The tube is then inverted such that the open end is at the bottom. (figure 5 (iii). Determine The length 13 of the air column. (3mks)
c) A rubber tube is inflated to a pressure of 2.5×10^5 pa and a volume of 3000 cm³ at a temperature of 25° c. it is then taken to another place where the temperature is 15° c and pressure of 2.2×10^5 pa. determine the new volume. (3mks)

14. a) State difference between speed and velocity. (1mk)

b) figure 6 (i) shows the velocity time graph for a car starting at rest.



i. O and A

- ii. A and B
- iii. C and D

(iii) What is the total distance covered for the whole journey. (3mks)

c) figure 6 (ii) shows a paper tape that was attached to a trolley and allowed to run through a ticker timer operated by mains electricity with a frequency of 50Hz



ii. He average acceleration

(2mks)

15. a) Determine the term efficiency of a machine. (1mk)

b) figure 7 shows a drum containing water being raised from the ground to a stationery lorry using wooden planks inclined at an angle of 30° to the ground.



If the mass of the drum is 90kg, Determine:

- i. The velocity ration of the set up. (2mks)
- ii. the effort applied, if the efficiency of the set up is 75% (3mks)

- c) Explain the following statements.
 - i. The efficiency of a pulley system increases with load to a given level.
 - 16. a) determine specific latent heat of fusion of a substance. (1mk)
 b) Water of mass 400g at temperature of 60⁰c is put in a well lagged copper calorimeter of mass 160g. a piece of ice mass 40g at 0⁰c is put into water in the calorimeter and the mixture stirred gently until all the ice melts. The final temperature, T of the mixture is then measured. Determine:

(i) The heat absorbed by ice. (2mks)

(ii) The heat absorbed by the melted ice to rise to temperature T. (Give your answer in terms of T) (2mks)

(iii)The heat lost by water and the calorimeter in terms of T. (3mks)

(iv) The final temperature T of the mixture. (3mks)

- Specific latent heat of fusion of ice: 334000Jkg⁻¹
- Specific heat capacity of water: 4200Jkg⁻¹k⁻¹
- Specific heat capacity of copper: 900 Jkg⁻¹k⁻¹

17. a) Define angular velocity. (1mk)

b) A stone of mass 0.2kg is tied to a string is whirled in a horizontal circle of radius 1.0m at a constant speed of 3.0m/s. Determine:

(i) The angular velocity of the stone. (2mks)

(ii) The tension in the string. (2mks)

c) figure 8 shows a body of mass m attached to the centre of rotating table with a string whose tension can be measured.



e tension, T on the string was measured for various values of angular velocity ω .

The distance r of the body from the centre was maintained at 30cm.

Table 1 shows the results obtained.

Angular velocity ω (rad s ⁻¹)	2.0	3.0	4.0	5.0	6.0
Tension, T (N)	0.04	0.34	0.76	1.30.1.90	
ω^2					

a) Complete the table 1 above

0

(1mk)

b) Plot a graph of T (y axis) against ω^2

(5mks)

c) From the graph determine the mass, m of the body given that $T = m\omega^2 r$ -c, where c is a constant.

d) Determine the constant, c and suggest what it represents. (1 mk)

FORM 4 TERM 1 OPENER PHYSICS

232/2

PHYSICS PAPER 2

NAME
INDEX NUMBER
CANDIDATE'S SIGNATURE

ADM NO.....

Instruction to candidates

- Write your name and index number in the spaces provided.
- Attempt all the questions in section A and B.
- All your answers must be written in the spaces provided in this question paper.
- All working must be clearly shown.
- Non-programmable silent electronic calculators may be used.

For examiners use only.

Section	questions	Max score	Candidates score
Α	1-12	25	
В	13	10	
	14	10	
	15	13	
	16	10	
	17	12	
	Total	100	

SECTION A(25MKS)



On the same diagram draw the reflected ray and indicate the angle of reflection.(2mks)

- 2. Three capacitors of capacitance 2uF, 3uF and 4uF are to be connected together. Draw a circuit diagram that can give,
 - a. Maximum capacitance(1mk)
 - b. Capacitance of 2.22uF(2mks)

Figure 2 shows a set up used to make a simple cell. Use it to answer question 3 and 4.





FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

5.14

(2mks)

1.7

3. Identify

.

Plate A:....

4. The bulb lights immediately on connection and goes off after a short time. Explain one reason for this observation.(2mks)

- 5. In testing for the polarity of a magnet with unknown poles, repulsion is considered the surest way as compared to attraction. Give a reason for this.(2mks)
- 6. Figure 3 shows an object O placed in front of a convex mirror. Locate the position of the image.(3mks)



Figure 3

(

7. State two ways of increasing the strength of an electromagnet.(2mks)

8. A boy standing a distance from a vertical wall claps his hands and hears an echo after 0.60 seconds. If the speed of sound in the place is 330m/determine the distance between the wall and the bot.(3mks)

9. Tracks transporting petroleum product have a chain hanging downwards .Explain.(1mk)

10. Arrange the following electromagnetic waves in order of their increasing frequency.Radiowaves,x-rays,gamma rays,visible light.(1mk)

11. An electric water heater is rated 1.5Kw and is operated a 240v main supply.Calculate the resistance of th coil.(3mks)

12. Stateone condition necessary for total internal reflection to occur.(1mk)

. . . .

SECTION B955MKS)

13. a.State one similarity and one difference between the human eye and the camera.(2mks)

!

b.Figure 4 shows rays from an distant object as seen by the eye.



The image is formed in front of the retina.

i. What is the name of the defect shown above.(1mk)

ii. State two possible causes of the defect.(2mks)

iii. On the figure 5 show how the defect can be corrected.(2mks)

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

Figure 4

6-6.11

* *



14. a.State the Ohm's Law(1mk)

b.Figure 7 shows three resistors of resistance 6 Ω 3 Ω and R Ω respectively, connected to a 4v source. the reading of the voltmeter is 0.8 v.



Determine

i. The value of R

(3mks)

ii. The effective resistance of circuit.(2mks)

c.A cell supplies a current of 0.5A when a 2Ω resistor is connected. When the 2Ω resistor is replaced with a 5Ω resistor, the current of 0.25A flows .Determine the electromotive force (e.m.f) and the internal resistance of the cell.(4mks)

15. a.(i) State the Lenz's Law of electromagnet induction.(1mk)

ii)Figure 8 shows a solenoid connected to a sensitive centre zero galvanometer. a bar magnet is moved in the direction shown and current flows through the galvanometer.



Indicate on the diagram, the direction of current in the coil.(1mk)

Figure 8

b.Figure 9 shows a simple a.c electronic generator.



Figure 9

- i. Name the part labeled x.(1mk)
- ii. Using appropriate rules, briefly explain how the generator woks.(4mks)

c.(i) Sate any two ways in which energy can be lost in a transformer.(2mks)

ii.A transformer steps down voltage from 240V to 6 volts for use by the radio. The primary coil has 2000 turns. Determine

1

I.the number of turns in the secondary coil.(2mks)

II.the current in the primary coil if the radio is is rated 75w.(2mks)

16. A.(i) What do you understand by diffraction?(1mk)

ii)Figure 10 (a) and (b) shows two sets of waves incident on two different gaps. The wavelength for both is the same.



ii.A ray of light travels from medium one to medium two sa shown in figure 12. The refractive index of medium one $n_1 = 1.4$ while that of medium two is $n_2 = 1.5$.





(3mks)

II. The emergence angle(e) on the face CD.(3mks)

c.Figure 13 shows a graph of real depth against apparent depth of a swimming pool as it is being filled with water.

For marking schemes call/text/whatsapp 0705525657

From the graph, determine

i. the refractive index of water.(3mks)

ii. The real depth, when the apparent depth is 2.4m.(mks)

FORM 4 TERM 1 OPENER

CHRISTIAN RELIGIOUS EDUCATION

CRE PAPER 1

313/1

NAME
INDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

Answer any five questions in the answer sheet provided

- 1. a) Identify eight historical books in the old testament (8mks)
 - b) Give seven reasons why the Bible is referred to as a library (7mks)
 - c) State five different occasions when Christians use the Bible (5mks)
- 2. a) Outline the activities carried out by the Israelites on the night of the Passover (5mks)
 - b) Give five reasons why the Exodus was important to the Israelites (10mks)
 - c) How do Christians show respect for God? (5mks)
- 3. a) Explain the achievements of Solomon as the king of Israel (7mks)
 - b) State the importance of the temple in Jerusalem to the Israelites (7mks)
 - c) Give six lessons that modern political leaders in Kenya can learn from King Solomon (6mks)
- 4. a) Describe the call of Amos to become a prophet of God (5mks)
 - b) Identify the five visions of prophet Amos (5mks)
 - c) Give five reasons why Amos was against the way Israelites worshipped God (10mks)

- 5. a) Outline five teachings of prophet Amos on the remnant and restoration of the Israelites (5mks)
 - b) State five ways in which God would punish Israel for her evils according to prophet Amos (10mks)
 - c) How does the church in Kenya punish errant members? (5mks)
- 6. a) How do the aged in Traditional African communities prepare their family members before they die? (7mks)

b) State the Traditional African understanding of spirits (5mks)

c) What is the responsibility of the living towards the ancestors in traditional African communities?(8mks)

FORM 4 TERM 1 OPENER

CHRISTIAN RELIGIOUS EDUCATION

CRE PAPER 2

313/2

NAME	•••
INDEX NUMBER	•
CANDIDATE'S SIGNATURE	••
ADM NO	

ANSWER ANY FIVE QUESTION S IN THE ANSWER SHEET PROVIDED

1. With reference to Luke's gospels, explain eight ways in which Jesus fulfilled the Old Testament prophesies about the Messiah. (8mks)

b) Explain What Zachariah revealed about John the Baptist in the Benedict sin Luke 1:68-80 (6mks)

c) Give reasons why then birth of a child is celebrated in the modern society? (6mks)

2 a) Give reasons why Jesus was rejected in Nazareth (8mks)

b) Describe the healing of the paralytic (lk 5:17-26) (7mks)

c) Give reasons why a church leader may be rejected today (5mks)

3 a) Narrate the parable of the widow and the unjust judge (lk18:1-8) (6mks)

b) Explain Jesus teaching on prayer (8mks)

c) Give the importance of prayers in a Christian life today (6mks)

4a) Explain actions taken by Jewish leaders to ensure that Jesus was put to death (8mks)

b) Give evidence to show that Jesus resurrected (6mks)

c) What is the importance of Jesus resurrection to Christian today? (6mks)_

5a) Explain the New Testament teaching s on the unity of the believers as expressed in the bride (8mks)

b) Identify causes of disunity in the early church (6mks)

c) Explain how church disciplines those who cause disunity in to church today (6mks)

6 a) Outline seven teachings about Jesus from peters message on the day of Pentecost (7mks)

b) Outline the characteristics of love as taught by St.Paul in 1corinthian 13 (7mks)

c) State activities of the church in Kenya which show that the Holy Spirit is working among them. (6 marks)

FORM 4 TERM 1 OPENER

HISTORY AND GOVERNMENT

PAPER 1

311/1

NAME.....

INDEX NUMBER.....

CANDIDATE'S SIGNATURE.....

ADM NO.....

INSTRUCTIONS TO CANDIDATES

This paper consists of section **A**,**B** and **C**. Answer all the Questions in section **A**, three in section **B** and two Questions in section **C**.

SECTION A (25MARKS)

- 1. Identify any two archaeological sites in the Rift valley of Kenya. (2mks)
- 2. Name<u>two</u> communities that form the coastal Bantus. (2mks)
- 3. What is the significance of EUNOTO ceremony among the masaai?(1mk)
- 4. Identify <u>one</u> technological factor which facilitated the coming of early visitors to the Kenyan coastal before 1500 A.D (1mk)
- 5. State two forms of the Anglo-German agreements of 1886 (1mk)
- 6. Give <u>two</u> factors that contributed to the spread of Islam along the Kenyan coast by 1500 AD (2mks)
- 7. Identify the treaty that ended the scramble for and partition of east Africa (1mk)
- 8. State <u>two</u> reasons why the colonial government established local native councils in Kenya(2mks)
- 9. Give the <u>main</u> function of the governor in colonial Kenya (1mk)
- 10. Identify the pioneer political organization during the colonial period in Kenya (1mk)
- 11. Name one community that offered mixed reaction to the British in Eastern Kenya.(1mk)
- 12. Give two reasons why the British used Indian coolies to construct the Ugandan railway (2mks)
- 13. Give <u>two</u> ways in which African migration to the urban centres was controlled by the colonial government (2mk)
- 14. Name<u>one</u> group that offered education in colonial Kenya (1mk)
- 15. Why did Africans form welfare organizations during the colonial period? (1mk)

- 16. Identify two characteristics of Human rights (2mk)
- 17. Give two conditions that <u>one</u> must fulfill in order to be naturalized Kenyan citizen (2mk)

SECTION B. (45MX)

Answer any three questions from this section in the booklet provided.

- 18. a) Identify three functions of Njuri Ncheke among the Ameru. (3mx)b) Describe the social political organization of the Agikuyu. (12mx)
- 19. (a) state three methods used by the colonial government to acquire labour for the settlers in

Kenya (3mx).

- b) Explain the impact of the colonial land polices in kenya (12mx).
- 20. a) why did the Akamba resist British invasion of their land. (3mx).
 - b) Describe the external factors that contributed to decolonization of Kenyan by the

British (12mx)

- 21. a) what were the grievances of the coast African association (5mx)
 - b) Describe the role of women in the Mau Mau movement (10mx)

SECTION C (30MKS) ANSWER ANY TWO QUESTIONS

- 22. (a) identify three categories of people whose personal liberty is limited (3mx)
 - (b) Explain <u>five</u> responsibilities of a Kenyan citizen (12mx)
- 23. (a) outline <u>five</u> principles of democracy (5mx)
 - (b) Discuss the rights of a child as contained in the children act.(10mx)
- 24. (a) What were the three main features of the Independence constitution of Kenya.(3mx)
 - (b) Explain \underline{six} powers that the constitution of Kenya gives to the president (12mx)

FORM 4 TERM 1 OPENER

HISTORY AND GOVERNMENT

PAPER 2

311/2

INDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDIDATES

Answer <u>all questions</u> in section A, three in section B and <u>two</u> questions from section C.

Section a (25mks)

Answer all questions in this section

- 1. Give two aspects of human activities studied in economic history (2mks)
- 2. Name two Species belonging to the Australopithecus family.(2mks)
- 3. State the Major development in transport which promoted early agriculture in Mesopotamia.(1mk)
- 4. Identify one form of message that could be relayed by the use of drum-beats in ancient times(1mk)
- 5. Name the first European country to transport slaves from west Africa to west indies in the 16th century)1mk)
- 6. State two factors that led to spread of iron working skills in Africa (2mks)
- 7. In what way has brain drain undermined scientific revolution in Africa. (1mk)
- 8. State two political functions of modern Nairobi city (2mks)
- 9. Give two functions of asante-hene in Asante Empire. (2mk)
- In what ways did the Berlin conference 1884-1885 solve the dispute in Congo among European powers. (2mks)
- 11. Name two leaders of west Africa who collaborated with the French against Samori Toure in 1896 (2mks)
- 12. State one method used in the direct rule in Zimbabwe to maintain law and order. (1mk)
- 13. Name one colony of Britain in west Africa (1mk)

- 14. Give one reason why the Africans in Tanganyika were against the use of akindas by the German colonial administrators.
- 15. Give two methods used by the apartheid government to discourage African nationalism from 1960 (2mks)
- 16. What was the immediate result of German invasion of Poland (1mk)
- 17. Mention the main feature of common wealth member states. (1mk)

SECTION B (45MKS)

ANSWER THREE QUESTIONS FROM THIS SECTION

- 18. (A) Mention three factors which influenced the evolution of man. (3mks)(b) Explain six reasons why it is important for students to study History and Government in schools. (12mks)
- 19 (a) Name three participants involved in the Trans-saharan trade (3mks)
 - (b) Explain six problems faced by traders in the Tran-saharan trade (12mks)
 - 20.(a) Mention three traditional forms of water transport (3mks)
 - (b) Describe five contributions of television on economic development. (12mks)
 - 21. (a) Identify any three European powers who took part in the scramble and partition of African

(3mks)

(b) Explain six social reasons why Europeans colonized Africa (12mks)

SECTION C (30 MKS) ANSWER TWO QUESTION FROM THIS SECTION

- 22. (A) Give three functions of ancient Meroe city (3mks)
 - (b). Explain six factors that contributed to the decline of most early urban centre. (12mks)
- 23. (a) Name three Asante leaders (3mks)
 - (b) Describe socio-political organization of Asante kingdom (12mks)
- 24. (a) State five causes of the first world war (5mks)
 - (b) Explain the reasons why the central powers were defeated by the Allied powers during world War I (10 mks)

FORM 4 TERM 1 OPENER GEOGRAPHY

PAPER 1

312/1

NAME	••••
INDEX NUMBER	••••
CANDIDATE'S SIGNATURE	
ADM NO	• • • • • • • • • • • •

INSTRUCTIONS TO CANDIDATES

This paper has two sections A and B

Answer all the questions in Section A

Answer question 6 and any other two questions from Section B

All answers must be written in the answer booklet provided

This paper consist of 4 printed pages candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no questions are missing

SECTION A

Answer all the questions in this section

- 1. a) i) What is the solar system? (1mk)
 - ii) Name three objects involved in the formation of an eclipse (3mks)
 - b) Name one of the minor bodies within the solar system (1mk)
- 2. a) State two conditions for the formation of fog. (2mks)
 - b) Name three factors that determine the amount of solar radiation which reaches the surface of the earth (3mks)
- 3. a) List three characteristics of summer solstice (3mks)b) What is an isobar? (2mks)

- a) Name two conditions which occur when the materials have been forced to move horizontally (2mks)b) State three causes of earth movements (3mks)
- 5. a) Name two types of longitudinal waves (2mks)b) State three types of earth quakes (3mks)

SECTION B

Answer question 6 and any other two questions from this section

6. Study the map of Homa Bay (1:50000) sheet 129/2 provided and answer the following questions

a. i)Name two manmade features found at grid square 5540 (2mks)

ii) Calculate the bearing of the air photo principal point found at grid square 5543 form trigonometrical station found at grid square 5741 (2mks)

iii) What is the title and sheet No of the map found on the south eastern part of Homa Bay map. (2mks)

b) i) Measure the distance of dry weather road D213 from grid square 4930 up to the junction at grid square 5434. (Give your answer in kilometers and meters (2mks)

ii) Calculate the area covered by the boundary of olambwe valley National reserve (2mks)

- c) i) Reduce by half the area enclosed between grid points 580340 to 650340 and from 580410 to 650410 (2mks)
- ii) On the reduced map locate the following features (4mks)
 - Homa bay municipality
 - papyrus swamp
 - air field runaway grass/airstrip
 - divisional boundary

d i) Citing evidence from the map give three social service offered within Homa Bay municipality (3mks)

ii) Describe the relief of the area covered by the map. (6mks)

7. a) Name three types of faults

ii) A part from compressional forces, explain two other processes that may cause faulting.

b) With the aid of diagram, describe how compressional forces may have led to the formation of the great Rift valley (8mks)

c) Explain five ways in which faulting is of significance to human activities (10 mks)

- 8. a) i) Define the term drainage basin (2mks)
 - ii) Describe two ways in which gorges form (4mks)
- b) State four causes of river deposition (4mks)
- c) Explain how the following are formed
 - i. Antecedent drainage system (3mks)
 - ii. Radial drainage pattern (3mks)

d) Geography students in a school near river Tana intend to carry out a field study on the old stage of a river

- i. State three preparations they would undertake before the study (3mks0
- ii. Name three features they are likely to identify outside the river channel (3mks)
- iii. State three problems they are likely to experience during the study (3mks)
 - 9. a) Define the term ice sheet (2mks)
 - b i) Name five types of moraines (5mks)
 - ii) State three main ways in which ice moves (3mks)
- c) Describe how a tarn is formed (5mks)
- d) What is the difference between a Roche moutonee and a crag and tail (2mks) .
- e) Explain the significance of glaciated landscape. (8mks)
 - 10. The diagram below represents features in a limestone area. use it to answer question



- a. i) Name the features marked X, V and W (3mks)ii) Describe how the feature marked Y is formed (6mks)
- b. i) What is an artesian basin (2mks)ii) Explain three factors which influence the formation of features in limestone area (6mks)
- c. You are supposed to carry out a field study of an area eroded by water .
- i. Give three reasons why you would need a map of the area of study. (3mks)
- ii. Name two erosional features they are likely to identify during the field study (2mks)

iii. State three recommendations that you would make from your study to assist the local community to rehabilitate the eroded area (3mks)

FORM 4 TERM 1 OPENER GEOGRAPHY

PAPER 2

312/2

NAME	
INDEX NUMBER	
CANDIDATE'S SIGNATURE	•••••
ADM NO	•••••

INSTRUCTIONS TO CANDIDATES:

- This paper consists of **two** sections: **A** and **B**
- Answer all the questions in section **A**
- Answer question 6 and any two questions from section B
- All answers **must** be written in the answer booklet provided

SECTION A

1.	(a) Define the term mining.	(1mk)
	(b) Name a mineral which occurs in each one of the following place	es in East Africa:
	(i) Kwale in Kenya	(1mk)
	(ii) Kilembe in Uganda	(1mk)
	c) State two ways in which land derelicts can be reclaimed	(2 mks)
2.	(a) List three social factors that influences agriculture	(3 mks)

	(b) State two characteristics of pastoral farming	(2 mks)
	(c) State three physical problems experienced in irrigation farming in Keng	ya. (3mks)
3.	(a) Name three tourist attractions in Coastal province of Kenya	(3mks)
	(b) Give two problems facing tourism in Kenya	(2mks)
4.	a) Differentiate between a forest and forestry.	(2mks)
	b) Give two types of natural forests.	(2mks)
5.	a) State three problems facing farmers in Mwea-Tebere irrigation scheme.	(3mks)

SECTION B

Answer questions 6 and any other two questions from this section

 The table below shows tea production in '000 tonnes by type of grower in the years 2001 to 2003. Use it to answer questions

Type of Grower	Amount in metric tonnes			
	2001	2002	2003	
Small holder	182,000	176,000	181,000	
Estates	113,000	111,000	113,000	

Source: Economic survey of Kenya 2004

(a) (i) Using a scale of 1 cm to represent 20,000 metric tonnes, draw a comparative bar graph based on the data above(8 mks)

(ii) State two advantages of using comparative bar graph to present data (2 mks)

(b) (i) Calculate the percentage decline in tea production small holder between 2001 and 2002

(c) (i) Describe the processing of tea from picking to the time it is ready for marketing (8 mks) (ii)Name two areas in Kenya where tea is grown in large scale. (2mks)
(d) Outline three ways in which tea is important to Kenya's economy. (3mk)
7. (a) (i) Differentiate between land reclamation and land rehabilitation. (2mks) (ii) State **four** methods of land rehabilitation which are used in Kenya. (4mks) (b) (i) State the aims of setting up of the Pekerra irrigation scheme. (3mks) (ii) Name **three** crops grown in the scheme. (3mks)

(c) (i) Explain **three** achievements of the Pekerra irrigation scheme. (6mks)

(ii) Explain two benefits of irrigation schemes in Kenya.	(4mks)
(d) Describe how a polder is reclaimed.	(3mks)

(2mks)
(2mks)
(3mks)
(4mks)

- (c) (i) Give four reasons why the marine fishing industry in East Africa is not well developed (4mks)
 (ii) State five ways in which the fishing industry is of significance in Kenya. (5mks)
 (d) (i) Give three main problems that are facing fishing in Lake Victoria. (3mks)
 - (ii) State **two** similarities between fishing in Kenya and Japan. (2mks)
- 9. (a) Define: (i) Agro-forestry (2mks) (ii) Name three major soft wood forest blocks in Western Kenya (3mks) (b) (i) Name two commercial softwoods grown in Kenya (2rnks) (ii) Give four differences between forestry in Kenya and Canada (4mks) (c) State four importance of forestry to the economy of Kenya (8mks) (d) Explain three efforts being made by the Kenyan government to solve the mothigh rate
- of forest depletion

10. a) i) State three physical conditions that may discourage setting up of Game Reserves and Parks. (3mks)
ii) Name one Game Ranch in Kenya. (1mk)
b) (i) State the significance of wildlife to Kenya. (3mks)
c) i) Differentiate between domestic and international tourism. (2mks)
ii) Explain three factors that hinder development of domestic tourism in Kenya. (6mks)

iii) State four problems experienced by the Kenya government in its efforts to conserve wildlife.

(4mks)

(6mks)

FORM 4 TERM 1 OPENER MATHEMATICS

PAPER 1

121/1

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SECTION I: (50 MARKS)

Answer all the question in this section in the spaces provided:

1. Evaluate without using a calculator

$$\frac{\frac{1}{4} + \frac{1}{5} \div \frac{1}{2} \text{ of } \frac{1}{3}}{\frac{1}{2} \text{ of } (\frac{4}{5} - \frac{3}{4} + \frac{1}{2})}$$
(3mks)

2. Simplify completely.

$$\frac{3a^2 + 5ab - 2b^2}{b^2 - 9a^2}$$
(3mk)

The points A, B and C lie on a straight line. The position vectors of A and C are
 2i + 3j + 9k and 5i - 3j + 4k respectively; B divides AC internally in the ration 2:1. Find the

(a) Position vector of B.

(2 mks)
(b) Distance of B from the origin.

(1 mk)

4. Find the value of x in the equation
$$\cos(3x - 180^\circ) = \frac{\sqrt{3}}{2}$$
 in the range listed below. $0^\circ \le x \le 180^\circ$ (3mks)

5. A farmer has a piece of land measuring 840m by 396m. He divides it into square plots of equal size. Find the maximum area of one plot. (3 mks)

6. A liquid spray of mass 384g is packed in a cylindrical container of internal radius 3.2 cm. Given that the density of the liquid is 0.6g/cm³, calculate to 2dp the height of the liquid in the container.

(3 mks)

7. (a) Find the inverse of the matrix $\begin{pmatrix} 4 & 3 \\ 3 & 5 \end{pmatrix}$

(1 mark)

(b) Hence solve the simultaneous equation using the matrix method (2 marks)

$$4x + 3y = 6$$
$$3x + 5y = 5$$

8. Use the tables of cube roots, squares, and reciprocals to evaluate the following correct to 4 s.f

$$\frac{3}{(0.0136)^{1/3}} - \frac{2}{(3.72)^2}$$
(4mks)

The volumes of two similar solids are 800cm³ and 2700cm³. If the surface area of the larger one is 2160cm², find the surface area of the smaller figure. (3mks)

10. Find the integral values that satisfy the simultaneous inequalities below. (3mks)

$$4x - 6 \ge x - 12$$
$$8 - 3x > 2x - 7$$

11. Find the area of the triangle below given that lines AB=25cm, BC = 15cm, AC = 14cm, BD = 28cm

(4mks)



12. A straight line has the equation 3y-5x=4. Determine the acute angle which the line makes with the X-axis. (3mks)

13. The data below shows masses in grams of pieces of metal in a factory. If the mean mass is 3.3g, find the value of m. (3mks)

Mass (x) g	1	2	3	4	5	6
Frequency (f)	4	7	2m	2	5	m

14. A point (-5, 4) is mapped onto (-1, -1) by a translation T. Find the image of (-4, 5) under the same translation. (2 marks)

15. If (M + n) : (M - n) = 8: 3. Find the ratio M: n.

(3 marks)

16. Solve the equation $\log (x+24) - 2\log 3 = \log (9-2x) + 2$

(4marks)

- 17. A bus left Mombasa and traveled towards Nairobi at an average speed of 60km/hr. after 2½ hours; a car left Mombasa and traveled along the same road at an average speed of 100km/ hr. If the distance between Mombasa and Nairobi is 500km, Determine
 - (a) (i) The distance of the bus from Nairobi when the car took off

(2 marks)

(ii) The distance the car travelled to catch up with the bus (4 marks)

(b) Immediately the car caught up with the bus, the car stopped for 25 minutes. Find the new average speed at which the car traveled in order to reach Nairobi at the same time as the bus. (4 marks)

18. The figure below is a model representing a rocket capsule. Themodel whose total height is 15cm is made up of a conical top; a hemispherical bottom and the middle part is cylindrical. The radius of the base of the cone and that of the hemisphere are each 3cm. Theheight of the cylindrical part is 8cm.



a) Calculate the external surface area of the model. (4mks)

b) The actual rocket has a total height of 6 metres. The outside of the actual rocket capsule is to be painted. Calculate the amount of paint required if an area of $20m^2$ requires 0.75 litres of the paint. (6mks)

19. The figure below shows a circle centre O PQRS is a cyclic quadrilateral and QOS is a straight line.



Giving reasons for your answers find the size of; a) Angle PRS (3mks)

b) Angle POQ (2mks)

d) Angle PSR (2mks)

e) Reflex angle POS (3mks)

20. (a) Complete the table of the functions $Y = 1+x-2x^2$ (2mks)

х	-3	-2	-1	0	1	2	3
$-2x^2$	-18			0	-2		
1	1	1	1	1	1	1	1
У	-20	-9			0		

b) Draw the graph of the function $Y = 1+x-2x^2$ on the graph paper provided. (4mks)



Use your graph to find the value for x in the equation $1 + x - 2x^2 = 0$

c) By drawing a suitable line graph on the same graph find the value for x which satisfies the equation $+5 + 2x - 2x^2 = 0$ (3mks)

- d) State the maximum point of the function $Y = 1+x -2x^2$ (1mk)
 - 21. At 2.00 pm, a ship is at a position P from where a light house L is 12km away on a bearing of 320⁰. At 4.00pm, the ship is at a position Q from where the lighthouse is now on a bearing of 035°. Given that the ship is traveling due West, find by calculation;
 a)How far the lighthouse is from Q. (3mks)

b) The speed of the ship. (2mks)

c) The closest distance of the ship from the light house. (2mks)

d) The lighthouse, point Q and point P were noted to be along the circumference of a circular field. Find the distance of P from the centre of the field. (3mks)

22. (a) In the figure below O is the centre of a circle whose radius is 5 cm AB = 8 cm and AOB is obtuse.



Calculate the area of the major segment

(7 marks)

(b) A wheel rotates at 300 revolutions per minute. Calculate the angle in radians through which a point on the wheel turns in one second. (3mks)

- 23. A school planned to buy x calculators for a total cost of Kshs 16 200. The supplier agreed to offer a discount of Kshs 60 per calculator. The school was then able to get three extra calculators for the same amount of money.
- a) Write an expression in terms of x, for the:
 - i) Original price of each calculator. (1 mk)

ii) Price of each calculator after the discount (1 mk)

b) Form an equation in x and hence determine the number of calculators the School bought. (5 mks)

c) Calculate the discount offered to the school as a percentage (3 mks)

24. The diagram below represents a conical vessel which stands vertically. The which stands vertically. The vessels contains water to a depth of 30cm. The radius of the surface in the vessel is 21cm. (Take



a) Calculate the volume of the water in the vessels in cm 3 (2mks)

b) When a metal sphere is completely submerged in the water, the level of the water in the vessels rises by 6cm.

Calculate:

(i) The radius of the new water surface in the vessel; (2mrks)

(ii) The volume of the metal sphere in cm^3 (3mks)

(iii) The radius of the sphere. (3m

FORM 4 TERM 1 OPENER MATHEMATICS

PAPER 2

NAME..... INDEX NUMBER.....

ADM NO.....

INSTRUCTION TO CANDIDATE'S:

- 1. Write your **name**, **index number** and **school** in the spaces provided above.
- 2. Write the date of examination in spaces provided.
- 3. This paper consists of two Sections; Section I and Section II.
- 4. Answer ALL the questions in Section I and any five questions from Section II.
- 5. All answers and working must be written on the question paper in the spaces provided **below** each question.
- 6. Show all the steps in your calculation, giving your answer at each stage in the spacesprovided **below** each question.
- 7. Marks may be given for correct working even if the answer is wrong.
- 8. Non-programmable silent electronic calculators and KNEC Mathematical tables **may be** used, except where stated otherwise.
- 9. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- 10. Candidates should answer the questions in English. FOR EXAMINER'S USE ONLY:

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

SECTION II

17	18	19	20	21	22	23	24	TOTAL

GRAND TOTAL

SECTION I: (50 MARKS)

Answer all the question in this section in the spaces provided:

1. Use logarithm tables to evaluate

(4mks)

$$\sqrt{\frac{3}{\frac{58.32 \times (0.9823)^2}{693.5}}}$$

2. Given that $4x^2 - 32x - 20 + k$ is a perfect square, find K.

(3 marks)

3. Make **t** the subject of the formula

$$x = \sqrt{3} \sqrt{\frac{3h(t-h)}{t}}$$

(3mks)

4. (a) Expand $(1-2x)^6$ in ascending powers of x upto x^3 . (2mks)

(b) Hence evaluate $(1.02)^6$ to 4 d.p.

(2mks)

Peter and Tom working together can complete a piece of work in 6 days. Peter working alone can complete the work in 15 days. Both worked for 4 days then Peter fell sick, find the time taken by Tom to complete the remaining work. (3mks)

6. A point P divides AB in the ratio 7:-5 where A(2,-3,4) and B(-4,7,-2) Find the coordinates of P (2mks)

It has been found that the annual rate of increase in the population of people infected by H.I.V. in a certain country is 4%. How long will the infected population take to double its self. Give answer to the nearest year? (3mks)

8. Two circles of radii 3cm and 8cm have their centers 13cm apart. Calculate the length of the common direct tangent. (2mks)

9. Y varies partly as x and partly as z. If y = 2 when x = 3 and z = 4, and y = 1 when x = 2 and z = 3. Find y when x = 5 and z = 2. (3mks)

(3mks)

11. Two blends of Tea costing Kshs.120 and Kshs. 150 per kilogram were mixed and the mixture sold at shs. 171.60. Which was a profit of 30% at what ratio were they mixed. (3mks)

12. In the figure below, BT is a tangent to the circle at B. AXCT and BXD are straight lines AX = 6cm, CT = 8cm, BX = 4.8 cm and XD = 5cm.



13. If

$$\frac{\sqrt{14}}{\sqrt{7} - \sqrt{2}} - \frac{\sqrt{14}}{\sqrt{7} + \sqrt{2}} = a\sqrt{7} + b\sqrt{2}$$

Find the values of a and b where b are rational numbers (3mrks)

14. The radius of a spherical ball is measured as 7cm, correct to the nearest centimeter. Determine to 2 decimal places, the percentage error in calculating the surface area of the ball. (4 mks)

15. Determine the amplitude and the period for the graph of
$$y = \sin\left[\frac{x}{2} - 90\right]^0$$
 (3mks)

16. The transformation represented by the matrix

 $M = \begin{pmatrix} 0 & 1 \\ 3 & 1 \end{pmatrix}$ maps a triangle **ABC** onto another triangle **A¹ B¹ C¹** of area 36cm².

Find the area of triangle ABC

(3mks)

17. The table below represents marks scored in maths

Marks	10-19	20-29	30-39	40-49	50-59	60-69	70-79
No. of students	2	6	7	13	6	4	2

ii) Standard deviation

(3mks)

(4mks)

iii)	Upper quartile	(3mks)
18. a)	A matrix $\begin{pmatrix} 1 & 2 \\ 0 & 1 \end{pmatrix}$ represent the transformation T, triangle ABC where A(1,1) B(5,1) a is transformed by T. i) Find the image A ¹ B ¹ C ¹ of ABC under T.	und C(2,4) (2mks)
	ii) Draw A ¹ B ¹ C ¹ and ABC	(2mks)
	iii) Describe the transformation T	(1mk)
b)	Draw $A^2B^2C^2$ image $A^1B^1C^1$ under enlargement centre (0,0) scale factor $-1/_2$	(2 mks)

c) Find a single matrix that would A²B²C² onto ABC. (3 mks) FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

- 19. The probability that a volleyball team wins a game is 3/5. If the team plays three games using a tree diagram find the probability that they
- i) Win only two games (3mks)

ii) Loose at least one game

(2mks)

b) Unfair die with six faces numbered 1 to 6 is tossed. The probability of a number appears on top is proportional to the number. Find the probability of

Number 4 showing on top

i)

(3mks)

ii) Prime number showing on top

(2mks)

20. The figure below represents a square based pyramid with equilateral triangles AB=5cm



Calculate the a) Height of the triangular faces

(2mk)

b) Length of AC

(1mk)

c) Angle between VA and ABCD

d) Angle between VAD and ABCD

e) Angle between VAB and VBC

21. Two variables x and y are related by the formula $y = ka^x$ where a and k are constants. The values of x and y are given in the table below.

X	2	0	7	12	4	9	5
у	286	256	385	525	316	437	339

(a) By drawing a suitable straight line graph, find the values of k and a

(b) Establish the relationship between x and y.

(10 ks)

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

(2mks)

(2mks)

(3mks)

22. In the figure below C is a point on AB such that BA = 3BC and D is the mid-point of OA. OC and

BD intersect at X Given that OA = a and OB = b



(a) Write down in terms of a and b the vectors.



(c) If OX = k OC, find h and k (4mks)

(1mk

(1mk)

23. The fig shows two intersecting circles with centres A and Band radii 7cm and 10.5cm respectively. The distance between AB = 14 and AM:MB = 3:4.



(b) If BX = h. BD, express OX in terms of a, b and h

Hence express OX in terms of a and b only.

Calculate to four significant fig the;

(d)

- a) Size of angle CAD (2mks)
- b) Size of angle CBD (2mks)

c) Area of shaded region (use p = 3.142). (6mks)

Х	0	15	30	45	60	75	90	105	120	135	150	165	180
4x	0	60	120	180	240	300	360	420	480	540	600		
$4x - 60^{\circ}$	-60		60		180	240	300		420	480	540		
y=Cos(4x-	0.5		0.5	-0.5	-1		0.5						
60°)													

24. a) Complete the table below for the graph of $y = \cos (4x - 60^{\circ})$ for $O^{\circ} < x < 180^{\circ}$. (2mks)

b) Using the scale of 1cm to represent 150 on the x - axis and 4cm to represent 1 unit on they-axis, draw the graph of $y = \cos (4x - 60^{\circ})$ for $O^{\circ} < x < 180^{\circ}$. (3mks)

c) Use your graph to solve the equations.

(i) $1 + \cos(4x - 60^{\circ}) = 1$ (1mk)

(ii) 5 Cos ($4x - 60^{\circ}$)=1 (2mks)

d) State the period and the phase angle of the graph. 2mks

FORM 4 TERM 1 OPENER AGRICULTURE

PAPER 1

443/1

NAME
INDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDIDATES

- I. Write your name and index number at the top of the space given
- II. This paper has three sections
- III. Answers all question in section A and B and any 2 from section C
- IV. Answer your questions in the spaces provided.

SECTION A (30MK) ANSWER ALL QUESTIONS

- 1. What do you understand by Agriculture economics? (1mk)
- 2. State four reasons for carrying out minimum tillage (2mk)

- 3. State the conditions under which opportunity cost is zero in a farming enterprise (1mk)
- 4. Outline 4 limitations of pastoral farming (2mk)

- 5. Give two factors that would determine the depth and width of a cut off drain (1mk)
- 6. State three ways in which Agriculture relate to industries (1mk)

7. Differentiate between soil texture and soil structure (1mk)

8. Give four advantages of title deed to a farmer (2mk)

- 9. Name the chemical used to achieve the following during water treatment process
- a) Coagulation of solid particles (1/2mk)
- b) Softening of water (1/2 my)
- c) Killing pathogens (1/2mk)
- 10. Give four reasons why green manure is not commonly used in agricultural production (2mk)

11. State two effects of soil PH on crop production (1mk)

- 12. (a)Name 4 properties of soil influencing soil texture (2mk)
 - (b) Name two factors affecting rooting of cutting. (1mk)
- 13. Give four reasons for timely planting of annual crops (2mk)

- 14. Why is it advisable to apply straight nitrogenous fertilizers to a crop of maize at height of 30-45 cm (1mk?)
- 15. Give 4 a disadvantages of non-capped multiple stem system in coffee production (2mk)

16. Differentiate between thinning and rogueing (1mk)

- 17. State 2 importance's of tissue culture in crop production (1mk)
- 18. Define the following terms as used in maize breeding. (1mk)
- a) Hybrid
- b) composite
- 19. Distinguish between integrated pest management and economic injury level. (1mk)
- 20. Give three advantages of using pesticides in pest control $(1^{1/2})$
- 21. State how each of the following leads to loss of soil fertility
- a) Monocropping (1/2mk)
- b) Leaching (1/2mk)

SECTION B (20MK)(answer all questioning the space provided)

22. The diagram below shows a method of irrigation.



- I. Identify the irrigation method shown above
- II. What are the dis advantages of the method named in (a) above when using underground perforated pipes (3mk)

23. A farmer was advised to apply 300kg CAN per hectare during top dressing of maize crop .If CAN contains 21% Nitrogen calculate the amount of Nitrogen applied per ha (2mk)

24. The diagrams below show methods of layering.



- I. Identify the methods A and B (2mk)
- II. What is the advantage of method **B** over method **A** (1mk?)
- III. Name other two methods of layering apart from the ones shown above (1mk)
 - 25. Study the diagram below showing a method of soil sampling and answer the questions that follow.



FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657
- a) Name the method of soil sampling illustrated above (1mk)
- b) State precaution taken when collecting the soil for testing using the named method (2mk)

c) Give two reasons why soil from the farm is tested (2mk)

26. Below is a diagram of weed. Study the diagram carefully and answer the questions that follow.



- a) Identify the weed illustrated above (1/2mk)
- b) Why is the weed illustrated above difficult to control (1mk?)
- c) State two ways in which the weed can be controlled in a field of maize (2mk)

27. Below are diagrams showing tea cutting planted in polythene sleeves.



- a) Which of the two diagrams shows a correct planted cutting (1/2mk?)
- b) Give reasons for your answer in (a) above (1mk)

SECTION C 40 MK. ANSWER ANY TWO

28. (a)Explain the negative effects of land fragmentation and sub-division in Kenya (9mk)

(b)Describe the factors that determine spacing of crops during planting (7mk)

(c)Discuss various symptoms of viral infection in crops (4mk)

29. (a)Discuss the factors that encourage soil erosion (10mk)

(b)Discuss the importance of drainage as land reclamation methods (5mk)

(c)Explain five cultural methods of crop diseases control (5mk)

- 30. Describe the field production of Napier grass and Elephant grass (*Penniseum purpuveum*) under the following sub –headings
- I. Seed bed preparation (5mk)

II. Planting (5mk)

III. Fertilizer application (4mk)

IV. Weed control (4mk)

V. Utilization (2mk)

FORM 4 TERM 1 OPENER AGRICULTURE

PAPER 2

443/2

NAME
INDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDIDATES

- V. Write your name and index number at the top of the space given
- VI. This paper has three sections
- VII. Answers all question in section A and B and any 2 from section C
- VIII. Answer your questions in the spaces provided.

SECTION A (30MK) ANSWER ALL QUSTIONS

1. Name the dairy cattle breed that provide milk with the highest butter fat content (1/2mks)

- 2. State the name given to young ones of each of the following animals. $(1 \frac{1}{2} \text{ mks})$
- I. Rabbit
- II. Goat
- III. Pig
 - 3. Name the hormones that control milk let down (1mk)

- 4. Name the most appropriate tool used in the following operations
- a) Cutting identification marks on ears of an animal (1/2mk)

- b) Removal of gases which cause bloat in ruminants (1/2mk)
- c) Trimming hedges and shrubs (1/2mk)
- 5. Give three reasons why ewes disown lambs $(1^{1/2}mk)$
- 6. List four disadvantages of live fences (2mk)

7. Name four light breeds of poultry (2mk)

- 8. State the functions of the following parts of an ox-drawn plough
- I. Landside (1/2mk)
- II. Land wheel (1/2mk)
- III. Share (1/2mk)
 - 9. Distinguish between randling and ringing as used in animal production (1mk)

10. State 2 causes of bloat in ruminants animals (1mk)

11. Diffreciate quarantine and isolation as used in livestock health. (1mk)

12. Name three sources of water in animal's body $(1^{1/2} \text{ MK})$

13. Name any four water fish reared in farm ponds today (2mks)

14. Give a fictional difference between a shoves and a spade (1mks)

15. State the functions of a ring spanner (1mk)

16. Give four methods of harnessing tractor power (2mks)

17. (a)Give two maintaince practices of a milking equipment(1mk)

(b)Give two condition that may make a dairy cow withhold milk during milking(1mk)

18. List four advantages of embryo transplant as used in livestock production (2mk)

19. Give four ways in which famers can control cannibalism in poultry farming (2mk)

20. Give four chacteristics of succulent roughages (2mk)

SECTION B (ANSWER ALL QUESTIONS IN THE SPACES PROVIDED)

21. Below are two diagrams of youth chick m and n showing deficiency of certain nutrient



a) Identify the nutrient the two chicks are lacking (1mk) _

Μ

Ν

b) State two sources of nutrient chick N is lacking (2mk)

c) State the condition chick N is suffering from (1mk)

d) Other than the condition shown in chick B above give other symptoms of the deficiency (2mk)

22. Study the illustration of the farm structure below and answer the questions that follow:



- a) Identify the parts labeled 5, 7, 9 and 10 (2mks)
- b) State one reason why it's important to have structure labeled F at the edge of the rooting material.

23. The diagram below is a cross section of part of cow's udder.



a) Label the part's numbered III, IV, VI, AND VII (2mks) III

IV

VI

VII

- b) What is milk let down (1mk?)
- c) Give two characteristic of clean and high quality milk (2mks)

24. The diagram below illustrate a disc plough study it carefully and answer the question thatfollow.



- a) Label the parts marked A,B and D. (3mk)AB
- D
- b) Give the functions the parts marked C and F (2mks)

25. State one reason why animals should be watered before dipping (1mk)

SECTION C

- 26. Discuss milk fever under the following sub-heading
- a) Animals affected (1mk)
- b) Symptoms of attack (7mks)

- 27. Discuss African swine fever under the following sub- heading
- a) Animal affected (1mk)
- b) Causal organism (1mk)
- c) Symptoms (6mk)
- 28. A.Describe various care and maintenance of a tractor battery (6mk)

B. Outline the expected causes of the following faults of ignitions system of a tractor

- I. Sudden stopping (2mks)
- II. Continuous Engine running (3mks)

C)Discuss advantages of battery cage system in poutry rearing (9mks)

29. A.Discuss digestion of food in poutry from crop to gizzard (10mks)

B. Give any 4 Harmful effects of Keds in livestock. (4mk)

- C. Describe functions of the following parts of plunge dip (6mk)
 - I. Jump (2mks)
 - II. Drainage race (2mks)
- III. Roof (2mkS)

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657

FORM 4 TERM 1 OPENER BUSINESS STUDIES

PAPER 1

565/1

NAME	•••
INDEX NUMBER	
CANDIDATE'S SIGNATURE	••
ADM NO	

1. State whether each of the following factors constitute internal environment to a business. (4mk)

factor		Environment
I.	Societal beliefs	
II.	Sharehoidies resolution	
III.	National Budget	
IV.	Market interest rate	

2. Outline four economic importance's of natural resources (4mk)

I.

П.

III.	

- IV.
- 3. State four limitation of direct production. (4mk)
 - I.
 - Ш.
- III.
- IV.
- List four disadvantages of an enclosed office. (4mk)
 I.
- П.
- III.
- IV.

5. Given below is a list of features which are true for either a public limited company or a co-operative society. Indicate in the space provided which of the features are true for a public company and co-operative society. (4mk)

	FEATURE	Public ltd co/co-operative society
i.	Can advertise its shares	
ii.	Does not aim at profit in	
	maximization	
iii.	Elect a management	
	committee	
iv.	One man one vote	
v.	Promotes co-operation	
	_	
vi.	Serves members only	
vii.	Voting right dependent	
	on the number of shares	

6. Outline four disadvantages of using a telephone to communicate. (4mk)

I.	
II.	
III.	
IV.	

7. Distinguish between

a) Joint demand and derived demand.(2mk)

b) Excess Demand and Excess supply.(2mk)

- 8. Give four reasons why banter trade is not popular in the current times. (4mk)
- 9. The items in the table given below are either injections into or withdrawals from the circular flow of income in an economy. Indicate in the spaces provided whether the item is an injection or a with drawal.

Item	Injection/ withdrawal		
a) Export earning			
b) Private investments			
c) Savings			
d) Taxes			

10. Account for the success of multiple stores compared with single shops. (4mk)

I. II.

III.

IV.	

11. Outline four benefits that consumers get from warehousing. (4mk)

- I.
- II.
- III.
- IV.

12. Fill in the blank spaces .

BUSINESS	ASSETS	CAPITAL	LIABILITY
Α	120,345	(M)	67,890
В	(N)	67,890	54,321
С	9,101,112	1,314,150	(0)
D	45,670	39,001	(P)

M	••
N	
0	
Р	

- 13. Highlight four ways in which the government can create conditions that will be favorable for business development and prosperity .(4mk)
- I. II. III. III.
- IV.
- 14. For each of the following transaction indicate with a tick in the space provided whether it will increase, decrease or have no effects on the balance sheet totals. (4mk)

TRANSACTION	EFFECTS ON THE BALANCE SHEET TOTALS
Investing move cash into the business	
Paying creditors in cash	
Buying a piece of furniture in cash	
Paying creditors using money from private sources	

- 15. State four ways that a traders may provided after sales services to his customer .(4mk)
 - I.
 - II.
 - III.

IV.

16. Outline four negative implication populations to a country's economy. (4mk)

.....

17. The following is an extract of cashbook.

date	particulars	cash	bank	date	particulars	Cash	Bank
May 2	Balance	W		May 6	Balance		60,000
12	Sales	20,000		19	Purchases		30,000
20	Were		50,000	22	Rent	6,000	
28	sales		120,000		Bal.cld	Y	Х
			170,000			60,000	Z

Determine the figures represented by w, x, y& z .

- I. W.....
- II. X.....
- III. Y.....
- IV. Z.....
- 18. List four sources of monopoly power. (4mk)

I.

П.

- III.
- IV.
- 19. Give four reasons why it would be advisable for lucia to take an endowment policy instead of a whole life policy. (4mk)
 - I.
 - Ш.
- III.
- IV.
- 20. State the book of original entry used in recording each of the following transactions in Kenya traders (4mk)

TRANSACTION	BOOK OF ORIGINAL ENTRY
Kweyu returned goods worth sh.9,500 to tetu	
.traders	
Withdrew ksh 20,000 from bank for personal use.	
Sold goods on credit to wanjala for 20,000.	
Bought a motor van worth ksh 200,000 on credit.	

21. The following information relates to kinango enterprises for the year ended 30th June 2013.Sales480,000Stock(01/07/04)60,000

36,000 25%

Determine

	1.	Gross profit
	ii.	Cost of sales
	iii.	Net purchases
	iv.	Rate of stock turnover (4mk)
22. Giv	ve four benefi	ts a businessman may get by keeping money in a fixed deposit account. (4mk)
I.		
II.		
III.		
IV.		

23. Baquba Enterprise had opening and closing balances of sh 250,000 and sh 406,000 respectively in the year 2004.during the year, the business amounting to sh 68,000. If the profit for the year was sh 180, 000, determine the drawing for the year. (4mk)

24. Mention four circumstances that may make a firm relocate from A to town B. (4mk)

I.	
II.	
III.	
IV.	
25. Lis	st examples of Direct taxes.
I.	
II.	
III.	
IV.	

FORM 4 TERM 1 OPENER BUSINESS STUDIES

PAPER 2

565/2

NAME
INDEX NUMBER
CANDIDATE'S SIGNATURE
ADM NO

INSTRUCTIONS TO CANDIDATES

- I. This paper consists of six questions.
- **II.** Answer any five questions.
- **III.** Write your answers in the answer booklet provided
- IV. All questions carry equal marks.

1 (a) Describe any **five** characteristics of human wants. (10mks)

4

5

(b) Explain **five** ways in which commercial banks help in facilitating business activities in a community.(10mks)

2 a) Quails traders intends to construct a warehouse .Explain **five** measures that Quails Traders should take to ensure smooth functioning of the warehouse. (10mks)

b) Sambaza, an island country in Indian Ocean, has been experiencing low national income Discuss **five** reasons that may have contributed to this problem .(10mks)

3 (a) Explain **five** factors that have contributed to the popularity of containers in transport. (10mk)

B) Kamwe Company limited prefers to sell its products direct to consumers. Highlight **five** circumstances under which this manufacturer may sell direct to consumer. (10mks)

(a) Ndathi has realized that his brother's one year old business is growing fast. Explain **five** reasons that could be contributing to this scenario. (10mks)

(b)Miciri a young entrepreneur has first won a lottery worth ksh.500; 000.He is torn between putting up a soap producing firm and a milk bar. Explain to Miciri **five** factors that he needs to consider before making a decision or what to produce. (10mks)

(a) Wamutira a newly employed teacher has joined Tajirika savings and credit co-operative society (SACCOs) ltd. Explain the **five** benefits that she may get from being a member of that SACCO.(10mks)

(b) Yegon had the following transaction in the month of June 2003.(10mks)

June 2 Started business with sh .100, 000 cash and furniture (from home) sh.3000.

- 3 Opened a bank account with sh. 7000.
- 6 Bought goods from kamanda on credit sh.500.
- 7 Sold stock sh.800 and was paid by cheque.

8 Yegon took away sh.100 cash from the business for his daughters fare back to school.

Required:

I. Record the following transactions in the relevant ledger accounts and balance them off. (10mk)

- (a) Explain **five** ways in which the government can provide an enabling environment can provide an enabling environment for business enterprise. (10mks)
 - (b) The following is the trial balance Mwingi West shop as at 31st March 2013.(10mks)

	DR	CR
	SHs	SHs
Stock 1 April 2012	181,600	
Sales and Purchases	691,850	923,400
Carriage inwards	4,200	
Carriage outwards	15,700	
Return outwards		6,400
Wages and salaries	102,400	
Rates and Rent	30,150	
Communication expense	6,240	
Commission Payable	2,160	
Insurance	4,050	
Sundry expenses	3,180	
Buildings	200,000	
Debtors and creditors	143,200	32,640
Outstanding Expenses		48,960
Fixtures	28,500	
Cash at bank	29,700	
Cash at hand	1,150	
2 years loan		80,000
Loan from k Ball		20,000
Drawings	79,200	
Capital		408,880
	1,520,280	1,520,280

Prepare:

6

- I. A trading profit and loss a/c for the year ended 31st March 2013.
- II. Balance sheet as at 31st March 2013.

FOR MARKING SCHEMES CALL/TEXT/WHATSAPP 0705525657