MANGU HIGH SCHOOL

101/1
ENGLISH
PAPER 1
(FUNCTIONAL SKILLS)
MOCK EXAM
JULY 2017
TIME: 2 HOURS

NAME: _____

ADM NO: _____ INDEX NO. _____ CLASS:_____

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
English
Paper 1
2 Hours.

INSTRUCTIONS TO CANDIDATES

  i.   Write your Name and Admission Number in the spaces provided above.
  ii.   Answer **ALL** the questions in this question paper
  iii. All your answers **MUST** be written in the spaces provided in this question paper.

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
Q1	20	
Q2	10	
Q3	30	
Total Score	**60**	

This paper consists of **7 printed pages.** Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn Over

1. FUNCTIONAL WRITING (20MARKS)

You are the troop leader of the scouts in your school. The group organized a tour to Masai Mara which will last three days.

a) Prepare the packing list you will use for your trip.   (8mks)

b) Write the journey that you kept for the three during your trip   (12mks)

2. CLOZE TEST (10MKS)
Fill in the blanks with the most appropriate word.

Parents believe that in boarding schools the teachers would be able to enforce strict _____ and administer sterner discipline. So, in the _____ of a family to assert discipline in the _____ of the children, parents _____ upon teachers to exert the _____ authority they themselves are _____ to impose! So again, this principle _____ teachers take the place of parents and _____ the growth of children with the _____ of their parents, can lead to socially unhealthy children which in essence _____ disrupt their education.

3. ORAL SKILLS (30MARKS)
   a) Read the poem below and answer the questions after

This is just to say
I have eaten   —
The plums
That were in
The ice box

And which
You were probably
Saving
For breakfast

Forgive me
They were delicious
So sweet
And so cold

Questions
i) Identify words used in the poem that have silent letters   (2mks)
ii) Identify and illustrate the use of two sound devices in the poem.   (4mks)
iii) How would you say
  a) Line 7   (2mks)
  b) The last two lines of the poem?   (2mks)

iv) For each of the following words, write another that is pronounced the same way.   (5mks)
       a) Time   -
       b) Heart   -
       c) Heard   -
       d) Tear (noun) -
       e) Tear (verb) -

(b) <u>Read through the conversation below and answer the questions that follow</u>

Kiptuiya: There's still some sexism in football. Why can't the Kenya Football Federation let Akinyi play in the Premier League?

Ashok: Oh! Come of it Kiptuiya. The KFF has nothing to do with Akinyi's case. She can't play in the premier League because she doesn't belong to any team in the league, pure and simple.

Oliech: But, excuse me, Ashok. Akinyi doesn't belong to a team because KFF wouldn't let her join one. Moreover....

Ashok: Just a moment, Oliech. You know quite well that the teams in the Premier League are all men's teams. How were they going to enroll Akinyi?

Kiptuiya: Fair enough, but that's the point I'm making. Why should the teams be exclusively male? Why can't a super player like Akinyi.........

Ashok: Sorry for the interruption, Kiptuiya. But every sport has its rules, and in football there are no provisions for mixed male and female teams.

Oliech: I thought Gor Mahia Football club wanted to......

Kiptuiya: Why can't they change the outdated rules? Sorry Oliech, you were saying something.

Oliech: Well, I was just going to say Gor Mahia had wanted to consider Akinyi's application to join them, but the KFF told them to consult FIFA first.

(i) Identify words and phrases that point out instances of interruption in the conversation above   (4mks)

(ii) Point out two reasons why Ashok decides to interrupt Oliech   (2mks)

(iii) Outline four important conversational conventions that people should observe when having an informal discussion (4mks)

(c) <u>Consider the situation below and answer the questions that follow</u>

A motivational speaker has been invited to your school during the career day. During the talk you realize that some of your classmates are dozing, a few are passing small notes to one another and others are whispering to their friends' ears.

(i) If you are the speaker and noticed the above behaviour, what six things would you do? (3mks)

(ii) Given a chance, what advice would you give your classmates to make them better listeners? Give four points (2mks)

MANGU HIGH SCHOOL

NAME: ....

INDEX NO: ....ADM.NO: .... CLASS: ....

101/2
ENGLISH PAPER 2
(Comprehension, Literary Appreciation & Grammar)
MOCK
JULY 2017
TIME: 2½ HOURS

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
English
Paper 2
2½ Hours

INSTRUCTIONS TO CANDIDATES

  i.   Write your name and index number in the spaces provided.
  ii. Answer all the questions in the question paper
  iii. All your answers must be written in the spaces provided in this question paper.

FOR EXAMINER'S USE ONLY

Question	Maximum Score	Candidate's Score
1		
2		
3		
4		
TOTAL SCORE		

Turn Over

—1 —

1. COMPREHENSION (20 MARKS)

Read the passage below and answer the questions that follow

Habits that reveal your personality

One reason that personality is such an important psychological concept is because of what it tells us about the kind of lives we're likely to lead. For example, if you are very conscientious then you're more likely to enjoy good physical health and more harmonious relationships; extroverts are happier; highly neurotic people experience more mental health problems; open-minded people command higher earnings; and, just as you'd expect, more 'agreeable' people are also usually popular and have lots of friends.

But our personalities don't only show themselves in our long-term success and well-being. They also correlate with the kind of things we get up to on a mundane, daily basis. A new study published in Personality and Individual Differences has charted these behavioural "signatures" of the Big Five personality traits – listed above – in more detail than ever before. And the results are surprising.

As well as wallowing more in hot tubs, extroverts apparently spent more time planning parties, drinking in bars, discussing ways to make money, talking on the phone while driving, decorating, and trying to get a tan (though not all at once). Greater conscientiousness, in contrast, was distinguished by the avoidance of various activities, including such innocuous pastimes as reading (which Chapman and Goldberg speculated may be seen by the highly conscientious as a leisure-time luxury), swearing and chewing on a pencil.

. People scoring high on agreeableness, meanwhile, said they spent more time doing ironing, playing with children and washing the dishes – presumably because their strong motivation to keep other people happy means they'd rather do the chores than have domestic acrimony. More surprisingly, they were also more likely to sing in the shower or the car.

Neurotic folk, meanwhile, engaged more often in activities that are associated with helping reduce mental distress, such as taking more tranquillisers and anti-depressants. But they also admitted to more anti-social behaviours, such as losing their temper more often, or making fun of others – perhaps because they struggle to keep their own emotions in check. Finally, open-mindedness went together with some obvious behaviours like reading poetry, going to the opera, smoking marijuana and producing art, but also some less obvious, like swearing around others, eating spicy food at breakfast, or lounging around the house with no clothes on. They were also less likely to follow a sports team.

This study is impressive for the huge range of activities that it investigated, though it remains to be seen if the same personality-behaviour links would be found in other cultures around the world, and of course there remain many thousands of other daily behaviours to be looked at. The new findings add to earlier research on behaviour-personality links, most of which has tended to focus on more specific activities or only on certain traits. For example, previous studies had shown that the highly conscientious are more likely to wear a watch, comb their hair and polish their shoes; that extroverts have more tattoos; that introverts use more concrete language; agreeable folk get fewer speeding tickets and eat more sweet foods; and that open-mindedness correlates with a penchant for fruit and vegetables, art-house movies, and a preference for dry, rather than sweet, white wine.

There's a serious side to this field of research – learning more about the harmful and unhealthy everyday behaviours linked to the different personality traits could contribute to better, more targeted health campaigns and interventions.

Of course, there's also a fun, thought-provoking element to the new findings – for example, if you're a prolific curser, you can now defend your habit as being a sign of your open-mindedness. And maybe now you'll also be a little more forgiving of your house-mate's habit of singing in the shower. After all, it could just be another sign of his or her agreeable personality.

-BBC

Adapted from the Sunday Nation - June 4, 2017

Questions

a) Why is personality an important psychological concept (1mk)

b) Explain how the neurotics keep their emotions in check (1mk)

c) In not more than 40 words , summarize the characteristics of the extroverts (6mks)

d) ' But our personalities ....daily basics'. Paraphrase the writes argument in these sentences (2mks)

e) Explain the meanings of the following words and phrases as used in the passage (4mks)
   i) Neurotic people

   ii) Correlate

   iii) Prolific

   iv) Domestic acrimony

f) There is a serious side to this field of research. (*Rewrite the sentence beginning . This.......*) (1mk)

g)Explain why the more agreeable people are popular (1mk)

h) Identify an instance of parenthetical information in the third paragraph (1mk)

i) They were also less likely to follow a sports team. (*Rewrite as a question*) (1mk)

j) Explain the writer's argument in the last paragraph (2mks)

2. EXTRACT (25 MKS)

Read the following extract from Bertolt Brecht's Caucasian Chalk Circle, then answer the questions after

AZDAK (*severely*): Shauwa, don't talk about things you don't understand. The rabbit is a dangerous and destructive beast. It feeds on plants, especially on the species of plants known as weeds. It must therefore be exterminated.

SHAUWA: Azdak, don't be so hard on me. I'll lose my job if I don't arrest you. I know you have a good heart.

AZDAK: I do not have a good heart! How often must I tell you I'm a man of intellect?

SHAUWA (*slyly*): I know, Azdak. You're a superior person. You say so yourself. I'm just a Christian and an ignoramus. So I ask, you: When one of the Prince's rabbits is stolen and I'm a policeman, what should I do with the offending party?

AZDAK: Shauwa, Shauwa, shame on you. I catch a rabbit, but you catch a man. Man is made in God's image. Not so a rabbit, you know that. I'm a rabbit-eater, but you're a man-eater, Shauwa. And God will pass judgment on you. Shauwa, go home and repent. No, stop, there's something . . . (*He looks at the* OLD MAN *who stands trembling in the corner.*) No, it's nothing. Go home and repent. (*He slams the door behind* SHAUWA.) Now you're surprised, huh? Surprised I didn't hand you over? I couldn't hand over a bedbug to that animal. It goes against the grain. Now don't tremble because of a cop! So old and still so scared? Finish your cheese, but eat it like a poor man, or else they'll still catch you. Must I even explain how a poor man behaves? (*He pushes him down, and then gives him back the cheese.*) That box is the table. Lay your elbows on the table. Now, encircle the cheese on the plate like it might be snatched from you at any moment—what right have you to be safe, huh?—now, hold

your knife like an undersized sickle, and give your cheese a troubled look because, like all beautiful things, it's already fading away. (AZDAK *watches him.*) They're after you, which speaks in your favor, but how can we be sure they're not mistaken about you? In Tiflis one time they hanged a landowner, a Turk, who could prove he quartered his peasants instead of merely cutting them in half, as is the custom, and he squeezed twice the usual amount of taxes out of them, his zeal was above suspicion. And yet they hanged him like a common criminal—because he was a Turk—a thing he couldn't do much about. What injustice! He got onto the gallows by a sheer fluke. In short, I don't trust you.

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stions

lace this extract in its immediate context (4mks)

rom your knowledge of the whole play, describe the character of Shauwa (4mks)

3ring out and comment on any two foregrounding devices used in the extract (6mks)

)escribe the attitude of Azdak towards authority as portrayed in this extract (2mks)

rite notes on the plight of the common people. Refer to the extract (6mks)

om your knowledge of later events in the text, what is ironic about the way Azdak treats the old man in xtract? (2mks)

nd yet they hanged him like a common criminal because he was a Turk. (*Rewrite to add correct on tag*)

3. POETRY

Keenly read the following poem and answer the questions that follow.

BEGGAR IN THE THREE PIECES

My Jumbo
Shot its way
Across the sky
To distant lands
Across blue seas

I descended the ladder
To a waiting ribbon
Of blood-red carpet
A quick glance at my
Three piece suit and the tie
That beautifully strangled my neck.

On my left hand hang
My beaded knobkerrie
On my right I clutched
My rusty inter-Nation Begging Bowl
On my face I wore humility and need
And of course dignity.

'Sir, the dearth of food
Had rendered my people thin
And hungry
Scoop us a little
You know,
Just a little,
To keep them till next rains'

'But sir, beggars
In three piece
Are a rare sight
But your suit is beautiful
-   Honestly'

Now my suit
Which cost me a fortune
In a Parisian Textile
Has denied me a fortune
And my countrymen, life.

L. O. Sunkuli

Questions

a) Briefly describe what is the poem about.   (3mks)

b) Who is the persona in this poem?   (2mks)

c) Explain the satire in this poem and comment on its effectiveness.   (2mks)

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d) Which lines in the poem help describe the character of the speaker in the poem? (2mks)

e) Explain what the last stanza implies. (2mks)

f) In which word class do the underlined words in the following lines belong to (2mks)

(i) That **beautifully** strangled my neck. ....

(ii) But your suit is **beautiful**. ....

g) The word "Scoop" has been used in the poem. How does this word help describe the relationship between the speaker and his interlocutor? (2mks)

h) Identify other aspects of foregrounding used in the poem. (3mks)

h) Explain the meaning of the following lines as used in the poem. (2mks)
(i) That beautifully strangled my neck

(ii) My beaded knobkerrie

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4. GRAMMAR

a) Use the right form of the words in brackets (3mks)

i) The modern world today has many _____ forms of communication. (sophistication).

ii) There are several factors which contribute to a healthy _____ (exist).

iii) Victims of drug abuse become social _____ (fit).

b) Place the following words in their correct position (3mks)
i) We drove. (in the market, carefully, yesterday)

ii) The rugby player tackled the opponent. (menacingly)

iii) I go swimming. (in he evenings, often)

c) Fill in the blanks in the following sentences with the type of connectors shown in brackets (2mks)
i) .... the hot weather, the scouts walked twenty kilometers. (contrast)
ii) Many insects .... the praying mantis , can fly. (illustration)

d) Replace the underlined word with a suitable phrasal verb formed using the verb in brackets(3mks)
i) Wayula was deceived by the smartly dressed man (take)

ii) Nzioka was staying with his cousin, but when the cousin started misbehaving, Nzioka could not accommodate him any longer (put)

iii) The rude boy interrupted (cut) his parents' discussion.

e) Rewrite the following sentences based on the instruction given after each. (4mks)
i) He understood why people had been laughing after he realized the ugliness of his headgear. (Rewrite using present participle).

ii) The maid had prepared supper by the time we got home. (Rewrite to remove gender bias.)

iii) I have been studying in this school for four years complained the student but I have never scored one hundred per cent in any subject. (Punctuate correctly)

iv) I was very exhausted. (Rewrite the sentence correctly)

MANGU HIGH SCHOOL

101/3
ENGLISH
PAPER 3
(Creative Composition and Essays based on Set Texts)
MOCK
JULY 2017
Time: 2 ½ Hours

NAME: _____

ADM NO: _____ CLASS: _____

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
English
Paper 3
2½ Hours

INSTRUCTIONS TO CANDIDATES

a) Answer **three** questions only
b) Questions **one** and **two** are compulsory.
c) In question **three** choose only **one** of the optional texts you have prepared on.
d) Each of your essays must not exceed **450** words
e) All answers to be written in the answer booklet provided.

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
Q1	20	
Q2	20	
Q3	20	
Total Score	60	

This paper consists of **2 printed pages**. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn Over

COMPULSORY

1. Imaginative Composition (20 marks)

   Either

   (a) Write a story that ends with the line"... that is when I realized that I had to seriously re-think about my future."

   Or

   (b) Write a story to illustrate the saying 'it is more blessed to give than to receive.

2. The River and the Source (20mks)

   Basing your argument on Margaret Ogolla's novel the River and the Source, write an argumentative essay on the following statements. **"Wife inheritance is of no use in the society"**.

3. Answer any **one** of the following three questions (20 mks)

   (a) Betrayal in the City – Francis Imbuga

   Write an essay to show the usefulness of our educated people with reference to Francis Imbuga's 'Betrayal in the City'.

   (b) The Novel: Witi Ihimaera - The Whale Rider

   The Maori community is male dominated but the women assert their superiority over men. Write a composition to justify the above statement.

   (c) The Short Story: Ilieva and Olembo (Ed) when the Sun Goes Down and other Stories.

   Discuss the effects of insecurity according to Moses Isegawa's story: The war of Ears

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102/1
KISWAHILI
Karatasi ya 1
JULAI 2017
INSHA
Muda: Saa 1¾

SHULE YA UPILI YA MANG'U
Hati ya Kuhitimu Masomo ya Shule ya Upili
MTIHANI WA MWISHO WA MUHULA WA KWANZA
Insha
2017

MAAGIZO

i.   Jibu maswali **mawili**.
ii. Swali la kwanza ni la **lazima**. Chagua swali la pili kwa yale matatu yaliyosalia
iii. Kila swali lina alama **20**
iv. Kila jibu lifikishe maneno mia **nne**
v.   Kila insha lazima iandikwe kwa lugha ya Kiswahili
vi. Mtihani huu una alama **40**.

Fungua Ukurasa

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MASWALI

1. Wewe ni katibu wa chama cha kiswahili katika shule ya upili ya Mingamiwili. Kama chama mmekutana kujadili mbinu na mikakati ya kuinua matokeo ya Kiswahili shuleni. Andika kumbukumbu za mkutano wenu.

2. Treni ya kisasa nchini ina manufaa makuu nchini Kenya. *Jadili*

3. Andika kisha kitakachodhihirisha maana ya methali. **Mti ukifa shinale na tanzuze hunyauka**

4. Andika kisa kitakachoanza kwa maneno yafuatayo; **Nilishusha pumzi kutokana na ufanisi nilioupata baada ya masaibu tele.**

JINA: _____ NAMBA YA USAJILI : _____

DARASA: _____ NAMBA YA MTIHANI: _____

102/2
KISWAHILI
KARATASI YA 2
(LUGHA)
MTIHANI WA MWIGO - 2017
KIDATO CHA NNE
MUDA: SAA 2½

CHETI CHA KUHITIMU MASOMO YA SEKONDARI
MTIHANI WA MWIGO
Kiswahili
Lugha
Karatasi 2
Muda: saa 2 ½

MAAGIZO

i. Andika jina lako na nambari yako katika nafasi zilizoachwa hapo juu
ii. Tia sahihi yako.
ii. Karatasi hii ina maswali **MANNE** (*Ufahamu, Ufupisho, Lugha na Isimujamii*)
v. Jibu maswali **YOTE** kwenye nafasi zilizoachwa baada ya kila swali

KWA MATUMIZI YA MTAHINI PEKEE

	Swali	Upeo	Alama
1	Ufahamu	15	
2	Ufupisho	15	
3	Matumizi Ya Lugha	40	
4	Isimujamii	10	
	JUMLA	**80**	

Fungua ukurasa

1. UFAHAMU (ALAMA 15)

Soma taarifa ifuatayo kisha ujibu maswali yanayofuatia

Malengo ya maendeleo ya Milenia

Malengo ya maendeleo ya Milenia (yajulikanayo kwa kimombo kama Millenium Development Goals (MDG), Ni malengo manane ya nchi wanachama wa umoja wa mataifa, ambayo nchi hizi zilikubaliana kujitahidi kutimiza kufikia mwaka wa 2015. Azma ya kufikia malengo haya ilizinduliwa rasmi mnamo septemba 2000 katika azimio la millennia la umoja wa mataifa. Wakati wa uzinduzi, mataifa yote 189 wanachama wa umoja wa mataifa yalihusika. Kwa sasa, mataifa wanachama yameongezeka na kufikia 193 na yote yanajizatiti kutekeleza azma hii.

Azma ya kwanza ni kukomeza au kupunguza umaskini uliokithiri kwa asili 50 miongoni mwa watu ambao kipato chao ni chini ya dola moja kwa siku. Aidha lazima hii inalenga kupunguza kwa kiasi hicho idadi ya watu wanaokumbwa na dhiki ya njaa kufikia mwaka wa 2015. Kwa kielelezo, kwa mfano vijiji viitwavyo 'vijiji vya milenia' vilianzishwa katika nchi sahara, ambazo ni Uhabeshi, Ghana, Kenya, Malawi, Rwanda, Nigeria, Senegal, Tanzania na Uganda vilichaguliwa. Wakazi hawa wanapookolewa kutoka kwa ulitima, hatua zilichukuliwa vijijini humu yanaonyesha athari chanya. Kunayo matumaini.

Lengo la pili lilikuwa kutimiza elimu ya msingi kwa wote chini ya wito 'Elimu kwa wote', yaani kwa kingereza Eduction for All (EFA) kufika mwaka wa 2015. Nchini Kenya, elimu ya msingi ilifafanuliwa upya katika katiba mpya ya 2010, ikawa yaanzia shule ya chekechea hadi kidato cha nne. Aidha imetajwa kuwa ya lazima, kwamba mtoto sharti ahudhurie masomo. Ina maana kuwa mzazi analazimika kumpeleka mtoto shuleni. Lengo pia lipo, kuhakikisha watoto wote wa jinsia za kike na kiume wanahitimu.

Lengo jingine ni kuwania usawa wa kijinsia kwa kuhakikisha kuna nafasi sawa kwa wote. Katika janibu nying za wanachama wa umoja wa mataifa, wanawake kwa miaka ya ayami walionekana kuwa chini ya wanaume kutokana na taasubi ya kiume, mwanamke alifaa kuwa chini ya mwanamume. Hatua ya kwanza ya malengo ya maendeleo ya millennia inanuia kuondoa tofauti ya uwiano wa wasichana na wavulana katika elimu ya msingi hadi sekondari ifikapo mwaka 2005; na katika ngazi zote za elimu ifikapo 2015. Kuondoa utoro miongoni mwa wahudhuriao masomoni hutahakikisha usawa huu.

Lengo la nne ni kupuuza vifo vya Watoto wa umri chini ya miaka mitano kwa theluthi mbili kufikia mwaka wa 2015. Jitihada zinatiwa kuhakikisha kuwa kina mama waja wazito hawazai njiti wala watoto wao hawaagi punde baada ya kuzaliwa. Changamoto imekuwa kwamba watoto wengi katika nchi zinazoendelea hufa kabla kufikia umri wa miaka mitano. Mapambano dhidi ya magonjwa kama vile kifaduro, polia na malaria yaliyosababisha vifo hivi pamoja na jitihada za kujizatiti za kufikia lengo hili.

Kunayo azma ya kuhakikisha upatikanaji wa huduma bora za uzi ili kupunguza kwa robo tatu vifo vya uzazi kufika 2015. Kua kwa wajawazito kunaashiria huduma duni wakati wa kuhimili. Kina mama wengine katika nchi zinazoendelea hawahudhurii kliniki wakati wakati wa kulea mimba. Kwingineko, huduma hizi huwa mbali sana,

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huku namna za usafiri zikiwa duni kina mama huisha ama kuhudumiwa na wakunga wasiohitimu au hata kujifungua pweke. Mataifa wanachama wanahimiza kuongezea zahanati na vituo vingine muhimu vya afya kadhalika jitihada zinatiwa kuwaelimisha kina mama na jamii kwa jumla kuhusu umuhimu wa kuhudhuria kliniki wakati wa ujauzito na kuhakikisha mama yu salama wakati wa kujifungua.

Magonjwa sugu yanayotishia kuwamaliza walimwengu ni kikwazo cha jitihada za walimwengu kujiendeleza. Ndivyo maana lengo la sita ni kupambana na ukimwi. Malaria na magonjwa mengineyo. Kampeni zinaimarishwa katika jumuiya hu kuzima kabisa na kupunguza maambukizo mapya ya ukimwi jitihada zinaitwa kupunguza au kuzuia kabisa ugonjwa wa malaria au magonjwa mengine hatari. Vyombo vya habari vituo ambavyo vilivyo na maafisa wa nyanjani vinatumiwa nyanjani katika mataifa wanachama ili kufaulisha kampeni hii.

Aidha wanachama wanalenga kuhifadhi mazingira kwa kujumuisha misingi ya maendeleo endelevu katika sera na program za nchi.Zinalenga kuzuia upotevu wa rasilimali ya mazingira kama vile miti na maji. Lengo lipokuhakikisha kuwa katika kipindi hiki wanachama watapunguza kwa asilimia 50 idadio ya watu wanaoshindwa kupata maji safi na salama hii ni moja wapo ya malengo ambayo kwa mujibu ya tovuti ya umoja wa mataifa www.un.org/milleniumgoals kuna matumaini ya kutimiza zaidi ya 2015.

Mwisho kuna lengo la kujenga mshikamano wa maendeleo duniani,kwanza kwa kuboresha zaidi mfano wa fedha na biashara duniani kuhakikisha ni wa usawa, unafuata sheria na kamwe hauna ubaguzi. Utawala bora; kushughulikia mahitaji ya kipekee ya nchi changa kama vile kuziondolea ushuru wa bidhaa muhimu, kuzipunguzia au kuziondolea madeni; kutoa misaada zaidi kwa nchi maskini zinazotia jitihada kutoa umaskini kushughulikia ajira bora; kushirikiana na sekta za kibinafsi ili kuimarisha teknolojia ya kisasa hasa katika habari na mawasiliano ni baadhi ya yanayozingatiwa kulenga kutimiza mshikamano huu.

Maswali

a) Malengo ya maendeleo ya millennia ni nini? (al.2)

b) Ni wachochole wa kiwango gani wanaolengwa kuinuliwa na hatua za malengo ya maendeleo ya millennia? (al.1)

(c) Taja vipengele **viwili** muhimu kuhusu elimu katika katiba mpya ya Kenya vinavyochangia kufikia malengo ya maendeleo ya milenia (al. 2)

(d) Ni changamoto zipi zinazowakabili kina mama wajawazito katika ulimwengu wa tatu? (al. 4)

(e) Eleza namna kampeni dhidi ya magonjwa sugu zinavyofanywa (al. 2)

(f) Hali ya maji inatarajiwa kuwaje kufikia 2015 (al. 1)

(g) Eleza maana ya vifungu hivi (al. 3)

   i.   Hawazai njiti

   ii. Vifo vya uzazi

   iii. 'Wakunga' wasiohitimu

4

2. UFUPISHO (ALAMA 15)

UFUPISHO

Katiba mpya imeipa lugha ya Kiswahili hadhi nyingine kuifanya kuwa lugha rasmi kando na kuwa ni lugha ya taifa. Mabadiliko haya muhimu yana changamoto kadhaa.

Kwanza kabisa lugha ya Kiswahili sasa itashindania nafasi sawa na ile ya Kiingereza katika shughuli za kikazi. Swala hapa linahusu majukumu ambayo lugha hizi zitatekeleza. Je, lugha hizi zinatumika mtawalia katika shughuli za kikazi au zitatengewa majukumu maalum?
Lugha ya Kiswahili itachukua nafasi ipi? Kiingereza kitaachiwa nani tukizingatia kuwa kwa muda mrefu lugha Kiingereza ndiyo imekuwa lugha tawala katika mazingira haya? Je, wananchi wataweza kufanya maombi kwa lugha ya Kiswahili kando na kuendesha mawasiliano ya kiofisi kwa lugha hii? Kwa kifupi ili kusitokee mgongano wa matumizi ya lugha hizi mbili ni muhimu sana kwa watunga - sera kueleza kinagaubaga mawanda ya matumizi ya lugha hizi mbili katika mazingira ya kikazi.

Changamoto nyingine na muhimu ni kiwango cha maandalizi ya wananchi katika kuyapokea mabadiliko haya. Kwanza, wananchi wanafaa wafahamishwe kuhusu haki yao ya kutumia lugha hii katika mazingira ya kazi. Si ajabu kuwa wao hawana habari kuhusu mabadiliko haya ya kisera. Watumishi wa umma nao wanastahili kupewa mafunzo maalumu kuhusu mbinu za mawasiliano katika Kiswahili ili waendeshe shughuli zao vizuri.

Kwa upande mwingine, vyuo vikuu pamoja na taasisi nyingine za mafunzo zinastahili kutoa kozi ya lazima katika lugha ya Kiswahili kwa wanafunzi wanaojiunga nazo ili kuwaandaa kwa mahitaji haya mapya ya kikatiba. Kadhalika, serikali inastahili kuwaandaa wataalamu zaidi wa lugha ya Kiswahili ambao watahusika katika kuwafunza wanaohusika na utekelezaji sera.

Kuna haja pia ya wataalamu wa lugha kuandika vitabu zaidi kwa lugha ya Kiswahili ambavyo vitatoa mafunzo kuhusu mbinu mbalimbali za mawasiliano. Shughuli hii iambatane na ile ya kutafsiri vitabu vilivyoandikwa kwa lugha nyingine kwa ile ya Kiswahili.
Kwa muda mrefu sasa, kumekuwa na tatizo la mitazamo hasi miongoni mwa wananchi kwa lugha ya Kiswahili. Baadhi ya wananchi wamekuwa na sababu zao za kuitumia lugha hii wakishikilia kuwa lugha yenyewe ni ngumu.

Aidha, wananchi wengine wamekuwa na uzoefu wa kuzungumza lugha ya kiingereza au lugha nyingine za kigeni huku wakitoa nafasi finyu kwa lugha ya Kiswahili. Serikali Inastahili kutafuta njia ya kuwahimiza wananchi wa kuionea fahari lugha ya Kiswahili, waipende na kuielewa vizuri.

Ni muhimu kufanywe kila juhudi kuhakikisha kuwa wananchi wanatumia Kiswahili sanifu ili wasije wakakivuruga kwa kukiendeleza visivyo au kwa kukiharibu kwa kijilugha cha sheng au kwa lugha za kienyeji.

Vile vile, ni muhimu wananchi watambue kuwa nchi yetu ya Kenya ndiyo kitovu cha lugha hii na hivyo basi wafanye kila juhudi kuitumia ipasavyo ili tusionekane kuwa watumwa katika lugha yetu asili. Tunahitaji vioo vielelezo nchini ambao wanazungumza Kiswahili sanifu kwa madoido na ufasaha sio tu katika ulingo bali pia katika nyanja nyingine za maisha.

Kwa hivyo viongozi wetu wajiepushe na matumizi ya Kiswahili chapwa ili wananchi wahimizike kuzungumza Kiswahili kwa ufasaha. Ingekuwa hata bora ikiwa wangepewa kipaumbele katika kupokea mafunzo kabambe katika lugha hii. Pengine tungejifunza mengi kutoka nchi jirani ya Tanzania ambayo kwa kiasi kikubwa ilifaa kurasmisha Kiswahili na kuleta umoja wa kitaifa.

Maswali
  a) Fafanua changamoto zinazoikumba lugha ya Kiswahili kama lugha rasmi.   (maneno 70)   (al. 7)

Matayarisho

Jibu

  b) Mwandishi ametoa mapendekezo kuhusu namna ya kuimarisha matumizi ya Kiswahili nchini. Yafafanue
     (maneno 80)   (al.8)

Matayarisho

Jibu

3. MATUMIZI YA LUGHA (ALAMA 40)
  a) Taja sifa tatu za sauti /h/   (al.3)

  b) Eleza miundo yoyote miwili ya silabi za Kiswahili na kwa kila muundo utoe mfano mwafaka   (al.2)

  c) Eleza miundo miwili ya nomino katika ngeli ya U-I   (al.2)

  d) Kwa kila sentensi pigia mistari kiunganishi na utaje ni cha aina gani   (al.2)

    i) Mji huo uliangamia kwa uhalifu uliokuwepo.
    ii) Sitaki sima wala nyama
  e) Fafanua kwa kutoa mifano mwafaka majukumu matatu ya alama ya kuulizia   (al.3)

  f) Kiambishi ni nini?   (al.2)
  g) Andika upya sentensi hii ukibadilisha maneno yaliyopigiwa mstari kama ulivyoelekezwa kwenye
     mabano.   (al.2)
     Viongozi waadilifu huepuka ubadhirifu wa mali (nomino , kitenzi)

  h) Andika katika usemi wa taarifa   (al.3)
       Juma: Tafadhali usiukanyage mguu wangu
       Ali: Ah! Mbona nuikanyage?
  i) Tunga sentensi kubainisha matumizi ya hali isiyodhihirika   (al.1)

  j) Kauli ya kutendesheka huibua dhana gani?   (al.2)

  k) Tunga sentensi ukitumia kitenzi – wa katika kauli ya kutendewa.   (al.1)

  l) Changanua sentensi ifuatayo kwa kutumia njia ya mishale   (al.4
     Mwanafunzi huyo alituzwa na mwalimu aliyefurahi

(m) Bainisha yambwa na chagizo (al. 4)

Zawadi alionunuliwa James na mjomba kwa pesa nyingi ilipotea baada ya kishuka

(n) Tofautisha matumizi **matatu** ya neno **jinsi** (al. 3)

(o) Tofautisha sentensi changamano na ambatano (al. 2)

(p) Tunga sentensi moja yenye aina **mbili** za vishazi na uvionyeshe (al. 2)

(q) Tunga sentensi zilizo na miundo ifuatayo. (al. 2)

i. KN (N + RH) + KT (T + V)

ii. KN (N + kishazi tegemezi) + KT (T + W)

7

4. **ISIMUJAMII (ALAMA 10)**

"Viatu zangu ni smart sana. Hata kale katoto ketu kadogo kananiambia kanazipenda seriously".

(a) Msemaji wa kauli hii amedhihirisha makosa ya kisarufi katika matumizi yake ya lugha. Fafanua mambo **matano** ambayo huweza kumpelekea mtu kufanya makosa katika matumizi yake ya lugha (al. 5)

(b) Kauli hii inaonyesha hali ya kuchanganya ndimi ambapo msemaji ametumia misamiati ya kiingereza na ile ya Kiswahili. Eleza sababu **tano** zinazoweza kumpelekea mtu kuwa na ujuzi wa zaidi ya lugha moja. (al. 5)

8

SHULE YA UPILI YA MANGU

102/3
KISWAHILI
KARATASI 3
FASIHI
MTIHANI WA MWIGO
JULAI 2017
MUDA: SAA 2½

MTIHANI WA MWIGO
KISWAHILI
Karatasi 3
Saa 2½

MAAGIZO

- Jibu maswali **manne** pekee
- Swali la **kwanza** ni la **lazima**
- Maswali hayo mengine **matatu** yachaguliwe kutoka sehemu zilizobaki yaani:
  Riwaya, Hadithi fupi, Fasihi Simulizi na Ushairi.
- Usijibu maswali **mawili** kutoka **sehemu moja.**
- Karatasi hii ina kurasa **5** zilizopigwa chapa.
- Watahiniwa ni lazima wahakikishe kwamba kurasa zote zimepigwa chapa sawasawa
  na kuwa maswali yote yamo.

Fungua ukurasa

1

SEHEMU YA A: **SWALI LA LABIA**

TAMTHILIA - Mstahiki Meya

1. "Ya mwananti kuivunda nti"
   i) Yape maneno haya muktadha   (al.4)
   ii) Taja tamathali ya lugha inayojitokeza katika dondoo hili   (al.2)
   iii) Huku ukitoa mifano saba iliyofafanuliwa vizuri, onyesha ukweli wa kauli hii   (al.14)

SEHEMU YA B: Damu Nyeusi na Hadithi Nyingine

<u>Jibu Swali la 2 au la 3</u>

2. a) Kwenye hadithi ya Maeko Mhusika Duni ana wimbo ambao anamwimbia mkewe. Onyesha vile wimbo huu unakuwa kinaya kwa mkewe badala ya kuwa liwazo   (al.10)

   b) Onyesha umuhimu wa mhusika Babu Maende katika hadithi ya Maskini Babu yangu.   (al.10)

3. a) Huku ukizingatia hadithi ya kikaza onyesha vile mwandishi ameshughulikia maudhui ya kutowajibika.   (al.10)

   b) "If you come here again....".
   i) Eleza muktadha wa dondoo hili   (al.4)
   ii) Taja matumizi mawili ya lugha ambayo yanajitokeleza katika dondoo hili (al.2)
   iii) Taja sifa nne za msemaji wa maneno haya.   (al.4)

SEHEMU YA C: Kidagaa Kimemwozea

<u>Jibu Swali la 4 au la 5</u>

4. a) "Mwafrika amethibitisha kwamba anao uwezo wa kudhibiti maisha yake". Yaweke maneno haya katika muktadha wake   (al.4)

   b) Mwandishi anamtumia mhusika huyu kukejeli hali tofauti tofauti katika maisha ya wakubwa. Thibitisha ukweli ya kauli hii   (al.6)

   c) Onyesha kinyume cha kauli hii huku ukirejelea riwaya nzima.   (al.10)

5. a) Kuna haramu nyingi ambazo zimehalalishwa katika riwaya hii. Huku ukitumia mifano mwafaka thibitisha ukweli wa kauli hii.   (al.10)

   b) Huku ukimrejelea imani onyesha vile mwananchi wa kawaida anawajibika katika mataifa yanayoendelea.   (al.10)

USHAIRI

Jibu Swali la 6 au la 7

6. <u>Soma shairi lifuatalo kasha ujibu maswali</u>
   1.   Mbiu naipulizia, kwa wa hapa na wa ng'ambo,
         Kwani ngoja 'mesikia, inaumiza matumbo,
         Kwa upole sitafyoa, hata kama kwa kimombo,
         Yafaa jihadharia , maisha yas'ende kombo.

   2.   Maisha yas'ende kombo, kututoa yetu ari,
         Zingatia haya mambo, wetu walezi mukiri,
         Kuwa wana kwa viambo, huwa Baraka na kheri
         Watunzeni na maumbo, msijezusha hatari

   3.   Msijezusha hatari, na nyingi hizi zahama,
         Wazazi haya si siri, mawi mnayoandama
         Twaeleza kwa uzuri, matendoyo yatuuma.
         Watoto tunayo mori, mi lini mtajakoma?

4. Ni lini mtajakoma, na pombe ziso halali?
   Sio baba sio mama, mbona ny'hamtujali?
   Mwafa ja nzi twasema, mwatuacha bila hali
   Hangaiko acha nyuma, kwani hamuoni hili?

5. Kwani hamuoni hili, kila mwapigana
   Nyumbanizo hatulali, jehanamu tumeona
   Mwatusumbua akili, twaumia tena sana
   Acheni na ukatili, kwani upendo hamna.

6. Kwani upendo hamna, kama mbwa mwatuchapa
   Mwatuchoma sisi wana, mioyetu yatupapa
   Pa kujificha hatuna, tumebaki tukitapa
   Maisha hamu hayana, tumevunjwa na mifupa.

7. Tumevunjwa na mifupa, hata leo uke wetu
   Mwatubaka na kuapa, kutung'ata nyi' majitu,
   Maisha hatujakopa, fahamu mkosa utu,
   Hayo makeke na pupa, mtakoma utukutu.

8. Mtakoma utukutu, na kutumia mikiki,
   Na tabia zenye kutu, tumechoka nayo chuki,
   Hatutakubali katu, kutendewa yenye siki,
   Serikali fanya kitu, kwani nasi tuna haki.

Maswali

(a) Eleza dhamira ya mtunzi wa shairi hili (al. 2)

(b) Fafanua tamathali **mbili** za usemi zilizotumiwa katika shairi hili (al. 4)

(c) Taja nafsineni katika shairi hili (al. 1)

(d) Eleza bahari **nne** zinazowakilishwa katika shairi hili (al. 4)

(e) Andika ubeti wa **nne** kwa lugha nathari (al. 4)

(f) Eleza maudhui **matatu** yanayojitokeza katika shairi hili (al. 3)

(g) Huku ukitoa mfano, taja mfano **mmoja** wa uhuru wa mshairi ambao umetumiwa katika shairi hili. (al. 2)

7. **Soma shairi lifuatalo kisha ujibu maswali**

Dhamiri imenifunga shingoni
Nami kama mbuzi nimefungwa
Kwenye mti wa utu. Kamba ni fupi
Na nimekwishachora duara
Majani niwezayo kufikia yote nimekula
Nanaona majani mengi mbele yangu
Lakini siwezi kurafikia: kamba, kamba

Oh! Nimefungwa kama mbwa
Nami kwa mbaya bahati, katika
Uhuru kupigania, sahani ya mbingu
Mineipiga teke na niigusapo kwa mdomo
Mbali zaidi inakwenda na siwezi tena
Kufikia na hapa nilipogungwa
Nimekwishapachafua na kuhama siwezi

Kamba isiyoonekana haikatiki
Nami sasa sitaki ikatike, maana
Mbuzi wa kamba alipofunguliwa, mashamba
Aliharibu na mbwa aliuma watu
Ninamshukuru aliyenifunga hapa
Lakini lazima nitamke kwa nguvu
"Hapa nilipo sina uhuru!"

Maswali

(a) Taja mambo **manne** ambayo mshairi analalamikia. (al. 4)

(b) Kwa nini mshairi haoni haja ya yeye kuwa huru? (al. 2)

(c) Eleza **maana** ya mshororo ufuatao kama ulivyotumiwa katika shairi (al. 2)
"Kamba isiyoonekana haikatiki."

(d) Taha na utoe mifano ya aina **mbili** za mbinu za lugha zilizotumika katika shairi hili (al. 4)

(e) Kwa kutoa mifano **miwili**, eleza jinsi matumizi ya mishata yanavyojitokeza katika shairi hili (al. 4)

(f) Andika ubeti wa **pili** kwa lugha nathari. (al. 4)

8. **SEHEMU YA E:** **Fasihi Simulizi**

(a) Fafanua mambo **matano** yanayochangia kubadilika kwa fasihi simulizi (al. 10)

(b) Eleza dhima ya methali kama kipera cha fasihi simulizi (al. 10)

— 4 —

MANGU HIGH SCHOOL

121/1
MATHEMATICS
PAPER 1
MOCK
JULY 2017
TIME: 2½ HOURS

NAME: _____

ADM NO: _____   CLASS: _____

Kenya Certificate of Secondary Education
Mock Examinations
Mathematics
Paper 1
2½ Hours.

INSTRUCTIONS TO CANDIDATES

i.   This paper contains two sections: section **I** and section **II**.
ii. In section **A** answer **ALL** questions and in section **B** answer only **FIVE** questions.
iii. Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.
iv. Marks may be given for correct working even if the answer is wrong.
v.   Non programmable silent electronic calculators and KNEC mathematical tables may be used, except where stated otherwise.

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

This paper consists of **14 printed pages**. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn Over

1

SECTION I: 50 MARKS
Answer **ALL** questions in this section

1. Evaluate (3mks)

$$\frac{\left(2\frac{1}{4} - 3\frac{2}{3} + 5\frac{1}{6}\right) \div \left(2\frac{1}{4} - 3\frac{5}{6} + 2\frac{1}{3}\right)}{2\frac{3}{4} + \frac{1}{4}\left(1\frac{2}{3} - \frac{1}{6}\right) \div \left(4\frac{1}{8} - 7\frac{5}{12} + 4\frac{1}{6}\right)}$$

2. The LCM of two numbers is 5040 and their H.C.F. is 6. If one of the numbers is 126 use the factor method to find the other number (3mks)

3. Use reciprocal, square and square root table to evaluate to 4 significant figures the expression below (3mks)

$$\sqrt{\frac{1}{24.56} + 4.346^2}$$

2

1. Simplify the expression (3mks)

$$\frac{2by - 2bx + 4ay - 4ax}{x - y}$$

2. What is the greatest number which when divided into 1003, 1864 and 1190 will leave the remainders of 2, 5 and 7 respectively. (3mks)

3. Evaluate (3mks)

$$\frac{[(-6 - 4 x - 7 + 2) \, x \, 3 - 3] \, x \, 40}{24 \div 6 x \, 2 + [12 - (-2) - 9] \, x \, 4}$$

4. The cost of producing a commodity consists of transport, labour and raw material in the ratio 8:4:12 respectively. If the transport cost increases by 12%, labour cost 18% and raw materials by 40% find the percentage increase of producing the commodity (3mks)

8. Solve the equation (3mks)

$$\frac{x-3}{4} - \frac{x-5}{6} = \frac{4x+6}{8} - 1$$

9. A forex bureau in Nairobi buys and sells selected foreign currencies at the rates given in the table below.

Currency	Buying (ksh)	Selling (ksh)
1 US $	75	80
100 Uganda shillings	4	4.50

A tourist arrived in Kenya with $2000. She changed the dollars into Kenyan shillings at the bureau. During her stay in Kenya, she spent a total of ksh.60,000. She concerted all her remaining Kenyan shillings into Ugandan shillings at the same bureau. How much in Ugandan shillings was she given (3mks)

10. Find the value of x in the following equation (4mks)
$$64^{x+1} + 8^{2x} = 1040$$

11. Determine the equation of a line passing through point (3, - 1/3) and perpendicular to a line whose equation is 6y - 9x + 8= 0. Express the equation in the form of y= mx + c

(3mks)

12. If x = 2/3 is a root of $6x^2 + kx - 2 = 0$. Find the value of k and the other root

(3mks)

13. The figure below is a circle of radius 8cm. Point A, B and C are vertices of the triangle ABC in which angle ABC=60° and angle ACB = 80°. Calculate the area of triangle ABC.

(4mks)
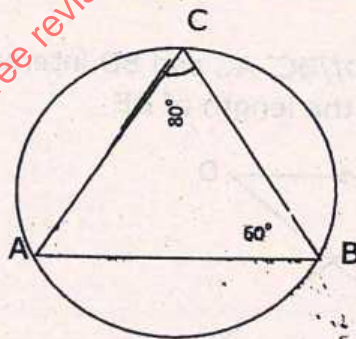
14. A pyramid is on a rectangular base of sides 6cm by 4cm. If the slant edges of pyramid are 8.4cm long, find the total surface area of the pyramid (3mks)

15. Use reciprocal, cubes and cube root tables to evaluate (4mks)

$$\frac{(2.9479)^3}{-63.34} - \sqrt[3]{0.0169}$$

16. In the figure below AD//BC, AC and BD intersect at E. Given that AE:EC=1:5 ; BD=12cm. Calculate the length of DE (2mks)
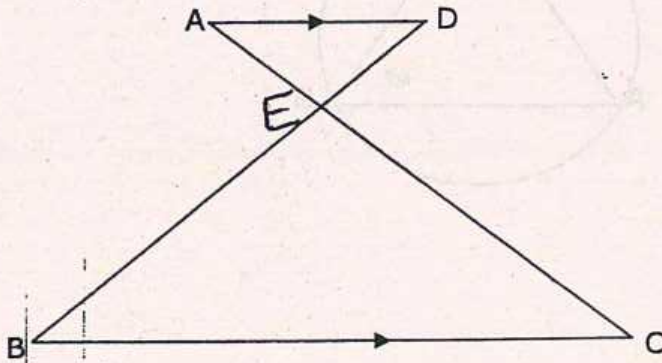
Answer only **FIVE** questions in this section

17.   Use a ruler and compass only in this questions

(a)   (i)   Construct a parallelogram ABCD such that AB=7cm, AD=4.2cm and
                angle BAD=52.5°   (5mks)

        (ii)   Measure the length of the longer diagonal   (1mk)

(b)   (i)   A perpendicular from D is dropped to meet AB at M. Construct the
                perpendicular and measure DM.   (2mks)

        (ii)   Hence calculate the area of the parallelogram   (2mks)

7

18.   (a) Determine the inequalities that defing the unshaded region R below (6mks)
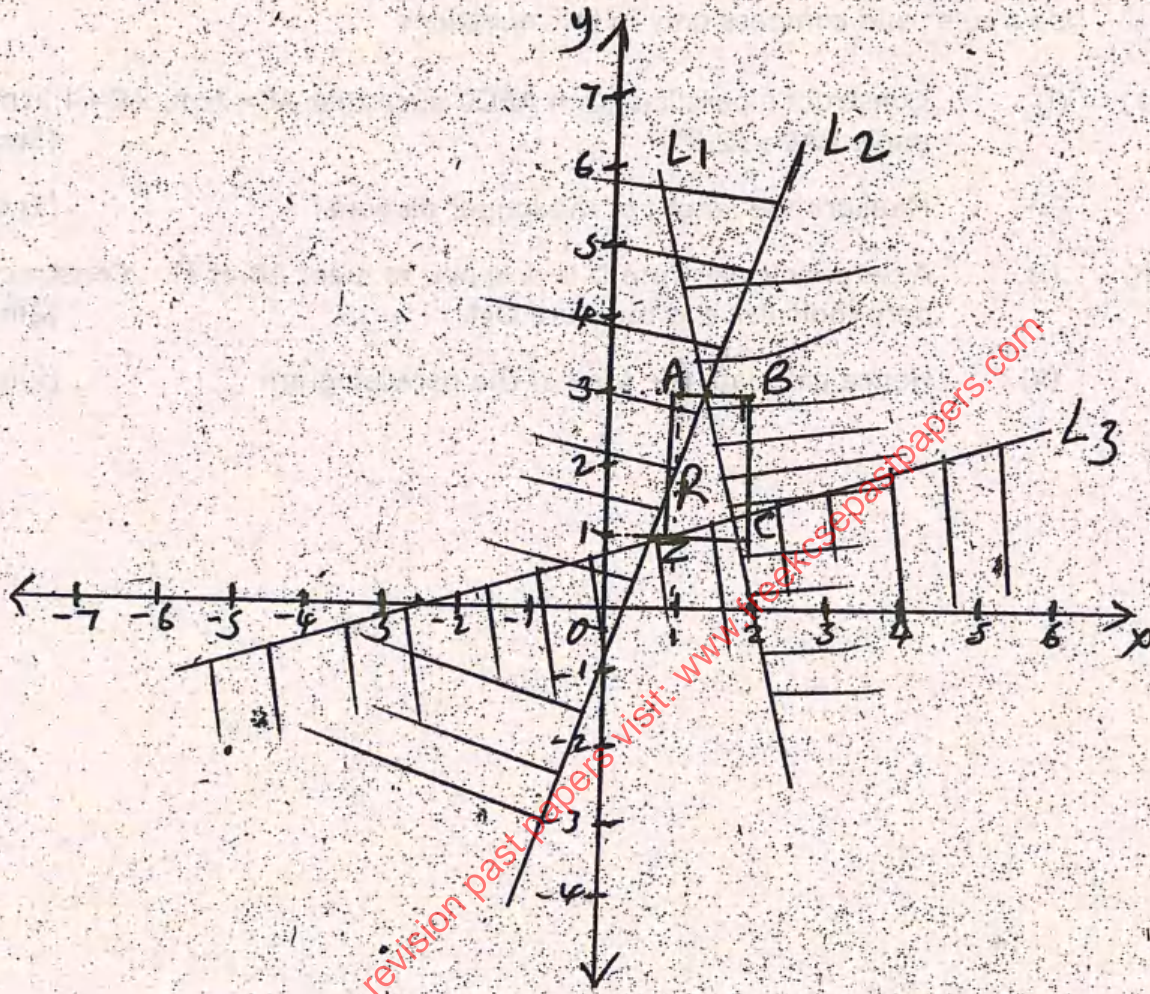
(b) Calculate the area of the region R   (4mks)

19. Mash bus leaves Voi for Nairobi at 7.00am at an average speed of 80km/h. Coast bus leaves Nairobi towards Voi at 7:30am on the same day at an average speed of 60km/h. The distance from Nairobi to Voi is 450km. After travelling for 1 ½ hours coast bus developed a mechanical problem which took 45 minutes to repair before continuing at its speed in the same direction.

a) Determine the time when the two buses met (4mks)

b) Calculate the distance from Nairobi when the two buses met. (3mks)

c) For how long did the mash bus stay in Nairobi before coast bus arrived at Voi. (3mks)

20. A triangle ABC with vertices A(-4,2), B(-6,6) and C (-6,2) undergoes an enlargement scale factor -1 and centre (-2,6) to produce triangle A'B'C'

a) Draw triangle ABC and its image A'B'C' on the grid provided. State the coordinates of triangle A'B'C' (3mks)

b) Triangle A'B'C' is then reflected in the line y=x to give A"B"C". Draw triangle A"B"C" and state the coordinates of its vertices (3mks)

c) If triangle A"B"C' is mapped onto a triangle whose coordinates are A''' (0,-2), B''' (4,-4) and C''' (0,-4) by a rotation find the centre and angle of rotation (4mks)

21. The equation of a curve is given by $y = -x + 4x^2 - 6 + x^3$.
  a) Complete the table below **(2mks)**

x	-5	-4	-3	-2	-1	0	1	2
y			6			-6		16

  b) On the grid provided, draw the graph of $y = -x + 4x^2 - 6 + x^3$ for $-5 \leq x \leq 3$ **(2mks)**

  c) Use your graph to solve the following equation
    i) $x^3 + 4x^2 - x - 6 = 0$ **(1mk)**

    ii) $-3x^3 - 12x^2 + 15 = 0$ **(2mks)**

    iii) $-x^3 - 4x^2 + 2x + 9 = 0$ **(2mks)**

22. a) Use trapezoidal rule to estimate the area bounded by the curve $y = 3x^2 - 8x + 10$ and the line $y = 0$, and $x = 0$ and $x - 10$. Use nine trapezia. **(3mks)**

  b) Use mid ordinate rule with 10 strips to estimate the area in (a) above **(3mks)**

  c) i) Calculate the exact area, calculate in (a) and (b) above **(2mks)**

    ii) Calculate the percentage error made when each method was used. **(2mks)**

23. In the figure below, O is the centre of the circle. Angle AEB=50°, angle EBC=80° and angle ECD=30°.
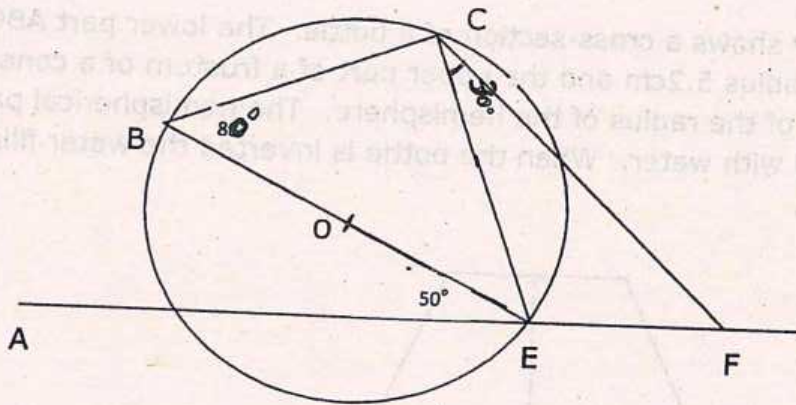
Giving reasons calculate

(a) Angle CDE

(2mks)

(b) Angle DFE

(3mks)

(c) Obtuse angle COE

(2mks)

(d) Angle ADE

(3mks)

24. The figure below shows a cross-section of a bottle. The lower part ABC is a hemisphere or radius 5.2cm and the upper part of a frustum of a cone whose top radius is a third of the radius of the hemisphere. The hemispherical part is completely filled with water. When the bottle is inverted the water fills the frustum part completely.
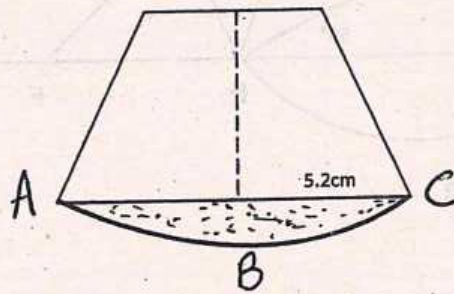
(a) Determine the height of the frustum (7mks)

(b) The capacity of the bottle in litres to 2.s.f. (3mks)

MANGU HIGH SCHOOL

121/2
MATHEMATICS
PAPER 2
MOCK
JULY 2017
TIME: 2½ HOURS

NAME: _____

ADM NO: _____   CLASS: _____

Kenya Certificate of Secondary Education
Mock Examinations
Mathematics
Paper 2
2½ Hours.

INSTRUCTIONS TO CANDIDATES

i.   This paper contains two sections: section **I** and section **II**.
ii. In section **I** answer **ALL** questions and in section **II** answer only **FIVE** questions.
iii. Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.
iv. Marks may be given for correct working even if the answer is wrong.
v.   Non programmable silent electronic calculators and KNEC mathematical tables may be used, except where stated otherwise.

For Examiner's Use only

Section I

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

Section II

7	18	19	20	21	22	23	24	Total

Grand Total

This paper consists of **15 printed pages**. Candidates should check the question paper to sure that all the pages are printed as indicated and no questions are missing.

Turn Over

1

SECTION I: 50 MARKS

Answer **ALL** questions from this section

1. Solve for x if $2^{-1}(x + 1) - 3x^{-1} = 5^{-1}(x - 2)$ (3mks)

2. Tea brands costing sh.100 and sh.150 were mixed the ratio x:y and the mixture was sold at sh.160 hence realizing a profit of 25%. Find the value of x+y (3mks)

3. In the figure below OA=**a**, OB=**b**, 3OM=2OB and $\frac{9}{5}$BN=BA
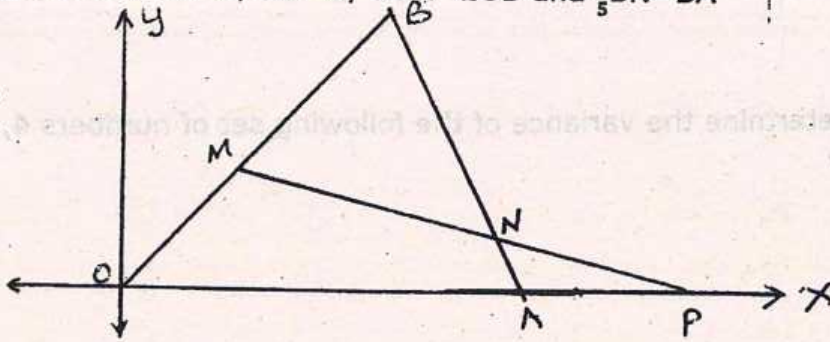
Express in terms of **a** and **b** vectors

    (i)   ON   (2mks)

    (ii)   MN   (2mks)

4. Given that x=2.70, y=4.6 and z=25, find the percentage error obtaining $\frac{xz - y}{y}$

                                                                              (3mks)

5. Determine the variance of the following set of numbers 4, 9, 5, 4, 7, 6, 2, 1, (
   9   (3mk

6. In the figure below PC is a tangent to the circle at B. CA produced meets QP a
   If AC=8.4cm, PB=16.8cm and angle ABP = 40°, find

   (i)   Length AP   (2mk:

   (ii)   Angle APB   (2mks

7. Find the first five terms of the expression $\left(2 - \frac{1}{x}\right)^8$. Hence evaluate $(1.75)^8$ truncating yours answer to 3.s.f. (3mks)

8. A point P moves in the shaded region between the circumference of the two concentric circles or radii 2cm and 3cm as shown below. The diameters AB and CD intersect at O at right angle. Write down in equalities that defines the locus of P. (3mks)
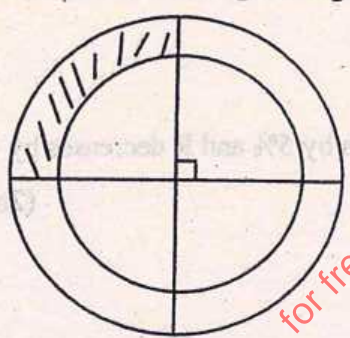
9. Solve for x in ½ cos 2x = - ¼ for $-\pi \leq x \leq \pi$, leaving your answer in π form (3mks)

10. Given that $(\log_x 2) - 1 = 2 - \dfrac{1}{\log x^2}$ express y in terms of x (3mks)

11. Given that $\begin{pmatrix} x & y \\ 1 & 1 \end{pmatrix}\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 4 \\ 2 \end{pmatrix}$, find the possible value, of x and y (3mks)

12. Make x the subject of the formula (3mks)

$$\sqrt[n]{\dfrac{2x^n + r}{4}} = \dfrac{x}{r}$$

13. Paul is standing on top of a vertical pillar from a point A on the horizontal ground the angle of elevation to Paul's feet is 33^0 and that of the top of his head is 36^0. If Paul's height is 1.8m, how high is the pillar from the level ground and how far is the fost of the pillar from A (3mks)

14. P varies directly as the square of Q and inversely as R. if Q increases by 5% and R decreases by 10%, Find the percentage change in P. (2mks)

15. Without using tables, evaluate (3mks)

$$\dfrac{1}{(1+\sqrt{3})^2} + \dfrac{1}{(1-\sqrt{3})^2}$$

16. P $(30^0N, 20^0W)$, Q $(30^0N, 40^0E)$, R $(60^0N, a^0E)$ and S (b^0N, c^0W) are four points on the surface of the earth. R is due North of Q, and S is due West of B and due North of P. Given that all distances are measured n nautical miles, find the difference between the distances from R to P using two alternative routes, one via Q and the other via S correct to 2 s.f. (4mks)

SECTION II: 50 MARKS

<u>Answer **FIVE** questions only from this section</u>

17. A civil servant is housed by the employer for which he pays shs. 2000 per month. In addition to his basic salary he receives ksh.25000, ksh. 7000and ksh.5000 per month as house, hardship and medical allowances respectively. He pays PAYE of sh.12000 per month but claims a person relief of sh.1800 p.m. If he pays sh.13000 per month as life insurance policy for which he claims a relief of sh.3 per pound and income tax is charged according to the table below.

Income in £ per month	Rate in shs per £
£1 – 650	2
£651 – 1850	3
£5151 – 5150	4
£5150 and above	5

<u>Calculate</u>

(a) Calculate his basic salary to the nearest shillings   (7mks)

(b) Determine his net monthly salary, if he has a total deduction of sh.18000 addition to the PAYE.   (3mks)

-7-

18. A contractor applied for contracts
    A - Building a classroom block
    B - Constructing school dining hall
    C - Putting up a dormitory block
    The probability of getting A is 0.7. The probability of getting B is 0.6 if A is obtained and only 0.3 if A is not obtained. The probability of getting C is 0.8 if B is obtained and only 0.4 if B is not obtained.

    (a)   Draw a tree diagram to represent the above information   (2mks)

    (b)   Find the probability of getting

        (i)   The three contracts   (2mks)

        (ii)   Only one contract   (2mks)

        (iii)   At least one contract   (2mks)

        (iv)   None of the contract   (2mks)

-8-

19. The figure below shows an aerial view plan of the roof of a building. ABCD is a rectangle in which AD=6m and AB=9m. The ridge XY is centrally located and it is 6m long. XA, XD, YC and YB are equal in length and the true length of each of them is 5m.
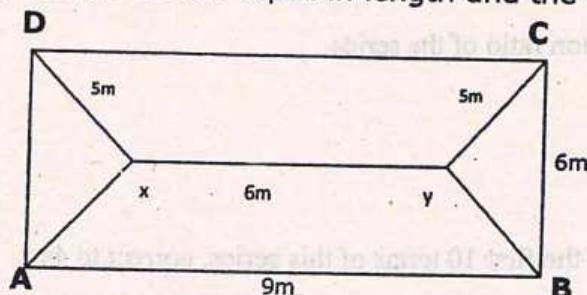
Calculate

(a) The true length of YM where m is the midpoint of BC   (2mks)

(b) The height of XY above the plane ABCD   (2mks)

(c) The angle of inclination of the face ABXY and the horizontal   (3mks)

(d) The angle between planes ADX and ABCD   (3mks)

20. The first three consecutive terms of a geometric progression are 3^{2x+1}, 9^x, 81 respectively.

a) Calculate the value of x (3mks)

b) Determine the common ratio of the series (2mks)
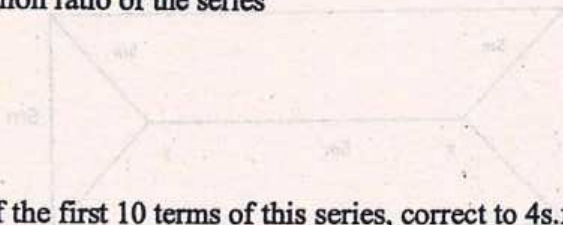
c) Calculate the sum of the first 10 terms of this series, correct to 4s.f. (2mks)

d) Given that the fifth and the seventh term of this G.P form the first two consecutive terms of an arithmetic sequence. Calculate the sum of the first 20 terms of the A.P. (3mks)

21. A particle moves along a straight line such that its distance S from a fixed A after t seconds is given by
S= (2t -1) (t-1) (t-2)

Find

i) the time s when the particle is at point A (2mks)

ii) the velocity and acceleration of the particle at t=2 (4mks)

iii) the times at which the particle is instantaneously at rest (2mks)

iv) Maximum displacement of the particle (2mks)

22. A trapezium has vertices at A(1,1), B(4,1), C(3,3) and D(1,3). T is a transformation whose matrix is
$$\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$$

a) Draw the trapezium and its image under transformation T hence describe T   (4mks)

b) Find the matrix transformation which maps the trapezium A'B'C'D onto trapezium with vertices A''(3,-3), B''(12,-3), B'' (12,-3), C''(9,-9) and D''(3,-9).

Describe the transformation.   (4mks)

c)Determine the matrix of a single transformation which will map A'' B'' C'' D onto ABCD.   (2mks)

23. a) Draw the graphs of y = sin2x and y = ½ sin (2x-30) in the domain -180⁰ ≤ x ≤180⁰   (5mks)

b) Use your graphs to

i) Find the period and amplitude of both graphs   (2mks)

ii) Solve ½ sin(2x – 30) sin 2x = 0   (1mk)

c) Describe the transformation that would map the graph y=sin2x on to the graph y= ½ sin (2x -30)   (2mks)

24. A firm manager intends to buy two types of machines. Type A machine requires $2m^2$ of floor space and costs sh.10,000. Type B machine requires $1m^2$ of floor space and costs sh.25000. The space available is $20m^2$. The manager has sh.180000 to spend. If he buys X type A and Y type B machines, write down two inequalities other than $x \geq 0$, $y \geq 0$ which have to be satisfied.

(a) Graph your inequalities (5mks)

(b) If a type A machine saves 2 man hour a day and type B machines saves 3 man hour a day.

(i) Find the number of machines that should be installed to maximize the number of man hour saved a day (3mks)

(ii) How many man-hours are saved? (2mks)

MANGU HIGH SCHOOL

NAME_____ ADM. NO_____ CLASS_____

INDEX NO._____ CANDIDATES SIGNATURE_____ DATE_____

231/1
BIOLOGY
PAPER 1
MOCK
JULY 2017
TIME: 2HOURS

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
Biology
Paper 1
2 Hours

Instructions to candidates.

a) Write your Name, Adm. No., and class in the spaces provided.
b) Sign and write the date of examination in the space provided above.
c) Answer **ALL** questions in the spaces provided in the question paper.
d) This paper consists of **11** printed pages.
e) Counter check the question paper to ascertain that **ALL** pages are printed as indicated and no question is missing.

For Examiner's Use Only

Question	Maximum score	Candidates score.
1 - 23	80	

Turn over

1. (a) Define the term growth. (1 mark)

....

....

(b) Name the tissue in plants responsible for:

   (i) Primary growth. .... (1 mark)

   (ii) Secondary growth.. (1 mark)

2. Two potato cylinders were carefully dried on a blotting paper and weighed. Each piece weighed 2 grams. One was placed in each test tube as shown in the diagram below.
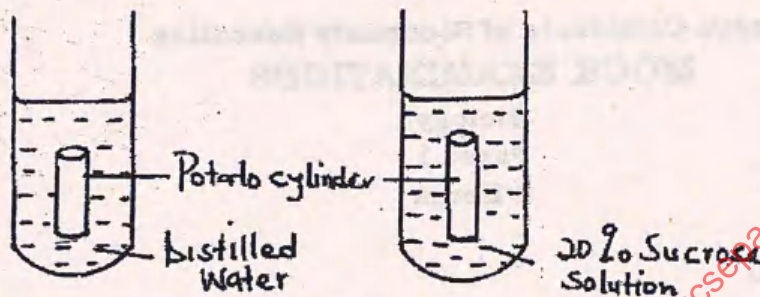
(a) After 48hrs, which potato cylinder will be heavier? Explain. (2 marks)

....

....

(b) Name the substance whose movement was responsible for the weight changes in the potato cylinder you identified in (a) above. (1 mark)

....

(c) Name the process which was responsible for the movement of the substance you identified in (b) above. (1 mark)

....

3. Why are the following steps taken when preparing a cross section of a leaf for viewing under the microscope?

(a) Cutting thin section. (2 marks)

....

....

(b) Placing the section in water. **(2 marks)**

....

....

4. Below is the dental formula of a mammal.

$$i\ 0, \quad c\ 0, \quad pm\ 3, \quad m\ 2$$
$$4 \qquad 0 \qquad 3 \qquad 3$$

(a) What is the total number of teeth...? **(1 mark)**

(b) (i) What is mode of feeding in the mammal? .... **(1 mark)**

(ii) Give one reason for your answer above. **(1 mark)**

....

5. Below is a diagram of a mature embryo sac.
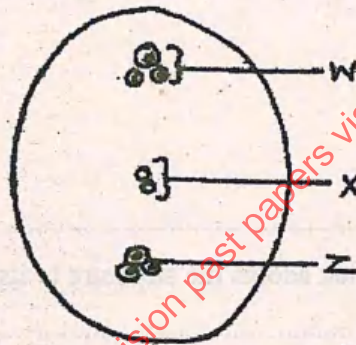
(a) Name the parts labeled.

(i) W .... **(1 mark)**

(ii) Z .... **(1 mark)**

(b) Give the name of the part of the seed formed when the part labeled X fuses with one of the male

nucleus.. **(1 mark)**

6. The table below shows approximate numbers of organisms found in an ecosystem.

Type of organisms	Number
Grasshoppers	Many
Hawks	3-4
Snakes	15-30
Green plants	Very many
Lizards	80-120

a) Using the information in the table draw a pyramid of numbers.   (3mks)

....

b) Explain what would happen to the other organisms if all the lizards suddenly died off.   (2mks)

....

7. a) Why do guard cells lie in close contact with epidermal cells?   (1mk)

....

b) The figure below shows a structure used in gaseous exchange

i) Identify the structure...(1mk)

ii) Explain one observable feature on the figure that adopts the structure to its function.   (1mk)

....

8. Mr. Juma has sued Serenity Hospital on grounds that their child was wrongly identified such that they got the wrong one. The child is blood group O. Mr. Juma is blood group AB while Mrs. Juma is heterozygous blood group A.

a) Work out the possible group of their offsprings.   (4mks)

....

b) Is Mr. Juma justified in his claims?   (1mk)

....

9. a) Name the bacteria found in the root nodules of leguminous plant.   (1mk)

....

b) What is the role of the bacteria named in (a) above?   (1mk)

10. a) Which substance in the cigarettes smoke may cause lung cancer.   (1mk)
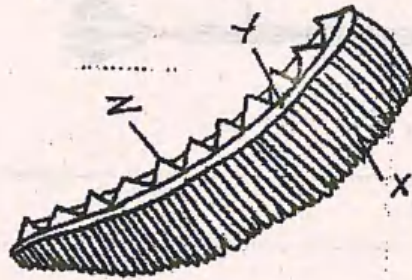
....

(b) The table below shows differences in air breathed in and out.

Gas	Volume of air breathed in	Volume of air breathed out
Oxygen	21.00	16.00
Carbon (iv) Oxide	0.03	4.00

What is the reason for their differences.

(2 marks)

....

....

11. The diagram below represents an organ of gaseous exchange.

(a) What is the name of the organ? ....(1 mark)

(b) Name the class to which the animals that have the organ you identified in (a) above belongs.

(1 mark)

....

(c) State one way in which structure X is adapted for gaseous exchange.

(2 marks)

....

12. In a prolonged drought period, forage was scarce. It made animals reach out for higher forage and this way the giraffes got the stretched long necks.

(a) What is the term used for a characteristic such as the long necks outlined?

(1 mark)

....

(b) What is the name given to the theory that describes the evolution of such structures like the long necks?

(1 mark)

....

-5-

c) State and explain the limitation of the theory you named in (b) above. (2mks)

....

13. a) A goat weighing 20kg requires 216KJ while a mouse weighing 54gms requires 2830KJ per day. Explain. (2mks)

....

b) What are the end products of respiration in plants when there is insufficient oxygen supply? (1mk)

....

14. State the functions of the following male hormones. (1mk)
   a) Follicle stimulating hormone.

....

b) Luteinizing hormone. (1mk)

....

15. The diagram below represents the structure of a nerve cell.
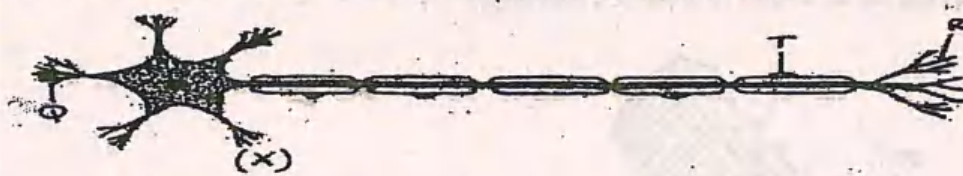
   a) Identify the nerve cell..(1mk)
   b) Give a reason for your answer in (a) above. (1mk)

....

   c) State the function of the part labeled T. (1mk)

....

   d) Using an arrow show the direction of an impulse on the diagram. (1mk)

....

16. State the function of the following parts of the human ear.
   a) Tympanic membrane

....

   b) Round window (1mk)

....

   c) Cochlea (1mk)

....

17. The diagram below represents a cross section obtained from a plant. Use it to answer the questions that follow
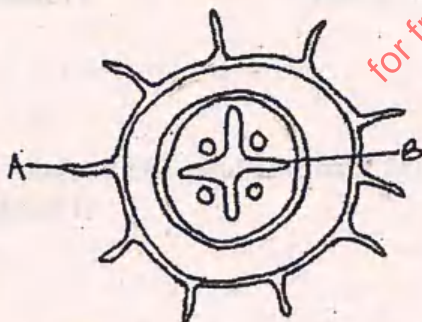
a) From which part of the plant was the section obtained from:..(1mk)

b) Give a reason for your answer in (a) above. (1mk)

....

(c) Name part B.. (1 mark)

(d) Name the material that strengthens the part you named in (c) above.
(1 mark)

18. (a) Given a sample of urine, name one test you would carry out to determine if it was obtained from a person suffering from diabetes mellitus. (1 mark)

....

(b) What results are expected if one is diabetic? (2 marks)

....

(c) Explain why sugar appears in the urine of a diabetic. (2 marks)

....

....

19. The diagram below represents a bone of a mammal.

(a) Identify the bone.. (1 mark)

(b) Name the part marked X.. (1 mark)

(c) Name the bone that articulates at the part labeled F................... (1 mark)

(d) Explain one way in which the bone is adapted to its function. (1 mark)

....

....

20. (i) Name the class in the phylum arthropoda with the largest number of individuals. (1 mark)

....

(ii) State three adaptations that make this class very successful. (3 marks)

....

....

....

....

21. The diagram below represents a cell organelle.
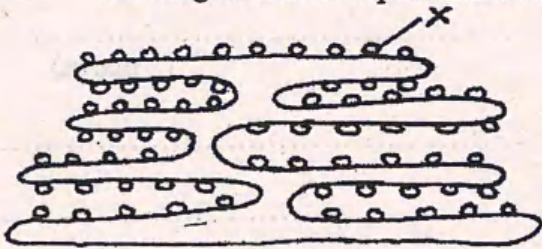
(i) Name the organelle above.. (1 mark)

(ii) State its function.. (1 mark)

(iii) Identify the structures labeled X and state it's functions. (2 marks)

....

....

22. (a) In which organ is cardiac muscle found.. (1 mark)

(b) What is the function of the cardiac muscle in the organ you have named in (a) above. (1 mark)

....

23. How does carboxyhaemoglobin lead to death? (2 marks)

....

....

MANGU HIGH SCHOOL

NAME_____ ADM. NO_____ CLASS_____

INDEX NO._____ CANDIDATES SIGNATURE_____ DATE_____

231/2
BIOLOGY
PAPER 2
MOCK
JULY 2017
TIME: 2HOURS

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
Biology
Paper 2
2 Hours

Instructions To Candidates

(a) Write your Name and Index no., Class, Signature and Date in the spaces provided above.
(b) This paper consists of **TWO** sections. A and **B**
(c) Answer **ALL** questions in section as in the spaces provided.
(d) In section B answer **question 6(compulsory)** and **EITHER** question **7** or **8** in the spaces provided after question 8.

For Examiners Use Only

Section	Question	Maximum Score	Candidates Score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
TOTAL		80	

This paper consists of **10 printed pages**. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

1

SECTION A: (40 MARKS)
Answer all the questions in this section in the spaces provided

1. In an experiment it was found that a certain pesticide would kill fruit flies of genus drosophila whose genotype is Rr but ineffective in killing flies of genotype rr. Groups of flies with this genotypes were mated and offsprings sprayed with the pesticides.

   (a) Work out the percentage of offsprings likely to survive. (5mks)

   (b) Explain how the flies which are resistance to the pesticide evolve (3mks)

2

2. The diagram below shows the effect of rebreathing expired air on ventilation rate in a mammal.
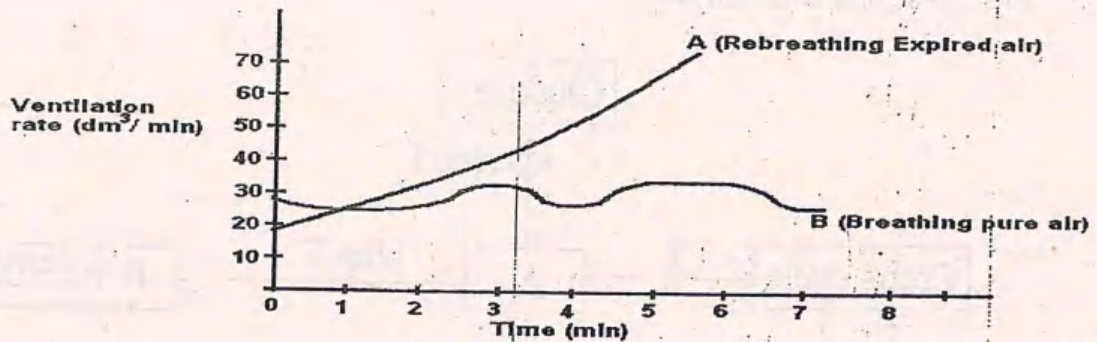
(a) How does rebreathing expired air affect ventilation rate?   (1mk)

....

....

(b) Identify the gas which is highly concentrated in rebreathed expired air.

                                                                                   (1mk)

....

....

(c) Account for the rate of ventilation in graph A.   (1mk)

....

....

(d) (i) Name the type of respiration likely to take place in the body cell of a mammal if rebreathing of expired air persisted for some times. (1mk)

....

....

(ii) Write a word equation to illustrate the type of respiration named in d (i) above.   (1mk)

....

....

(e) Which two factors affect the rate of ventilation as illustrated on the graphs.
                                                                                   (1mk)

....

....

3

3. The diagram below represents a simple respiratory pathway. Study it and answer the questions that follow:
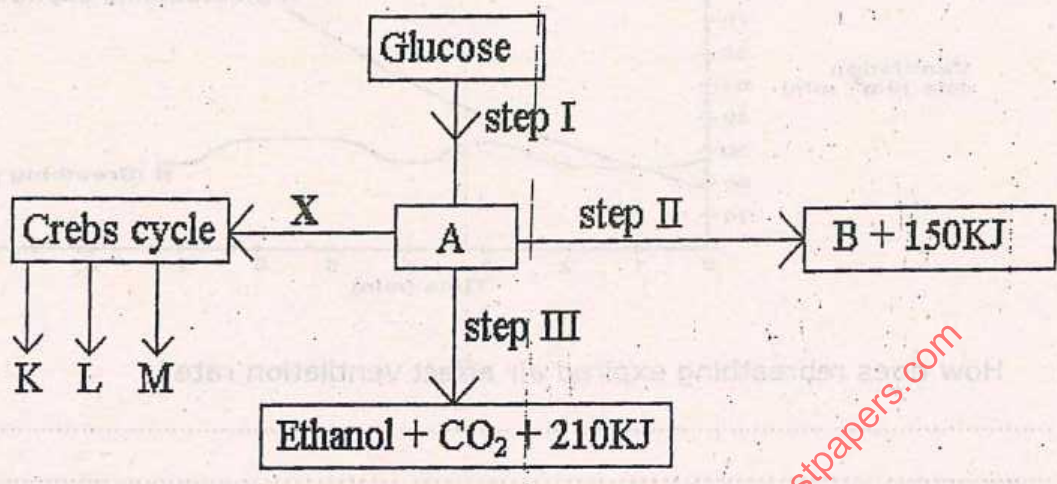
(a) Name the kingdom in which step III takes place.   (1 mk)

....

(b) (i)   Name the process taking place in step I.   (1 mk)

....

     (ii) Name the substance A and B.   (1 mk)

     A ....

     B ....

(c) Name the products K, L and M.   (3 mks)

....

....

....

4. The diagram below represents an experimental set up to investigate effects of gravity and light on the growing seedling.
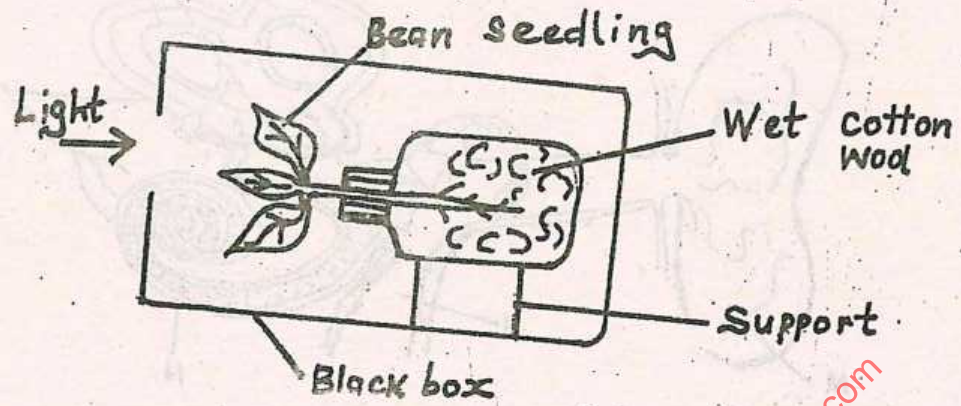
(a) (i) Draw a diagram of the seedling to experiment the expected results after three days (2mks)

(ii) Explain the appearance of the seedling in a (i) above. (4mks)
....
....

(b) Suggest a control experiment for the gravity in this experiment. (1mk)
....

c) State **one** importance of the type of response shown in the experiment above. (1mk)
....

5

5. The diagram below represents a section through the mammalian ear. Study it and answer the questions that follow.
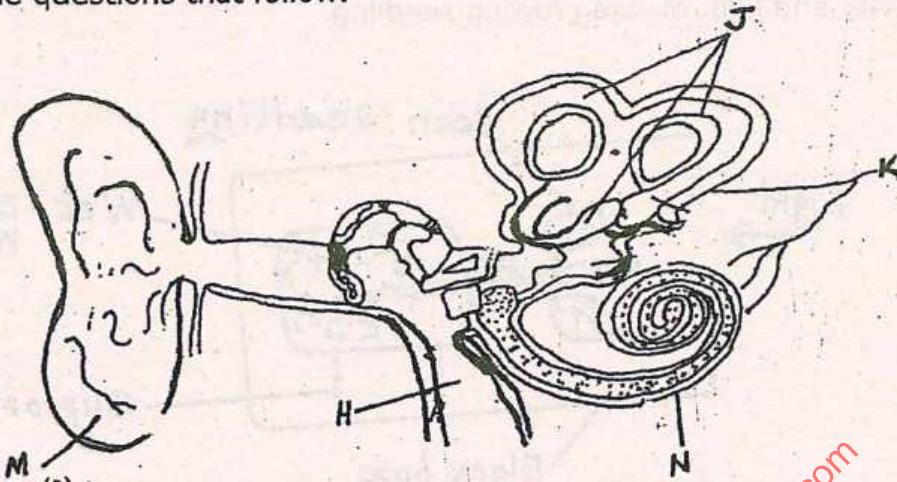
(a) Name the structures labeled H and J   (2mks)

H ....   J ....

(b) State how the structures labeled H, M and N are adapted to their functions

                                                                       (3mks)

H ....

M ....

N ....

(c) State what would happen if the structure labeled H was completely damaged
                                                                       (1mk)

....

(d) Name the fluid contained in structure N   (1mk)

....

(e) Apart from hearing, state the other role performed by the human ear   (1mk)

....

Answer question 6 (compulsory) and either question 7 or 8 in the spaces provided after question 8.

6. (Compulsory). In an experiment, a group of female locust was provided with excess amounts of food from the day they moulted to adult stage up to the 20th day of adulthood. The average weight of dry faeces for each animal was estimated every 2 days. The average fresh weight of each locust was also calculated every second day. It was noted that they all laid eggs between day 12 and day 14 and again between day18 and day 20 of adult life. The data on average dry weight of faeces and weight every two days was presented in the table below.

Days of Adult life	2	4	6	8	10	12	14	16	18	20
Average dry weight of faeces in mg.	240	420	610	740	850	630	540	830	750	620
Average fresh weight of Locust in mg.	530	750	840	970	1020	1160	860	980	1120	820

(a) Using a suitable scale and appropriate axis, draw a graph of the average fresh weight against time. (5mks)
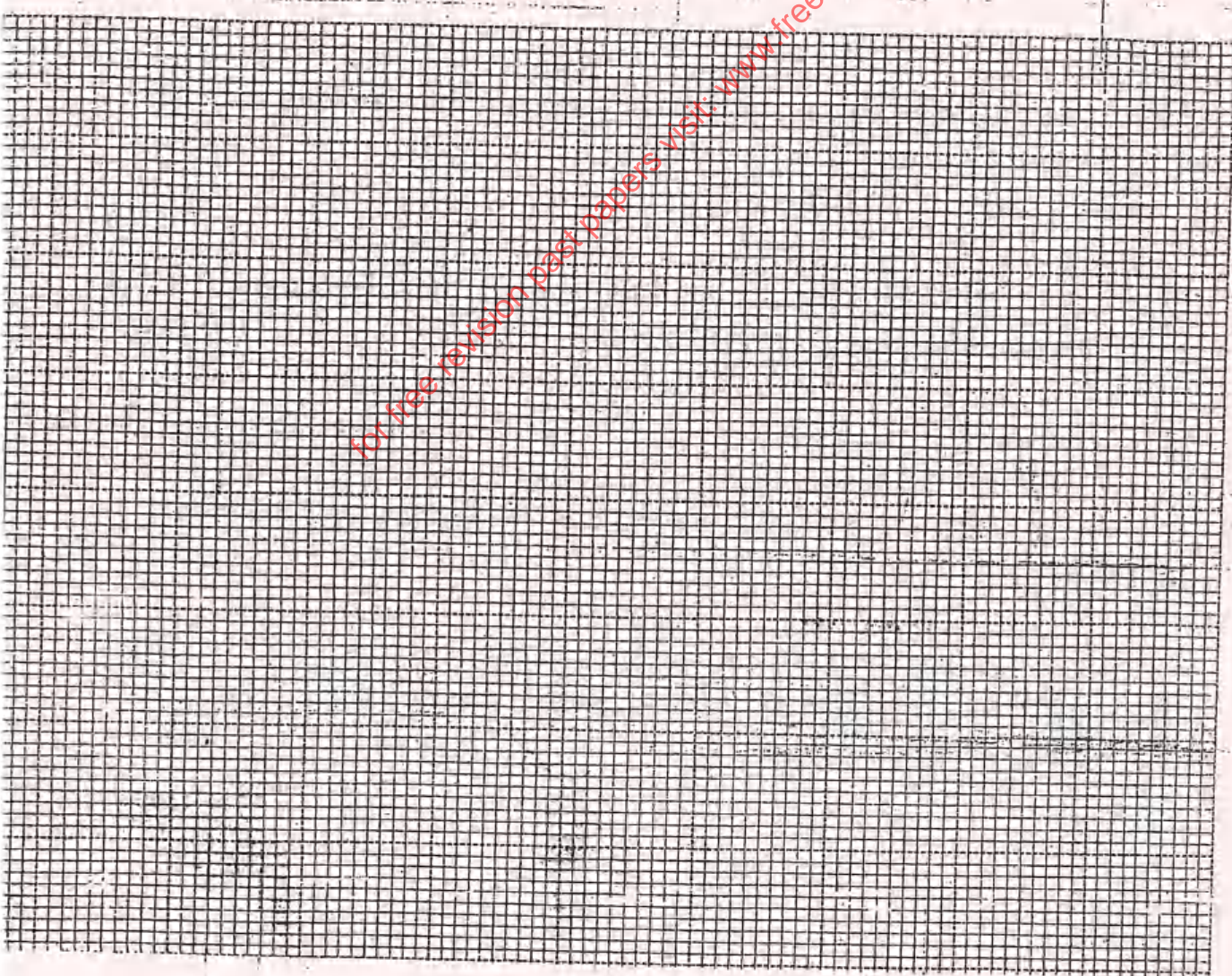
(b)　On the same grid paper, plot histograms to show the average dry weight of faeces produced by each locust every 2 days.　(5mks)

(c)　What is the relationship between food consumption and body weight? Explain this relationship.　(1 mk)

....

(d)　What is the relationship between egg production and food consumption? Account for this relationship.　(1mk)

....

(e)　What is the relationship between body weight and food consumption?

(1mk)

....

(f)　State two likely consequences that may happen if the amount of food was reduced to one half of that required by each locust throughout the study period.　(2 mks)

....

....

(g)　State two nutrients that must have been present in the locust diet giving a reason for each.　(2 mks)

....

....

(h)　If the population of locusts was established by Capture- recapture method, list the steps involved in this method　(3 mks)

....

....

Explain the mechanism by which a human body maintains a constant body temperature.　(20mks)

3.　(a)　Describe secondary thickening in flowering plants.　(13mks)

(b)　Describe one method which can be used to measure the average growth of a root seedling.　(7mks)

8

MANGU HIGH SCHOOL
BIOLOGY DEPARTMENT

Name... Class.....................

Index No................. Date ....

Candidates Signature.................

231/3
BIOLOGY
(PRACTICALS)
Paper 3
2017 mocks
$1^3/_4$ Hours

INSTRUCTIONS TO CANDIDATES

- Write your name, class and Index Number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer **ALL** questions in the spaces provided in the question paper.
- You are **NOT** allowed to start working with the apparatus for the first 15 minutes of $1^3/_4$ the hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.
- All workings **MUST** be clearly shown where necessary.

For Examiners use only.

Section	Question	Maximum Score	Candidates Score
	1	11	
	2	15	
	3	14	
	TOTAL SCORE	40	

This paper consists of 8 Printed pages. Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing

Answer ALL the questions in the spaces provided.

Q1. Provided is specimen R. Cut it into two halves. Cut one half into small pieces and crush using a mortar and pestle. Add some water and decant. Divide the resultant solution into two and put each in a test tube.

a) To the first half, add Benedict's solution and heat to boil. Record your observation and deduction.

(2mks)

Observations

....

Deductions

....

b) To the second half add equal amounts of HCL and heat until it boils. Cool the solution. Add Sodium Hydrogen carbonate drop wise until bubbling stops. Add Benedict's solution and heat until it boils. Record your observations and deductions.

(2mks)

Observations

....

Deductions

....

c) State the role of the following in the experiment you have performed in (b) above.   (2mks)
Hcl

....

Sodium Hydrogen Carbonate

....

d) i) Identify the process which occurred in (b) above occurs.

(1mk)

....

ii) State briefly how the process you have named in d (i) above occurs.

(1mk)

....

e) State any three roles of roughages in animals' diet.

(3mks)

Q2 Study the photographs below labeled G1,G2,G3,G4,G5 and G6 and answer the questions that follow

G1   G2

G3   G4

G5   G6

Dichotomous key.

1.	a) Leaves are narrow	go to 2
	b) Leaves broad	go to 3
2.	a) Leaves arranged in cluster on stem	pinaceae
	b) Leaves not arranged in cluster on stem	Araucariaceae
3.	a) Leaves simple	go to 4
	b) Leaves compound	go to 7
4.	a) Leaves green	go to 5
	b) Leaves purple	go to 6
5.	a) Leaves parallel veined	Graminae
	b) Leaves net veined	go to 10
6.	a) Leaves parallel veined	Commelinaceae
	b) Leaves not veined	Euphorbiaceae
7.	a) Branch with thorns	go to 8
	b) Branch without thorns	go to 9
8.	a) Leaflets attached to main stalk	Rosaceae
	b) Leaflets attached to many stalks that join the main one	Mimosaceae
9.	a) Leaflets attached to main stalk	Compositae
	b) Leaflets attached to many stalks joining the main one	Bignonaceae
10.	a) Leaflets lobed	Nymphaceae
	b) Leaf not lobed	Brassicaceae

a) i) Write down in the correct order, the steps in the key that you may follow for the correct identification, in the table below. (8mks)

Specimen	Steps followed	Identify
G1		
G2		
G3		
G4		
G5		
G6		

b) Examine specimen **G3**

   i) State two observations features that adapt specimen **G3** for survival in its habitat. (2mks)

   ii) Identify the habitat of the specimen. (1mk)

c) i) What would be observed if the stem of **G2** is strongly squeezed between two fingers? (1mk)

   ii) From your observations, write down how the specimen is adapted to its environment. (3mks)

Q2. Study the following illustrations of various mammalian teeth and answer the questions that follow.
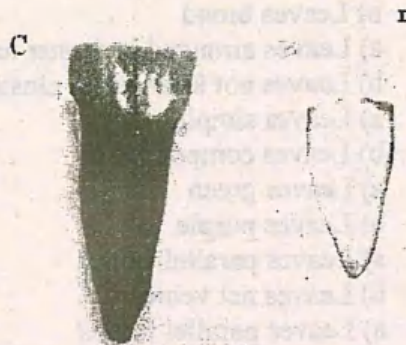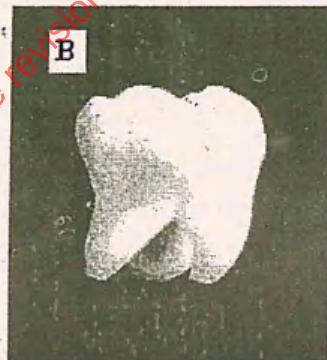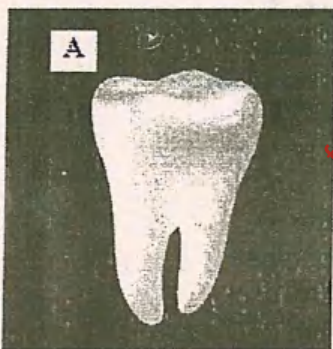
ı) Identify the teeth   (4mks)

A...............................

B...............................

C...............................

D...............................

MANGU HIGH SCHOOL

233/1
CHEMISTRY
PAPER 1
JULY 2017
TIME: 2 HOURS

NAME: _____

ADM NO: _____ INDEX NO. _____ CLASS:_____

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
Chemistry
Paper 1
2 Hours.

Instructions to candidates

(i)   Write your Name, Class, Adm. No. and Index No. in the spaces provided.
(ii)   Answer **ALL** questions in the spaces provided.
(iii)   All working **MUST** be clearly shown where necessary.

For examiner's use only

Question	Maximum Score	Candidates Score
1 - 27		

This paper consists of **13 printed pages**. Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing.

Turn over

1. Atoms of element x exist as $^{14}_6X$ and $^{12}_6X$ (1mk)

   a) What name is given to the two types of atoms (1mk)

   b) Use dot (.) and cross (x) diagram to illustrate the compound formed when element x burns in limited (1mk)

   c) Given that the relative abundance of is 98.47%. Calculate the RAM of element X (2mks)

2. a) Name three processes involved in obtaining each of the following substances from their mixture of sand , sugar , dry ice. (1mk)

   b) Name the method or process that can be used to separate each of the following substances
   (a) A mixture of diesel and petrol (1mk)

   (b) Iron III chloride and sugar (1mk)

   (c) Food colouring in a sauce (1mk)

3. Below is a table giving solubility a substance A and B at 20^0C and 50^0C

Substance	Solubility	100g of water
	20^0C	40^0C
A	40	65
B	15	17

When aqueous mixture containing 55g of A and 12g of B at 80^0C was cooled to 20^0C crystals were formed
   a) Identify the crystal formed (1mk)

   b) Determine the mass of the crystals formed (1mk)

   c) Name the method used to obtain the crystals (1mk)

4. Study the reactions equation below

   $H_{2(g)} + Br_{2(g)} \rightleftharpoons 2HBr_{(g)}$ $\Delta H = -74.4kj$

   a) Draw an energy level diagram showing the crystals and uncatalyst reactions (2mks)

   b) State the effect on formation of hydrogen bromide if pressure was increases in the equilibrium mixture above. Explain (1mk)

5. An organic compound has a formula of C4H10O
   a) Write the structural formula of the organic compound (1mk)

   b) To which homologous series does the compound belong? (1mk)

   c) Name the compound formed when this compound is reacted with propanoic acid (1mk)

6. Xcm3 of 0.25m sodium chloride was added to lead (II) nitrate until excess. 3.86g of a white precipitate were formed. (Na = 23, Pb = 2017, Cl =35.5, N=14, O=16)

   i) Write an ionic equation for the formation of white precipitate (1mk)

   ii) Work out the value of x (2mks)

7. The flow chart below shows part of the process of preparing and collecting carbon (II) oxide

| Carbon (IV) oxide + Carbon (II) oxide | → | Absorption bottle | → | Carbon (II) oxide |
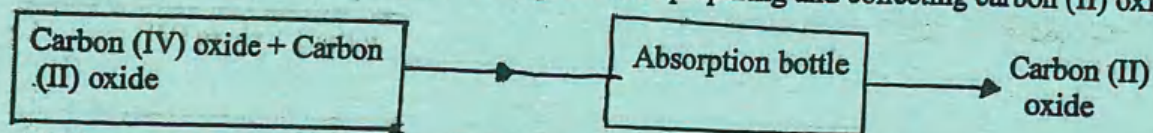
a) Name two reagents that are reacted to produce both carbon (IV) oxide and carbon (II) Oxide   (1mk)

b) Name the chemical substance in the absorption bottle   (1mk)

c) Write an equation for the reaction that takes place in the absorption chamber   (1mk)

8. Ammonia reacts with oxygen as shown by the thermal chemical equation below
$$4NH_3(aq) + 5O_2(g) \longrightarrow 4NO_{(g)} + 6H_2O_{(g)} \quad \Delta H = -1208kj$$
a) Work out
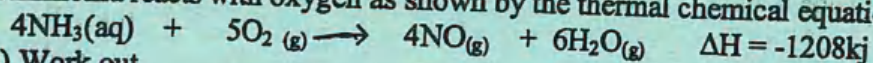
i) Energy evolved when one mole of ammonia reacts with oxygen   (1mk)

ii) Enthalpy change when $2.4cm^3$ of ammonia reacts as shown in the equation at r.t.p.   (1mk)

b) Name the catalyst used in this reaction   (1mk)

9. Study the cell representation below
$$Cr_{(s)} / Cr^{3+}_{(aq)} // Fe^{2+}_{(aq)} / Fe_{(s)} \qquad E.M.F. = 0.30V$$
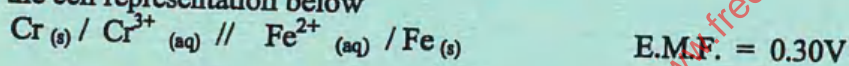
a) Write an overall cell reaction for the cell above   (1mk)

b) The E^θ value of is 0.44volts, calculate the E^θ value of $Cr^{3+}_{(aq)} / Cr_{(s)}$ (2mks)

10. a) Name two ores of copper metals   (1mk)

b) During extraction of copper metals the ore is subjected to form floriation. Give a reason   (1mk)

c) Name one alloy of copper and state its use.   (1mk)

11. Study the flow chart below and answer the questions that follow
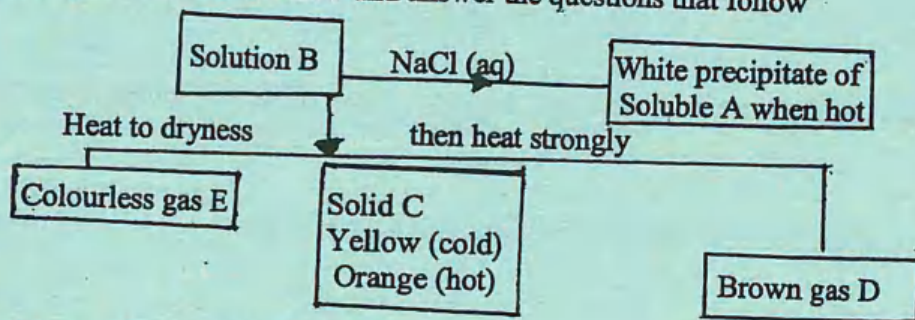
a) Write a chemical reaction between
   (i) Solid C and nitric (IV) acid   (2mks)

   (ii) Brown gas D and water

(b)   Identify white precipitate A   (1mk)

12. Hydrazine (NH_2NH_2) burns in oxygen to form nitrogen and steam.

    (a)   Write an equation for the reaction   (1mk)

    (b)   Using the bond energies given below. Calculate the enthalpy change for the
           reaction (a) above   (2mks)

           Bond   Bond Energy kj/mol
           $N\equiv N$ 944
           N-N   163
           N-H   388
           O=O   496
           H-O   463

13. In an experiment carbon (II) oxide gas was passed over heated copper (II) oxide
     as shown below

Copper (II) oxide

Carbon (II) oxide →

jet

Heat
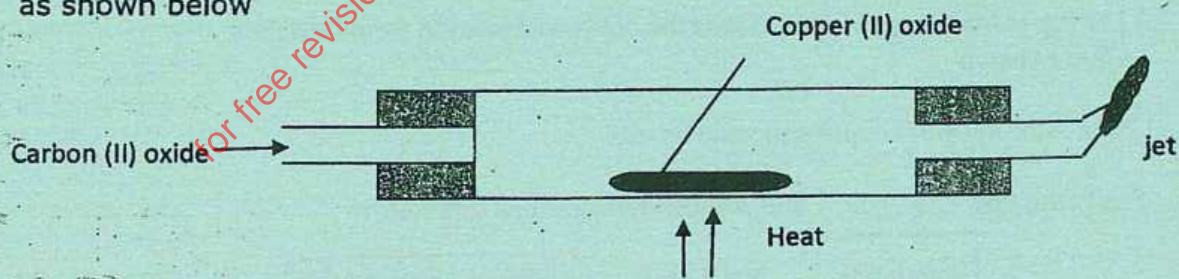
    (a)   State the observation made in the combustion tube after the experiment (1mk)

    (b)   Write the equation for the reaction taking place at the jet   (1mk)

14. The table below gives the first ionization energy of four elements

Element	I	II	III	IV
Ionization Energy kj/mol	44	418	51	376

(a) Arrange these element with increase in reactivity (1mk)

(b) Identify the strongest oxidizing agent (1mk)

(c) Assuming that these elements are metals identify the most reactive metal. (1mk)

15. Form one students set up the following apparatus to separate a mixture of iodine and common salt. Study it and answer the questions that follow
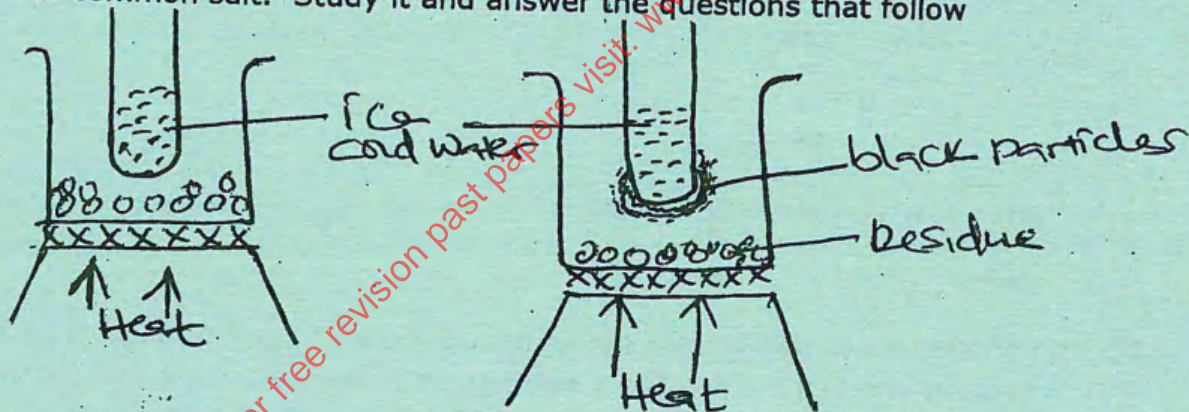
(a) Identify (2mks)
   (i) The black solid particles

   (ii) The residue

(b) State the function of the ice cold water in the test tube (1mk)

16. When potassium nitrate is heated it produces potassium nitrate and gas W.

   (i) Identify gas W (1mk)

   (ii) Name the type of reaction undergone by potassium nitrate (1mk)

   (iii) Give a test for gas W (1mk)

17. Name the following molecules

   (a)   (1mk)

   CH_3
   |
   CH_2
   | CH_3
   | |
   CH —— CH
   | |
   CH_3 CH_3

                          Br
                          |
   (b) CH_2 —— CH —— CH —— CH_3 (1mk)
                          |
                          Br
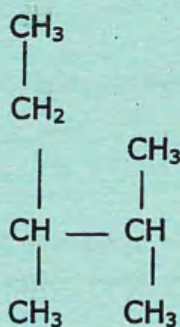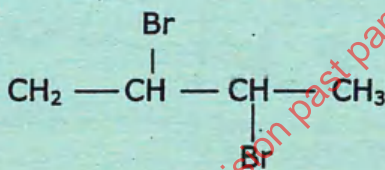
18. Portions of solution X were separately mixed with $2cm^3$ of sodium hydroxide solution and $2cm^3$ of ammonia solution. A white precipitate was formed in each case. When similar portions of solution X were missed with $20cm^3$ of each of the tests solutions there was no observable change in either case.

   (a) Identify the cation present in solution X (1mk)

   (b) Write an equation for the reaction between white precipitate and ammonia solution (1mk)

19. On complete combustion, 0.09moles of hydro-carbon T produced 19.8g of carbon(IV) oxide and 9.72g of water. (C=12, H=1, O=16).

   Determine the empirical formula of the compound T   (3mks)

20. In the space below, draw a diagram indication how an iron is coated using silver   (3mks)

21. Starting with calcium oxide, describe how a solid sample of calcium carbonate can be prepared   (3mks)

22. (a) In terms of structure and bonding, explain why waste (H_2O) is a liquid at room temperature while hydrogen sulphide is a gas at room temperature   (2mks)

   (b) Draw the structure of aluminium chloride using dots (.) and crosses (x)   (2mks)

-7-

23. A solution of chlorine in tetrachloro – methane turns colourless when propane gas is bubbled through it.
   a) Name the type of reaction that takes place (1mk)

   b) Write an equation for the above reaction. (1mk)

24. Sulphur (IV) oxide and nitrogen (IV) oxide reacts as shown in the equation below.
   $$SO_{2(g)} + NO_{2(g)} \rightarrow SO_{3(g)} + NO_{(g)}$$
   i) Using oxidation numbers of either sulphur or nitrogen show that this is a redox reaction (1mk)
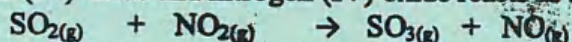
   ii) Identify the reducing agent (1mk)

25. A dry gas X was passed over heated copper (II) oxide. A brown residue, a colourless liquid Y and a colorless gas Z were formed . Gas Z has no effect on litmus papers and does not support combustion
   a) Suggest identifies of X, Y and Z (3mks)
   X_____   Z_____
   Y_____
   b) Write an equation for the above reaction (1mk)

26. The table below shows results obtained from experiment carried out a salt solution M.

Experiment	Results
i) A few drops of barium nitrate added to solution M	No precipitate
ii) A few drops of lead (II) nitrate added to solution M	White precipitate present
iii) Ammonia solution added dropwise until in excess	White precipitate which dissolve to form colourless solution

   a) Identify the cation and anion present in solution M
      i) Cation (1mk)
      ii) Anion (1mk)
   b) Write an ionic equation for the formation of a white precipitate in experiment II (1mk)

   c) Write the formula of the ion responsible for the formation of colourless solution in the experiment III (1mk)

28. The curve below represents the change when equal masses of powdered marble chips and marble chips (CaCO₃) were reacted with excess 2MHCL. Study them and answer the questions below.
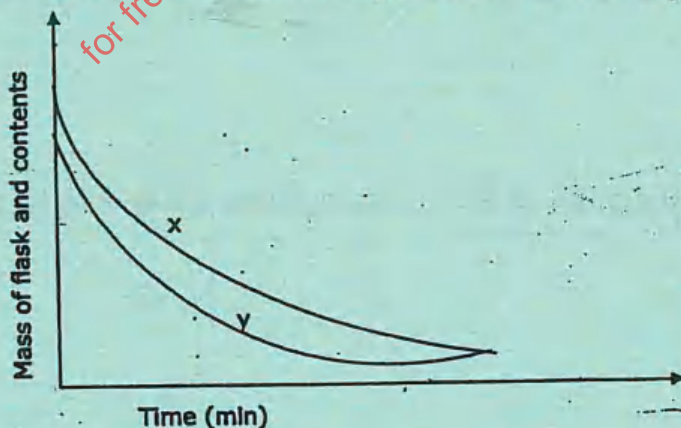
Which curve represents the reaction with marble chips. Explain your answer (3mks)

MANGU HIGH SCHOOL

233/2
CHEMISTRY
PAPER 2
JULY 2017
TIME: 2 HOURS

NAME: _____

ADM NO: _____   INDEX NO. _____   CLASS: _____

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
Chemistry
Paper 2
2 Hours.

Instructions to candidates

(i)   Write your Name, Class, Adm. No. and Index No. in the spaces provided.
(ii) Answer **ALL** questions in the spaces provided.
(iii) All working **MUST** be clearly shown where necessary.

For examiner's use only

Question	Maximum Score	Candidates Score
1 -9		

This paper consists of **13 printed pages**. Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing.

Turn over

1. Study the extract of the periodic table below and use it to answer the questions that follow (the letters do not represent the actual symbols of the elements.

a) Compare the 1st and 2nd ionization energies of element Q   (2mks)

b) Choose the most un reactive element   (1mk)

c) The oxide of M has a lower boiling point than the oxide of R. Explain this observation   (2mks)

d) Describe how a mixture of the carbonate of S and the carbonate of V can be separated.   (2mks)

e) Describe how a pure and dry sample of lead (II) sulphate can be prepared in the lab given the following solid lead carbonate, water, solid potassium sulphate, dilute nitric (v) acid and other lab apparatus   (3mks)

2. a) Study the experimental set up of apparatus shown below.

i) State and explain the observations made in the combustion tube as the experiment progressed (2mks)

ii) Using an equation explain the change that occurred in the boiling tube after a long time   (2mks)

iii) Why was the gas burned in the flame   (1mk)

b) A student set up the apparatus to prepare and collect a sample of ammonia gas as shown in the diagram. Study the set up and answer the questions that follow.

Identify two mistakes in the set up represented by the diagram

3. The reaction between 0.65g of Zinc granules and excess 0.5M hydrochloric acid was followed by measuring the amount of gas produced. The following results were obtained.

Time (sec	0	30	60	90	120	150	180	210	240
Total vol. of gas at r.t.p (cm³)	0	80	140	190	220	230	240	240	240

a) Plot the graph of volume of a gas produced against time   (3mks)

b) i) Write an equation for the reaction taking place   (1mk)

   ii) How would the gas produced be identified?   (1mk)

   iii) Why is an excess of acid used?   (1mk)
c) From the graph
   i) What is the volume of the gas evolved at 75seconds   (1mk)
   ii) Account for the shape of the curve   (2mks)
d) On the same graph, sketch the curves that you expect if the experiment was repeated under the same conditions but using 0.4M hydrochloric acid instead of 0.5M hydrochloric acid. Label the curve X.
   e)Calculate the rate of reaction at the 100ᵗʰ Sec   (3mks)

f) Calculate the volume of that would be produced at r.t.p. from 13g of Zinc.
   (Zn=65.0, molar gas volume at r.t.p. = 24dm³)   (3mks)
4. The table below gives the standard reducing potentials of some element represented by letters U,V,W,X, and Z (they are not the actual symbols)

Element	Standard Electrode Potentials (volts)
U	-2.36
V	+0.34
W	+0.79
X	0.00
Z	0.76

a) i) Identify the strongest reducing agent. Give a reason for your answer   (1mk)

   ii) Which two half cells would produce the highest e.m.f. Determine the e.m.f. that would be produced.
                                                                              (2mks)
   iii) What would element X represent ?   (1mk)
b) Element C and Z were connected to form an electrochemical cell. Draw a set up of the expected electrochemical cell formed.   (3mks)

i) Write the equation for the reaction that occurs at metal Z electrode   (1mk)
   I. Metal Z electrode

   II. Metal V electrode

(ii)   Write the cell representation for the above electro chemical cell (1mk)

(iii)   Determine the e.m.f. of the above cell   (1mk)

(iv)   Write the overall cell reaction indicating the emf   (1mk)

5.   In an experiment hydrogen chloride gas was prepared and reacted with aluminum turnings to form solid Q and gas R as shown below

anhydrous calcium chloride
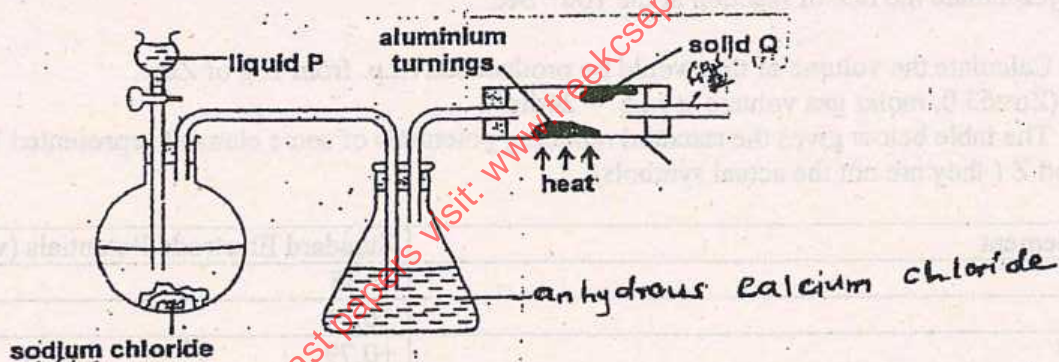
(a) (i)   Identify

I.   Liquid P _____   III. Gas R _____

II. Solid Q _____

(ii) Name another substance that could serve the same purpose as th. anhydrous calcium chloride   (1mk)

iii) Complete the diagram to show how dry sample of gas R can be collected (2mks)

iv) Explain why solid Q was collected further away from the heated aluminium (1mk)

b) Calculate the mass of the product that would be formed when 200cm3 of hydrogen chloride gas reacts completely with excess ammonia gas. (H=1, n=14, Cl=35.5 molar gas volume = 24 litre at r.t.p)

6. a) i) When potassium chromate (vi) is dissolved in water, a dynamic equilibrium is established which can be represented as follows

$$2CrO_4^{2-}{}_{(aq)} + 2H^+{}_{(aq)} \rightleftharpoons Cr_2O_7^{2-} + H_2O_{(l)}$$
(Yellow)   (Orange)
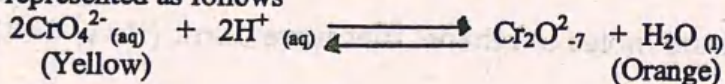
State and explain the effect of addition of a few drops of dilute sodium hydroxide on the system above. (2mks)

ii) The thermodynamic equation for the formation of ammonia in the harber process is as follows.

$$N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)} \qquad \Delta H = -92Kjmol^{-1}$$
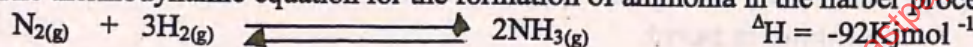
If the system is allowed to attain equilibrium, explain who increase in temperature would affect the yield of ammonia. (2mks)

b) i) State Gay Lussac's law (1mk)

ii) 90cm³ of a mixture of butane and nitrogen and nitrogen gas was burnt in excess oxygen gas. The resultant mixture was then bulbed into sodium hydroxide solution and reduced by 120cm³. Assuming that all volumes were measured at room temperature and pressure, calculate the volume of both nitrogen and butane in original mixture.

c) 150cm3 of sulphur (iv) oxide gas takes 75seconds to diffuse through a small hole. If 100cm3 of gas Z takes 25seconds to diffuse through the same hole. Calculate the relative formula mass gas Z. (O=16, S=32) (2mks)

7. 2.5g of ethanol was used to warm 500cm³ of water. The temperature of water was raised by 19k.

(a) (i) Calculate the enthalpy change for this reaction (take the density of water to be 1gcm³ and specific heat capacity of water to be $4.2kJgk^{-1}$) (2mks)

(ii) Calculate the moles of ethanol that were burnt (H=1, C=12, O=16) (1mk)

(iii) Calculate the quantity of heat that would be given out if 1 mole of ethanol is burnt (1mk)

(iv) How would the molar enthalpy of combustion obtained in this experiment compare with the theoretical value. Give reasons for your answer (2mks)

(b) Study the data given below and answer the questions that follow

$$CaO + CO_{2\,(g)} \longrightarrow CaCO_{3(s)}$$
$$C_{(s)} + O_{2(g)} \longrightarrow CO_{2(s)} \quad \Delta H = -394kJmol^{-1}$$
$$Ca_{(s)} + C_{(s)} + 1½ O_{2(g)} \longrightarrow CaCO_{3(s)} \quad \Delta H = -1207kJmol^{-1}$$
$$Ca_{(s)} + O_{2(g)} \longrightarrow CaO_{(s)} \quad \Delta H = -635kJmol^{-1}$$
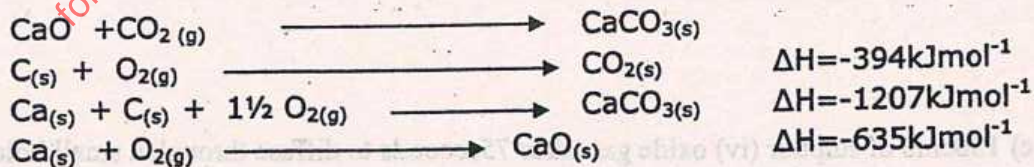
(i) Draw an energy level diagram linking all the four equations (2mks)

-6-

(ii)   Determine the enthalpy change for the reaction   (2mks)

8.   Study the flow chart below and answer the questions that follow
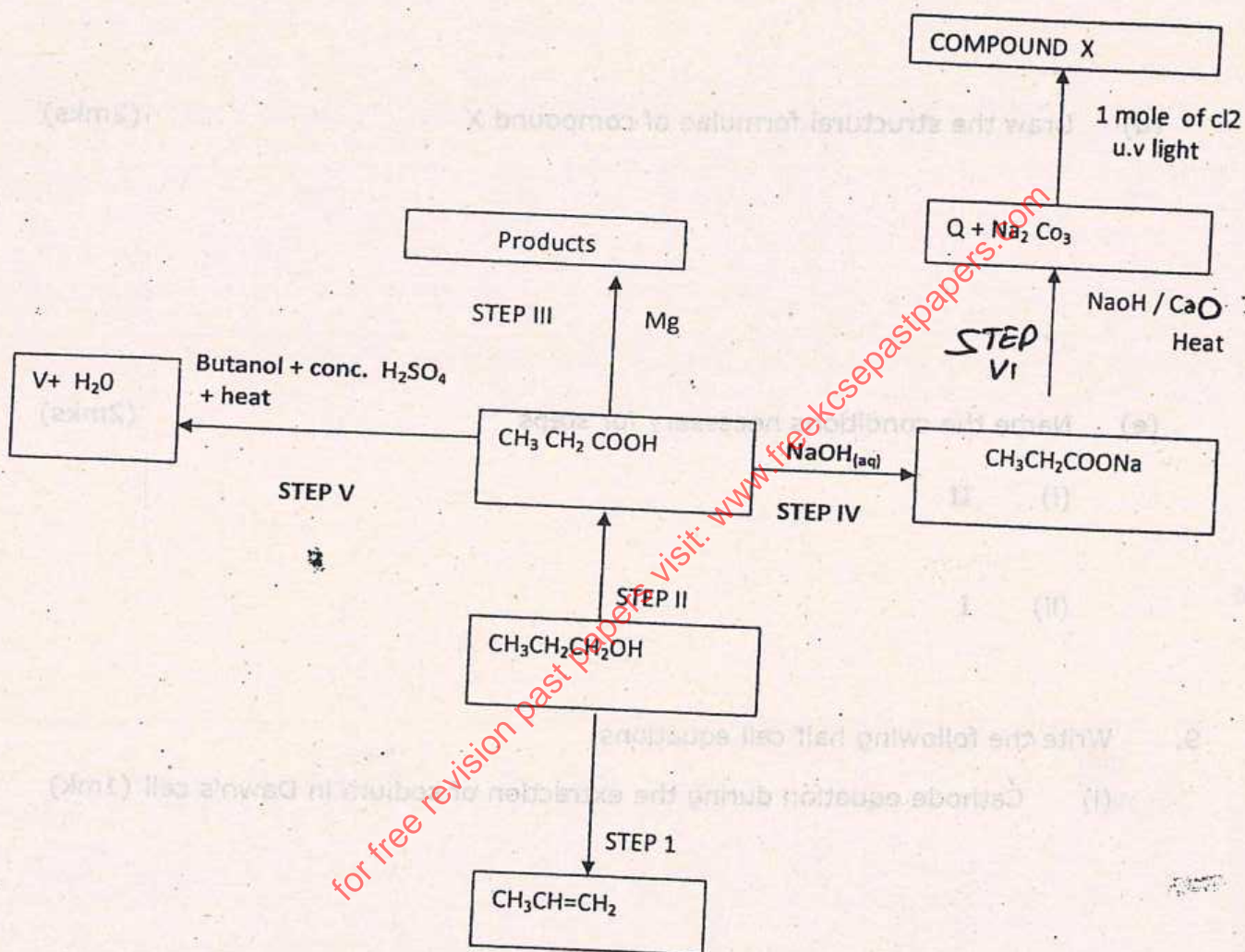
(a)   Name V and write its formulae   (2mks)
       V _____

       Formulae   -

(c) Write a balanced chemical equation of the reaction that took place (2mks)

   (i)   III

   (ii)   VI

(d) Draw the structural formulae of compound X   (2mks)

(e) Name the conditions necessary for steps   (2mks)

   (i)   II

   (ii)   I

9.   Write the following half cell equations

   (i)   Cathode equation during the extraction of sodium in Dawn's cell (1mk)

   (ii) Anode equation during the extraction of aluminium in half's cell (1mk)

MANGU HIGH SCHOOL

233/3
CHEMISTRY
PAPER 3
PRACTICAL
JULY
TIME: 2¼ HOURS

NAME: _____

ADM NO: _____ CLASS: _____

Kenya Certificate of Secondary Education
Mock Examinations
Chemistry
Paper 3
Practical
2 ¼ Hours.

- Write your name and Adm No. in the spaces provided above.
- Answer **ALL** the questions in the spaces provided in the question paper.
- You are **NOT** allowed to start working with the apparatus for the first 15 minutes of th
  2¼ hours allowed for this paper. This time is to enable you to read the question pape
  and make sure you have all the chemicals and apparatus that you may need.
- All working **MUST** be clearly shown where necessary.
- Mathematical tables and electronic calculators may be used.

For Examiner's Use Only

Question	Max. Score	Score
1		
2		
3		
Total Score		

This paper consists of **6 printed pages**.
Make sure that all the pages are printed and that no page is missing.

© **Mangu Mock Examinations Board**

Turn O

1. You are provided with:
   - Solution D_1 , a saturated solution of ethanedioic acid
   - Solution D_2, aqueous $KMnO_4$
   - Solution D_3, 0.01M ammonium iron (II) sulphate
   - $1M H_2SO_4$

   You are required to standardize D_2 and D_3
   Determine the solubility of D_1 at room temperature.

Procedure 1

Fill the burette with solution D_2, Pipette $25cm^3$ of D_3 into a conical flask. Add $2.0cm$ 1M sulphuric acid using a measuring cylinder. Titrate solution D3 with solution D2 un permanent pale pink color just appears . Repeat the procedure and complete the table A below. (4mks)

Table A

	I	II	II
Final Burette readings (cm^3)			
Initial burette readings (cm^3)			
Volume of D_2 used (cm^3)			

   a) Calculate the average volume of D_2 used (1mk)
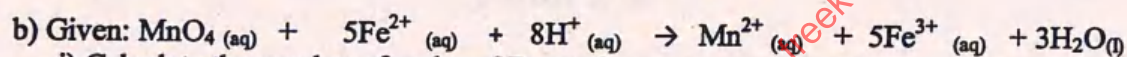
   b) Given: $MnO_4 (aq) + 5Fe^{2+} (aq) + 8H^+ (aq) \rightarrow Mn^{2+} (aq) + 5Fe^{3+} (aq) + 3H_2O (l)$
      i) Calculate the number of moles of D_3 used. (1mk)

      ii) Calculate the number of moles of D_2 used (1mk)

      iii) Calculate the number of moles of D2 per litre (1mk)

Procedure II

Measure $25cm^3$ of solution D_1. Pour it into a conical flask and dilute it by adding $75cm^2$ of distilled water. Label this solution D_4. Fill the burette with D_2. Pipette D_4 into conical flask add $2.0cm^3$ of 1M H_2SO_4 using a measuring cylinder. Heat the solution to about 70^0C and titrate while hot with D_2 until permanent pink colour just appears . Record your results in the table B below. Repeat the procedure twice to complete the table. (4mks)

	I	II	II
Final Burette readings (cm^3)			
Initial burette readings (cm^3)			
Volume of D_2 used (cm^3)			

   c) i) Calculate the average volume of D_2 used (1mk)

The reaction between manganate (VII) ions and ethandioate ions is

$$2MnO_4^-{}_{(g)} + 5C_2O_4^{2-}{}_{(aq)} + 16H^+{}_{(aq)} + 2Mn^{2+}{}_{(aq)} + 10CO_2{}_{(g)} + 8H_2O_{(l)}$$
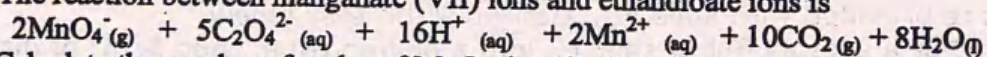
ii) Calculate the number of moles of MnO_4^- ions in the average volume of D_2 used. (1mk)

iii) Calculate the number of moles of ethanedioate ions in $25cm^3$ of solution D_4 (1mk)

iv) Calculate the number moles of ethanedioate ions in $100cm^3$ of solution D_4 (1mk)

v) How many moles of ethanedioate ions were in $25cm^3$ of solution D_1 used (1mk)

vi) Given the molecular formula of ethanedioate is $H_2C_2O_4$, Calculate its solubility in grams per $100cm^3$ of water at room temperature. (H = 1 , C =12 , O=16) (2mks)

2. You are required to find out the effect of concentration of solution D2 on the rate of reaction

Procedure

Using a burette, place $5cm^3$ of solution D_2 into a boiling tube. To this solution add $5.0cm^3$ of solution D_1 using a measuring cylinder and immeadtly start a stop watch. Shake the mixture and place the boiling tube on a test tube rack. Note and record the time taken for the purple colour of the mixture to disappear . Repeat the procedure using the volumes of solution D_2 and solution D1 and distilled water as indicated in table III below. (6mks)

Table III

Concentration of D2 in mole per litre	Volume of solution D2 (cm3)	Volume of water (cm3)	Volume of solution D1	Time for colour change (sec)
	5.0	0.0	5.0	
	4.0	1.0	5.0	
	3.0	2.0	5.0	
	2.0	3.0	5.0	
	1.0	4.0	5.0	

a) Use the results to plot a graph of concentration in mole per litre of D2 used against time taken for the colour change (4mks)

b) From the graph determine the time taken for the colour to change using $2.5cm^3$ of solution D_2 and $2.5cm^3$ of solution D_1 (3mks)

c) Comment on the relationship between rate of reaction and concentration of solution D2 (1mk)

3.   You are provided with solid M_2. Carry out the test below.
(a)   Put a spatula full of solid M_2 into a boiling tube. Add 5cm³ of distilled
     water. Shake and divide the resulting mixture into 3 portions.

Observations	Inferences
(½mk)	(½mk)

(i)   To the first portion add dilute HCl followed by barium chloride solution

Observations	Inferences
(½mk)	(1½mks)

(ii)   To the 2ⁿᵈ portion, add two drops of dilute HCl followed by a few drops
      silver nitrate solution then add $NH_3(aq)$

Observations	Inferences
(1mk)	(1mk)

(iii)   To the 3ʳᵈ portion add dilute NaOH solution dropwise until excess

Observations	Inferences
(½mk)	(1½mks)

- 4 -

MANGU HIGH SCHOOL

NAME... .... ADM.NO..................

CLASS............................... KCPE MARKS..

PHYSICS PAPER ONE
232/1
FORM FOUR
JULY 2017
TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATES:

(i)   Write your **name** and **Index number** in the spaces provided above

(ii)   This paper consists of *two* sections A and B.

(iii)   Answer *all* questions in section A and B in the spaces provided.

(iv)   All working *must* be clearly shown in the spaces provided.

(v)   Electronic calculators may be used.

Kenya Certificate of Secondary Education
Physics Paper 1

SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
I	1 – 13	25	
II	14	9	
	15	10	
	16	12	
	17	11	
	18	13	
TOTAL		80	

This paper contains 11 printed pages. Ensure that you have all the pages, all of them printed.

SECTION A (25 marks)
Answer all the questions in the spaces provided.

1. Figure below shows an oil patch formed on water surface laced with lycopodium powder.

d= 4.2 cm
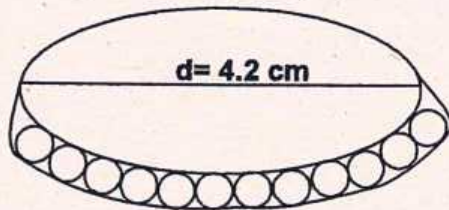
Given that the patch was from one drop of oil whose volume was 31.42mm³. Determine the size of one molecule of the oil. (2 mks)

2. A mercury thermometer can be modified to measure small changes in temperature. State one possible modification.   (1 mark)

3. Figure below shows a log of wood 2m long lying on a flat ground. Two forces F₁ and F₂ applied at the ends of the log will just lift the log while maintaining horizontal position.

F₂ = 80N

F₁ = 50N
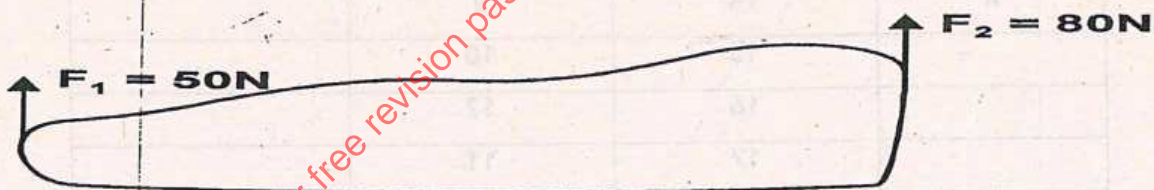
Determine :
a)   the weight of the log   (1 mark)

b)   the perpendicular distance from the centre of gravity of the log to force F₂ (2 marks)

4. When graphite particles are suspended in water and observed through a microscope, they are seen to move in a random motion. Explain. (2 mark)

5. Figure shows two inflated balloons hanging vertically on light threads.
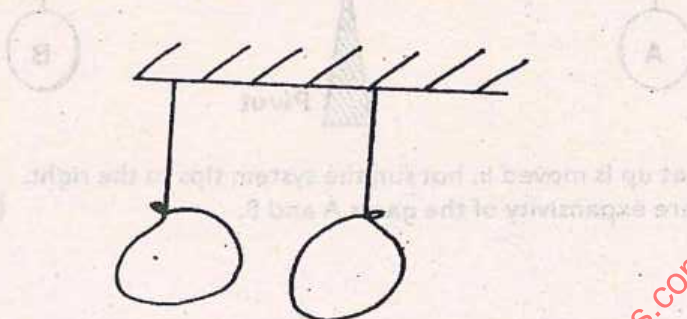
When a stream of air is blown in the space between the balloons, they are observed to move towards each other. Explain this observation. (2 mk)

6. A heavy load is suspended on a wire. Give any one factor that will determine extension in the wire.

(1 mark)

7. Explain why a hole in a ship near the surface is less dangerous than one near the bottom. (2 marks)

8. Figure below shows a velocity-time graph for a body.
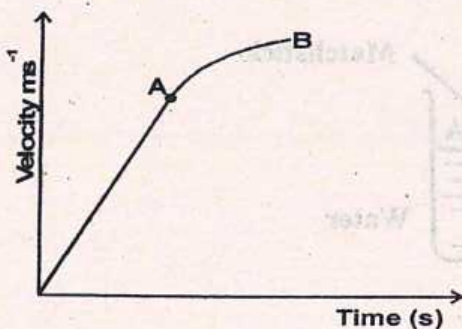
Describe the motion of the body between A and B   (1 mark

9. Figure below shows two balloons containing two different gases suspended of equal mass on a rod. The set up is in equilibrium.
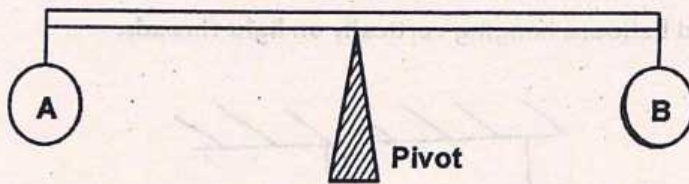
When the set up is moved in hot sun the system tips to the right.
a)   Compare expansivity of the gases A and B.   (1 mark)

b)   Explain your answer to (a) above.   (2 marks)

10. A man of mass 72kg jumps from a small boat on to the lake shore with a forward velocity of 9.0ms^{-1}. If the mass of the boat is 216kg, calculate the initial backward velocity of the boat.

        (3 marks)

11. Water is known to boil at 100°C. A student heated some water and noticed that it boiled at 101°C. State **one** possible reason for this observation.   (1 mks)

12. Figure shows a matchstick soaped on one end and placed on the surface of water as shown.
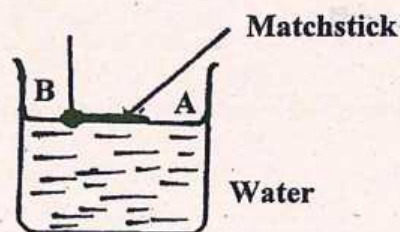
The match stick is observed to move towards a certain direction. State the direction (A or B) and explain your answer.

a. Direction   (1mk)

b. Explanation   (1mk)

13.   State two variables that must be controlled in an experiment for comparing the thermal conductivities of different metal rods of the same diameter.   (2 marks)

SECTION B (55 MARKS)

ANSWER ALL THE QUESTIONS IN THIS SECTION

14. (a) The figure below shows a centrifuge that is used to separate particles suspended in a liquid.
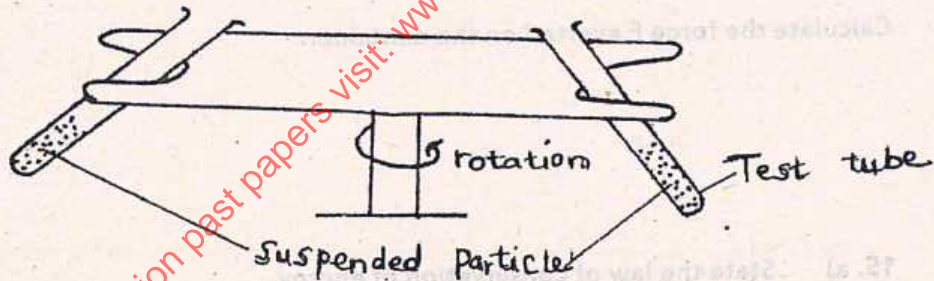
Fig.12

Particle of different mass M_1, M_2 and M_3 are suspended in a liquid which they do not dissolve. The system is then rotated in the direction shown.

(i)   Explain why the particles of different masses will acquire different radii as the system is rotated.   (2 marks)

(ii) If $M_3 > M_2 > M_1$, arrange the particle in increasing radii when the centrifuge is rotated for some time.   (1 mark)

(b) A car of mass 1200kg is negotiating a curve of radius 45m on a horizontal road. The force of friction between the tyres and the road is 6700N. Determine the maximum speed at which the car can be driven on the curve without going off the road. (3 marks)

© The figure shows a manometer used to measure the pressure difference between the air inside a plastic container and the atmosphere outside.

Platform area 0.1m²   Force F

Manometer

Meter rule

Water

h

90
80
70
60
50
40
30
20
10

Air

Flexible plastic container
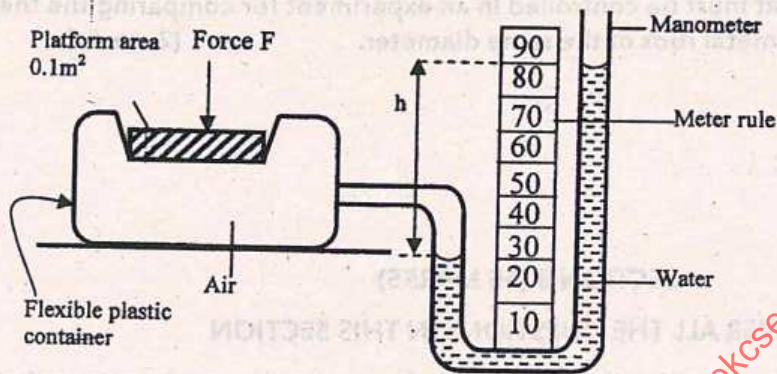
Calculate the force F exerted on the container.   (3 Marks)

15. a)   State the law of conservation of energy.   (1 mark)

b)   The diagram below shows a pulley system, a mass of 10kg is raised 2m by an effort of 80N.
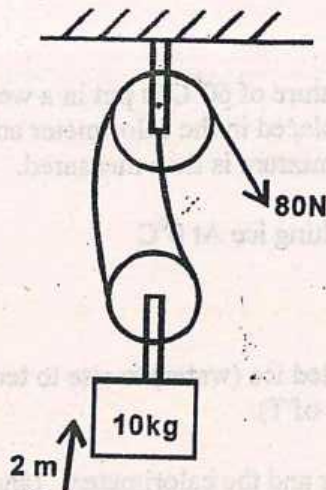
i) Calculate the distance moved by effort. (2mks)

ii) Calculate the amount of the potential energy that the load gain. (2mks)

iii) Find the work done by the effort (2mks)

iv) Calculate the efficiency of the system. (2mks)

vi) Explain why it easier to tighten or loosen a nut using a spanner with a long handle than one with a short handle. (1mk)

16. a) State the law of flotation (1mk)

b) A flat test tube containing lead shots in immersed in a fluid, where it floats as shown

i) explain the use of the lead shots. (1mk)

ii) The following readings were obtained for total mass M, of the test tube and lead shot and the depth, h of the test tube immersed as lead shot was added to the tube.

M/g	48	55	60	65	73	77	84
h/cm	8	9	10	11	12	13	14

b. Plot a graph of M against h (5mks)

iii) From the graph find the depth immersed when M is 90g (2mks)

iv) Use this result to find area of the base of the tube (3mks)
(density of liquid = 1.2g/cm³)

17. a) Define specific latent heat of fusion of a substance. (1mk)

b) Water of a mass 200g at a temperature of 60⁰C is put in a well lagged copper calorimeter of mass 80g. A piece of ice at 0⁰C and mass 20g is placed 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 the melting ice At 0⁰C   (2mks)

ii) The heat absorbed by the melted ice (water) to rise to temperature T.
(answer may be given in terms of T).   (2mks)

iii) The heat lost by the warm water and the calorimeter.   (answer may be given in terms of T.) (3mks)

iv) The final temperature of the mixture.   (3mks)
Specific latent heat of fusion of ice = 334000Jkg⁻¹
Specific heat capacity of water = 4200 Jkg⁻¹k⁻¹
Specific heat capacity of copper =900 Jkg⁻¹

18.a) State two factors that must be kept constant for a gas to obey Boyle's law.   (2mks)

b) An air bubble rises from the bottom of a pond 20m deep until it reaches the top of the pond. The graph below shows variation of pressure exerted on the bubble with volume of the bubble.
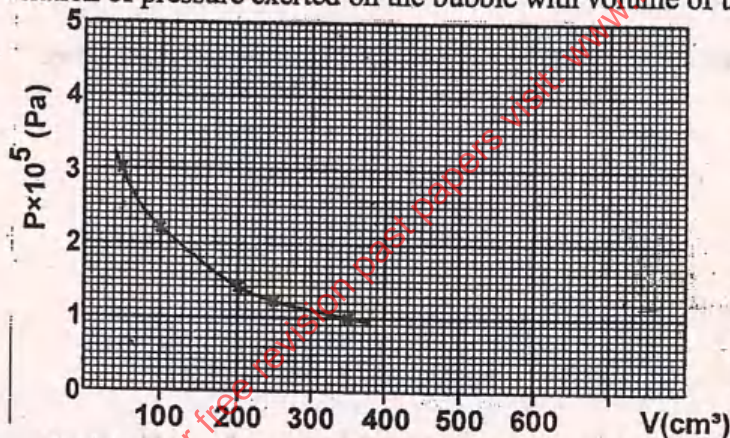
i) From the graph, determine the pressure exerted on the bubble and volume of bubble at
I. the bottom of the pond   (2mks)

II. the top of the pond   (2mks)

III. Explain the shape of the graph.   (1mk)

IV. Determine the atmospheric pressure at the place of the experiment.   (1mk)

V. Sketch in the space below the graph of pressure against reciprocal of pressure for the bubble. (2mks)

b) A balloon full of air is likely to burst if left outside on a very hot day. Give the reason in terms of kinetic theory of matter   (3mks)

MANGU HIGH SCHOOL

NAME: ....CLASS:................

ADM NO.........................INDEX NO.......................................

FORM 4
232/2
PHYSICS PAPER 2
JULY 2017

TIME: 2 HOURS

Instructions

- This paper consists of two sections **A** and **B**.
- Answer **ALL** the questions in the two sections in the spaces provided after each question
- All working **MUST** be clearly shown.
- Electronic calculators and mathematical tables may be used.
- Use only the constant(s) given where applicable.

This paper consists of **10** printed pages. Candidates should check to ascertain that all pages printed as indicated and that no question is missing.

EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-12	25	
B	13-18	55	
TOTAL		80	

ECTION A (25 MARKS)

1. The figure below shows an experimental set up consisting of a mounted lens L, a screen, a metre rul and a candle.

i) Describe how the set-up may be used to determine the focal length f of the lens. (3 mks)

ii) State why the set-up would not work if the lens were replaced with a diverging lens. (1mk)

2. The receiving part of a TV aerial should have a length equal to half the wavelength of the incoming waves. Determine the ideal aerial length for the reception of TV transmission of frequency 400MHz. (speed of radio waves= 3×10^8 m/s)   (3 mks)

3. An uncharged metal rod brought close to but not touching the cap of a charged electroscope causes a decrease in the divergence of the leaf. Explain.   (1mk)

4. Using the component symbols shown in the figure below, sketch a series circuit diagram for a forwa: biased diode. (1mk)

5. Explain how polarization reduces current in a simple cell. (1mk)
6. The figure below shows an electromagnet. State the polarity at X. (1mk)
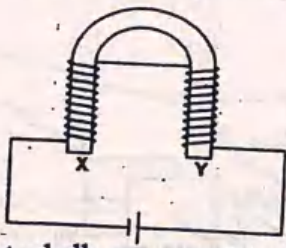
7. Give a reason why theatre halls are covered with soft perforated materials. (1mk)

8. A boy watching fireworks display sees the light from an explosion and hears the sound 2.5s later. Determine how far the explosion is. (speed of sound in air = 330m/s) (2mks)

9. The figure below shows an eye defect. Use a rays (on the same diagram) to show how the defect above could be corrected. (2mks)
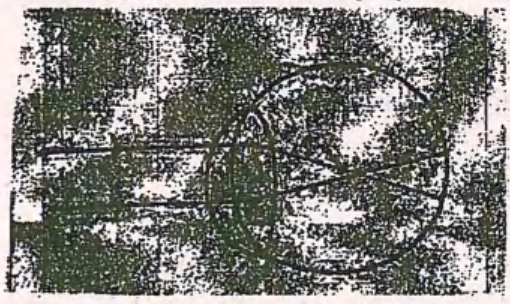
10. Water waves are produced in a ripple tank. The following is an example of the wave from that was observed.
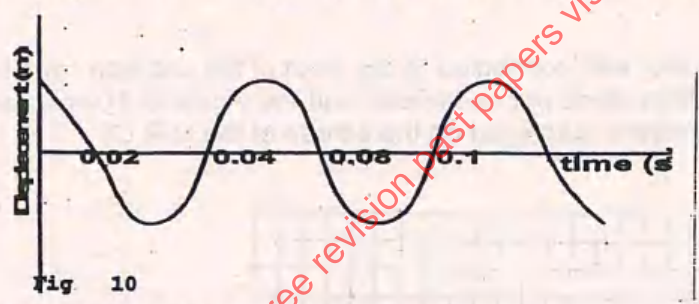
Fig 10

i) From the graph determine the frequency of the wave. (2mks)
   ii) Derive an equation relating velocity of a wave, frequency and wavelength. (2mks)
11. The figure below shows the charged plates of a parallel of a plate-air capacitor when the distance of separation is d.
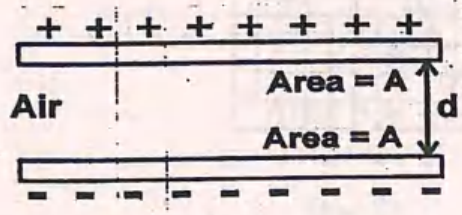
a) Complete the diagram to show the electric field pattern in the space between the plates. (1mk)
b) Without changing the area of overlap, suggest two methods by which you would increase the capacitance of a capacitor. (2mks)
12. State two conditions necessary for total internal reflection to occur. (2mks)

SECTION B (55 MARKS)

13. The figure shows the main features of cathode ray oscilloscope (C.R.O).
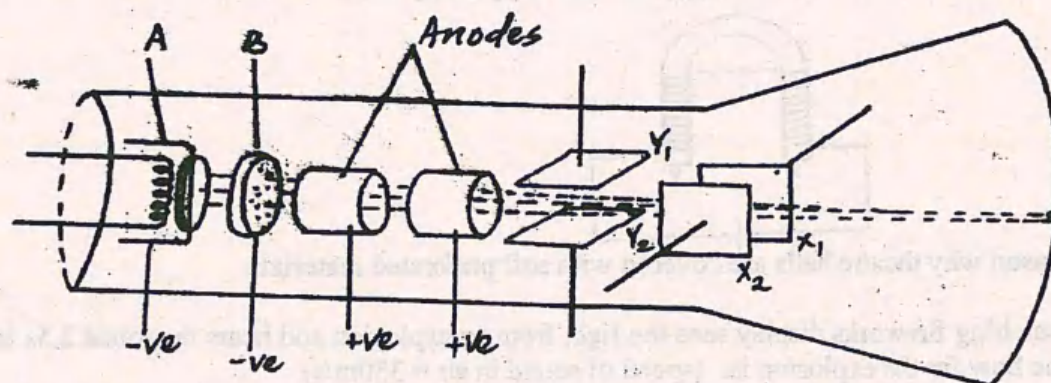
b) (i) Name the parts labelled **A** and **B**.   (2mks)

(ii) State the function of **B** and briefly outline how it works.   (2mks)

(iii) State **two** functions of the anodes.   (2mks)

c)   The output of an a.c generator was connected to the input of the cathode ray oscilloscope whose time base setting was 5 milliseconds per centimeter and the y-gain at 10 volts per centimeter. The figure below shows the waveform displayed on the screen of the C.R.O.
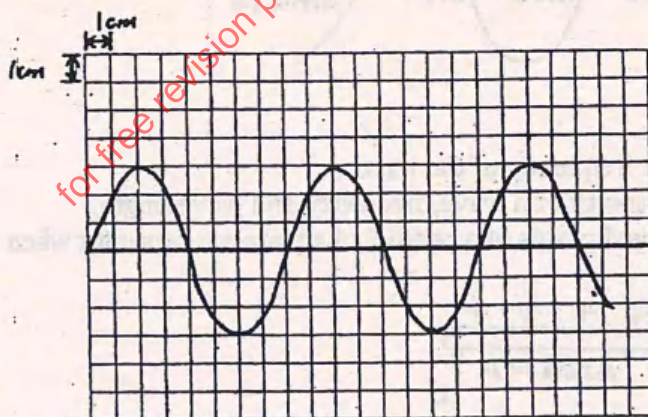
Determine
(i) The peak voltage of the generator.   (2mks)

(ii) The frequency of the voltage. (3mks)

14.a) A transformer has 8000 turns in its primary coil and 200 in its secondary coil. The voltage in the primary coil is 240V.

(i) Calculate the voltage in the secondary coil. (2mks)

ii) If the current in the primary coil is 3A while that in the secondary is 100A, determine the efficiency of the transformer. (3mks)

b) A current-carrying conductor AB is in a magnetic field as shown in the figure below.
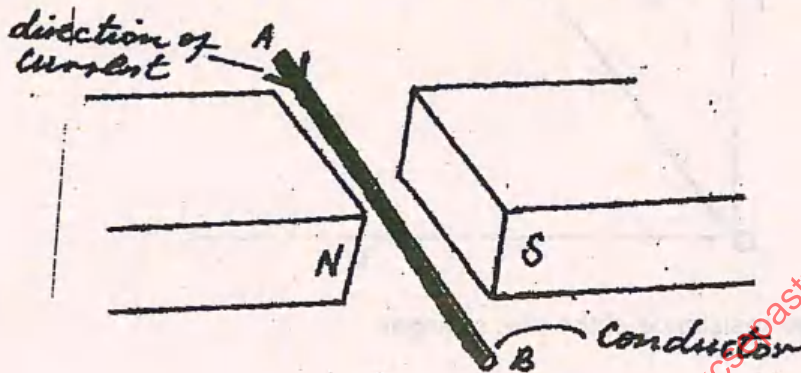
i) Indicate the direction of force F acting on the conductor. (1mk)

ii) State two factors that determine the direction of the force F. (2mks)

15. a) i) State the reason why tungsten used as a target in an X-ray tube. (1mk)

ii) State the adjustment to be made in an X-ray tube to increase the quality of X-rays produced. (1mk)

b) X-rays are emitted when a tube operates at 3×10^2 V and a current of 0.01 A is passing through it. Calculate i) the velocity of the electron on hitting the target. (3mks)

i) the minimum wavelength of the x-rays emitted . (take e= 1.6×10^{-19} C, m_e = 9×10^{-31} kg) (2mks)

16.a) Two light bulbs are labelled 40W, 240V and 100W, 240V. Determine the cost of using the two bulbs for six hours daily for 5 days given that the cost of electricity is 40 cents per kilowatt hour (2mks)

b) A car battery is used to light a 12V lamp. A current of 3A passes round the circuit. Calculate how much energy is transferred by the lamp in 20 seconds (2mks)

c) For a particular specimen of wire, a series of readings of the current through the wire for different potential differences across it is taken and plotted as shown
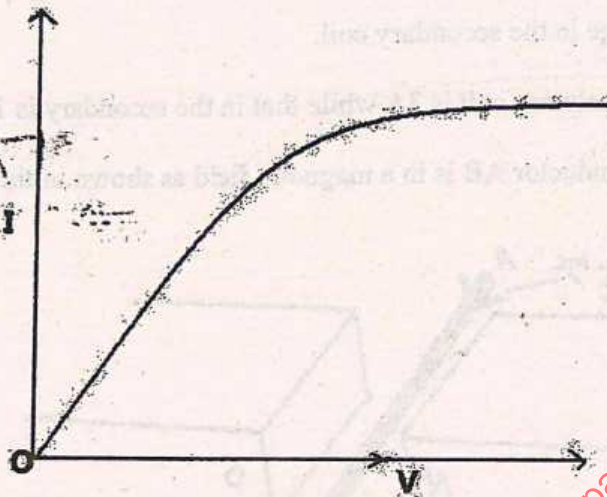
(i) Explain how the resistance of the wire changes. (3mks)

(i) State how the resistance of a piece of wire change if
    (I) the length were doubled (1mk)

    (II) the diameter were doubled (1mk)

17. a) Define radioactivity. (I mark)

   b) Nekesa discovered a radioactive substance which gave 118 counts/min. She noted that the background count was 18 counts/min. After 6 hours the count rate had dropped to 25 counts/m Determine the half-life of the radioactive substance. (3marks)

a) The figure below shows a diffusion cloud chamber for detecting radioactivity.
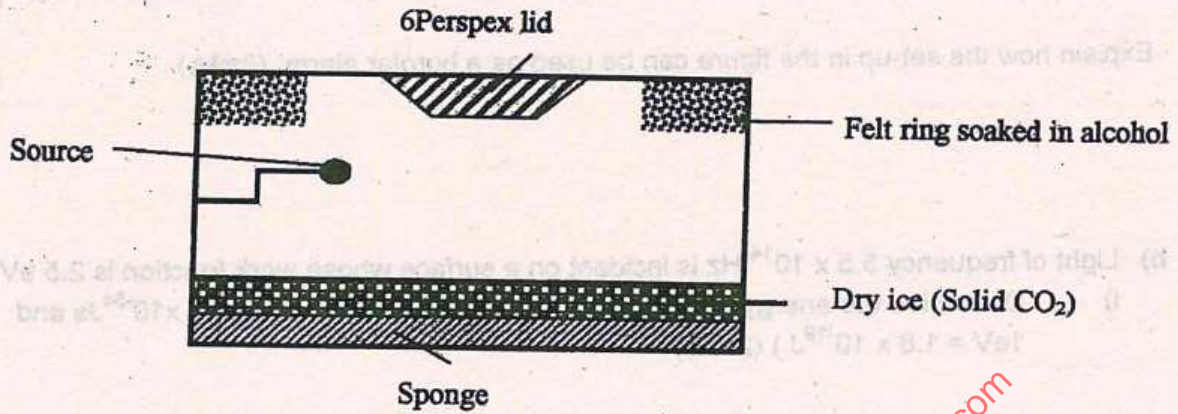
When radiation enter the chamber white traces are observed

i)
    I)   State how the traces are formed. (2 mks)

    II)   Explain how the three different radiations α, β and γ are identified using the traces. (3mks)

18. a) The figure shows a photocell used in a set-up for a burglar alarm.
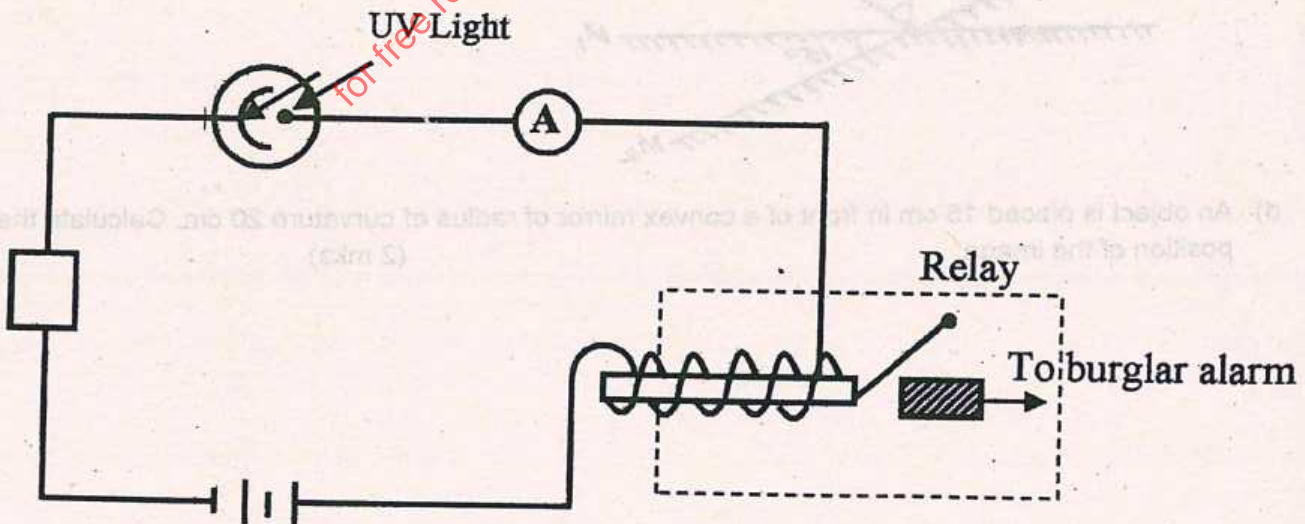
Explain how the set-up in the figure can be used as a burglar alarm. (3mks)

b) Light of frequency 5.5 x 10^{14} Hz is incident on a surface whose work function is 2.5 eV
   i) Determine the energy of the photons of light in eV (take h = 6.63 x10^{-34}Js and 1eV = 1.6 x 10^{-19}J) (2mks)

   ii) Will photoelectric emission occur? Explain your answer. (2mks)

c) The figure shows a ray of light incident along the normal. The mirror is rotated at an angle of 15° in a clockwise direction without changing the position of the incident ray. Determine the angle between the reflection ray and the incident ray. (2mks)
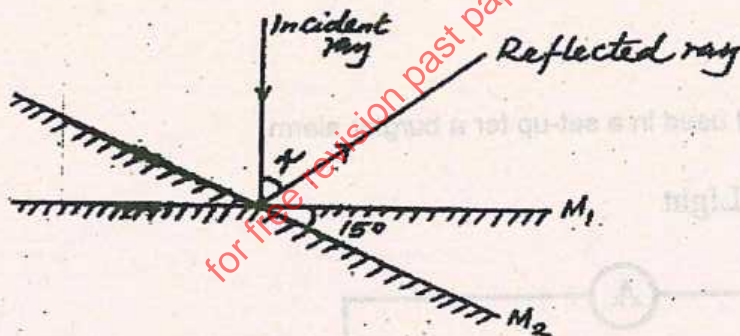
d) An object is placed 15 cm in front of a convex mirror of radius of curvature 20 cm. Calculate the position of the image. (2 mks)

MANGU HIGH SCHOOL

NAME: _____ ADM. NO. _____

CLASS: _____ INDEX NO._____

232/3
PHYSICS
PAPER 3
MOCK EXAM
JULY 2017
TIME: 2½ HOURS

Kenya Certificate of Secondary Education
MOCK EXAMINATIONS
Physics Paper 3
(Practicals)
2¼ Hours.

<u>INSTRUCTIONS TO CANDIDATES</u>

(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) You are supposed to spend the first **15 minutes** of the 2¼ hours allowed for this paper reading the whole paper carefully before commencing your work.
(d) Marks are given for a clear record of the observations actually made, their suitability, accuracy and the use made of them.
(e) Candidates are advised to record their observations as soon as they are made.
(f) Mathematical tables and electronic calculators may be used.

<u>**For Examiner's Use only**</u>

Question	Maximum Score	Candidate's score
1	20	
2	20	
Total	40	

This paper consists of **6 printed pages**. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn Over

1. You are provided with the following apparatus.
   Retort stand and clamp
   Runway (bisected plastic pipe)
   Marble
   Stop watch
   Micrometer screw gauge (shared)
   Beam balance (shared)
   Metre rule

   Arrange apparatus as follows
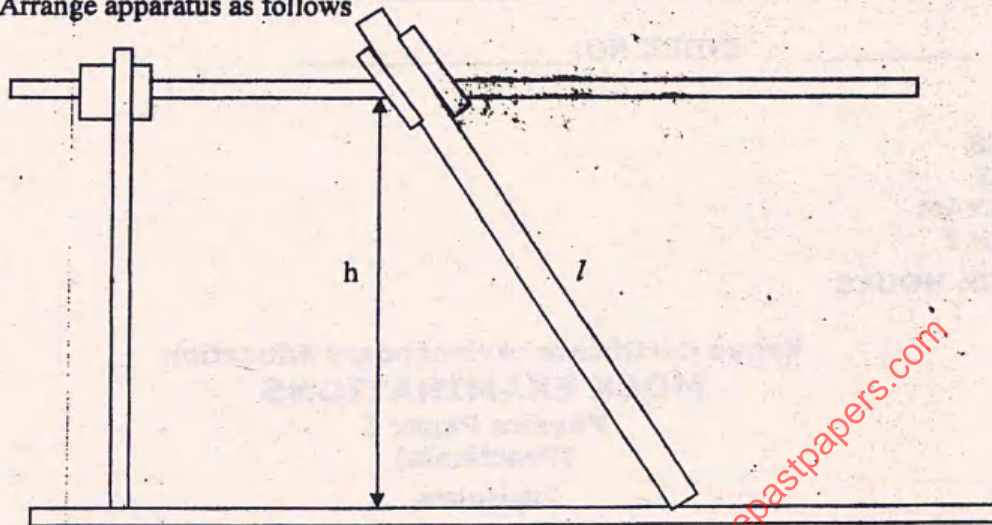
   Method

   (i)   Measure and record diameter d and mass of m of the marble

         d..m

         r..m and mass ....kg   (3mks)

   (ii) Mark the length l on the runways such that l =1.0m and set the apparatus as shown in the
         above diagram with h=7.5cm.   *from bottom*

   (iii) Release the marble from the marked end of the runway as you time the fall of the ball
         through length l. Record the time of the fall in the table of results.

   (iv) Repeat step (iii) for the other values of h and complete the table of results   **(8mks)**

Height in (m)	Time of fall (s)	$t^2 s^2$	$\frac{1}{t^2}$ (s)
0.075			
0.090			
0.110			
0.130			
0.155			
0.185			

2

Plot a graph of h (y-axis) against $\frac{1}{t^2}$ (5m)ks given that $h = \frac{l^2}{5t^2}\left(\frac{k}{mr^2} + 1\right)$

I. Find the slope of the graph (2mks)

II. Find the value of constant K (2mks)

2. You are provided with the following
   100cm Nichrome wire mounted on a metre rule label X.
   An ammeter
   A volt meter
   Three dry cells
   Cell holder
   Eight connecting wires (at least 4 with crocodile clips at the end)
   A 2.5 volt bulb fixed into a lamp holder
   A switch
   Procedure;-
   a) Connect the apparatus provided as shown in circuit diagram below:
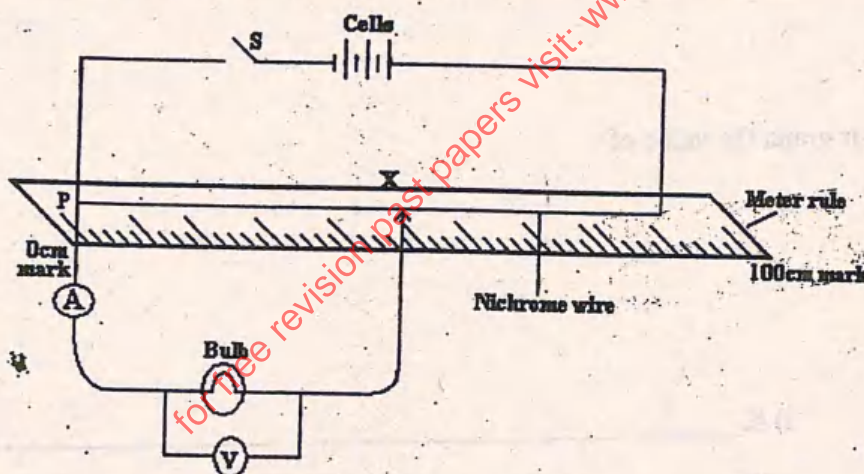
b) Place the sliding contact at X 20cm from 'p' then close the switch Record the ammeter and the voltmeter readings. Record the reading in the table below.
c) Repeat the above experiment by placing the sliding contact X at the point 40cm,60cm, 70cm and 80cm from P. Record your readings and complete the table below.

Length, L(cm)	I(A)	p.d.(v)	I(mA)	p.d.(mv)	Log I(mA)	Log v(mv)
20						
40						
60						
70						
80						

d) i) Plot a graph of log I. (y-axis)against log V   (5mks)
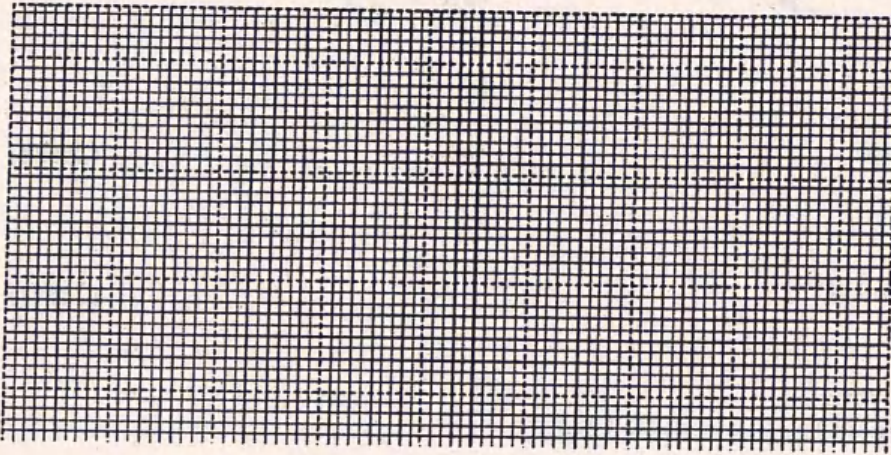
ii) Determine the slope of the graph   (3mks)

iii) The relationship between the current I(A) and p.d. (v) is given by the equation : $I = kv^n$ where k and n are constants of the lamp $\log I = n \log v + \log k$

Determine using your graph the value of

i) K_____(2mks)

ii)N_____(2mks)

MANGU HIGH SCHOOL

312/1
GEOGRAPHY
PAPER 1
MOCK
JULY 2017
TIME: 2¾ HOURS

Kenya Certificate of Secondary Education
Mock Examinations
Geography
Paper 1
2¾ Hours

INSTRUCTIONS TO CANDIDATES

i.   This paper has **TWO** sections: A and B
ii. Answer **ALL** questions in section A.
iii. In section B answer **question 6 (SIX)** and any other **two** questions.
iv. All answers **MUST** be written in the foolscaps provided.

This paper consists of **6 printed pages.**

Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn Over

Answer all the questions in this section.

1. a) What is the solar system? (2mks)
   b) Give three reasons which make the earth to have a spherical shape. (3mks)
2. a) How is an overthrust fold formed? (3mks)
   b) Name two countries in which the Andes Mountain are found. (2mks)
3. The diagram below represents zones of natural vegetation on a mountain. Use it to answer question (a).
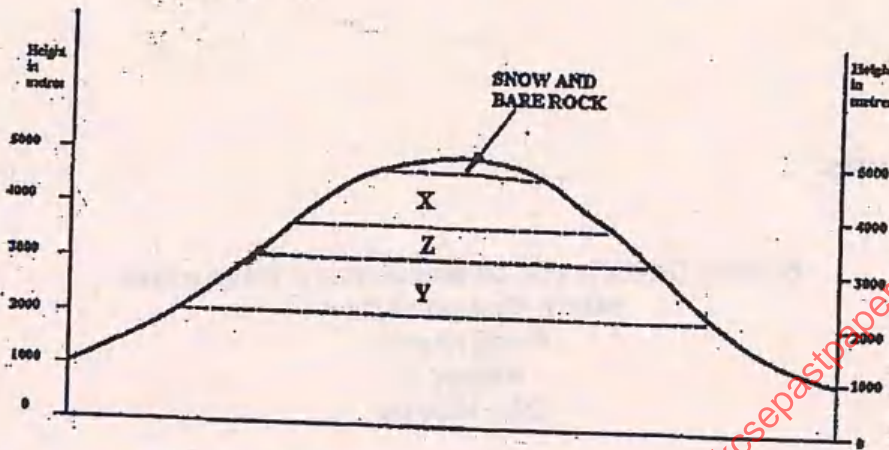
a) i) In your answer booklet, name the zones marked X, Y and Z. (3mks)
   ii) State two reasons why the mountain top has no vegetation. (2mks)
4. a) What is the difference between weathering and mass wasting? (2mks)
   b) State three effects of mass wasting on the environment. (3mks)
5. a) Apart from Mt. Kenya, name two other mountains in East Africa which are ice capped. (2mks)
   b) How is ice formed on a high mountain? (3mks)

SECTION B

Answer question 6 and any other TWO questions from this section.

6. Study the map of Busia 1:50, 000 (sheet 101/1) provided and answer the following questions.

a) i) What is the four figure grid reference of Budokomi School? (2mks)
   ii) What is the bearing of the air photo principal point in the square 2529 from the primary trigonometrical station SKP 206? (2mks)
   iii) Give the latitudinal extent of the area covered by the map. (2mks)
   iv) Calculate the area o land enclosed by the all weather road loose surface C526 and the regional boundary between Easting 31 to Easting 38. (2mks)
   v) Citing evidence from the map, identify two economic activities carried out in the area to the north of northing 43. (2mks)

b) Describe the drainage of the area covered by the map. (6mks)

c) Draw a square 10cm by 10cm to represent the area to the west of Easting 30 and north of Northing 40. On the square, mark and label:
   i) an international boundary;
   ii) River Sio;
   iii) the area above 1200 metres above sea level. (4mks)

d) Describe the relief of the area covered by the map. (5mks)

7. a) i) What is a rock? (2 marks)

ii) Give two examples of each of the following types of igneous rocks:

    i) Plutonic rocks. (2 marks)

    ii) Volcanic rocks. (2 marks)

iii) Outline **three** characteristics of sedimentary rocks. (3marks)

b) Describe **three** ways in which sedimentary rocks are formed. (6 marks)

c) Explain **three** ways in which rocks contribute to the economy of Kenya. (6 marks)

d) You are required to carry out a field study on the types of rocks within the vicinity of your school.

State how you would use the following items during the field study.

- Textbooks (1 mark)
- A hammer (1 marks)
- A camera (1 marks)
- A polythene bag (1 marks)

8. a) i) What is a river? (2 marks)

ii) Describe **three** processes by which a river erodes its channel. (6 marks)

b) Using diagrams, describe the following drainage patterns:

    i) Dendritic (2 marks)

    ii) Trellis (2 marks)

    iii) Centripetal (2 marks)

c) i) Differentiate between river rejuvenation and river capture. (2 marks)

ii) State three causes of river rejuvenation. (3 marks)

d) Students from Mang'uHigh Schoolare planning to carry out a field study along the middle stage

of River Chania.

i) State three ways in which the students would prepare themselves for the field study. (3 marks)

ii) Identify three features they are likelyto identify. (3 marks)

9. a) What is soil? (2mks)
b) The diagram below represents a well developed soil profile. Use it to answer question (a).
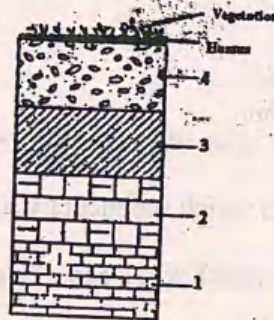
i) Identify the layers marked 1 and 2. (2mks)
ii) Describe the characteristics of the layer marked 3. (3mks)
iii) Give three factors that determine the colour of soil. (3mks)

c) Explain how the following factors influence the formation of soil:
i) Climate. (4mks)
ii) Topography. (4mks)

d) You are supposed to carry out study of an eroded area.
i) What information would you collect through observation that would indicate that the area is severely eroded? (2mks)
ii) Identify two methods you would use to record the observations. (2mks)
iii) State three recommendations you would give to control soil erosion. (3mks)

10. The diagram below represents a feature resulting from wind erosion in a desert. Use it to answer question a) and b).
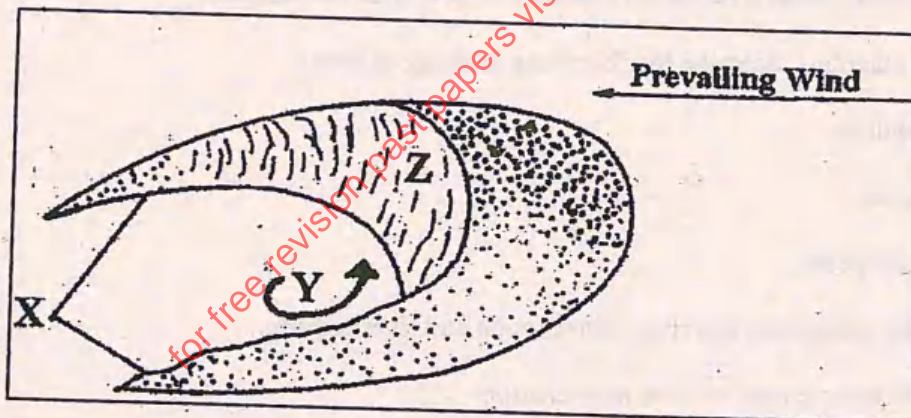
a) Name
i) the feature shown above. (1mk)
ii) the feature marked X. (1mk)
iii) the air current marked Y. (1mk)
iv) the slope marked Z. (1mk)

b) Describe how the feature shown above is formed (5mks)
c) i) Name two features produced by wind abrasion in arid areas. (2mks)
ii) Describe the three process through which wind transports its load. (6mks)
d) Explain four ways in which desert features are of significance to human activities. (8mks)

MANGU HIGH SCHOOL

312/2
GEOGRAPHY
PAPER 2
MOCK
JULY 2017
TIME: 2¾ HOURS

Kenya Certificate of Secondary Education
Mock Examinations
Geography
Paper 2
2¾ Hours

<u>INSTRUCTIONS TO CANDIDATES</u>

i.   This paper has **TWO** sections: A and B
ii. Answer **ALL** questions in section A.
iii. In section B answer **question 6 (SIX)** and any other **two** questions.
iv. All answers **MUST** be written in the foolscaps provided.

This paper consists of **5 printed pages.**

Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.

Turn Over

1

SECTION A

Answer **ALL** questions in this section

1. (a) Name **two** exotic breeds of commercial beef cattle reared in Kenya (2mks)
   (b) Outline **two** similarities of commercial beef farming in Kenya and Argentina
      (2mks)

2. (a) What is ecotourism? (2mks)
   (b) (i) Apart from sandy beaches, name three tourist attractions found at the coast of Kenya (3mks)
       (ii) State **three** factors that favour the establishment of National Parks in Semi-arid areas of East Africa (3mks)

3. (a) Give **two** reasons why geothermal power has not been fully exploited in Kenya (2mks)
   (b) Give **three** causes of the energy crisis in the world (3mks)

4. (a) Identify **two** types of internal trade (2mks)

5. (a) Name **three** documents from where information of population data can be obtained (3mks)
   (b) State **three** reasons why it is necessary for a country to carry out population census (3mks)

Section B

Answer **question 6** and any other **two** questions from this section

6. (a) (i) What is transhumance? (2mks)
   (b) (i) Identify **two** varieties of coffee grown in Kenya (2mks)
       (ii) State **four** physical conditions favouring the growth of coffee (4mks)
       (iii) State **three** human problems facing coffee farming in Kenya (3mks)

   (c) The table below shows total number of livestock in Kenya in 1986.

Type of livestock	Number in millions
Cattle (excluding dairy cattle)	7.0
Dairy cattle	2.0
Sheep	7.0
Goats	8.5
Pigs	0.11
Chicken	20.0
Total	**44.6**

   (i) Using a radius of 5cm, draw a pie chart to represent the information given in the table above. (7mks)

2

(ii) Give an advantage of pie charts as a method of representing data
(1mk)

(d) Explain why horticultural farming is more developed in the Netherlands than in Kenya
(6mks)

7. Use the world map provided below to answer questions (a) below.
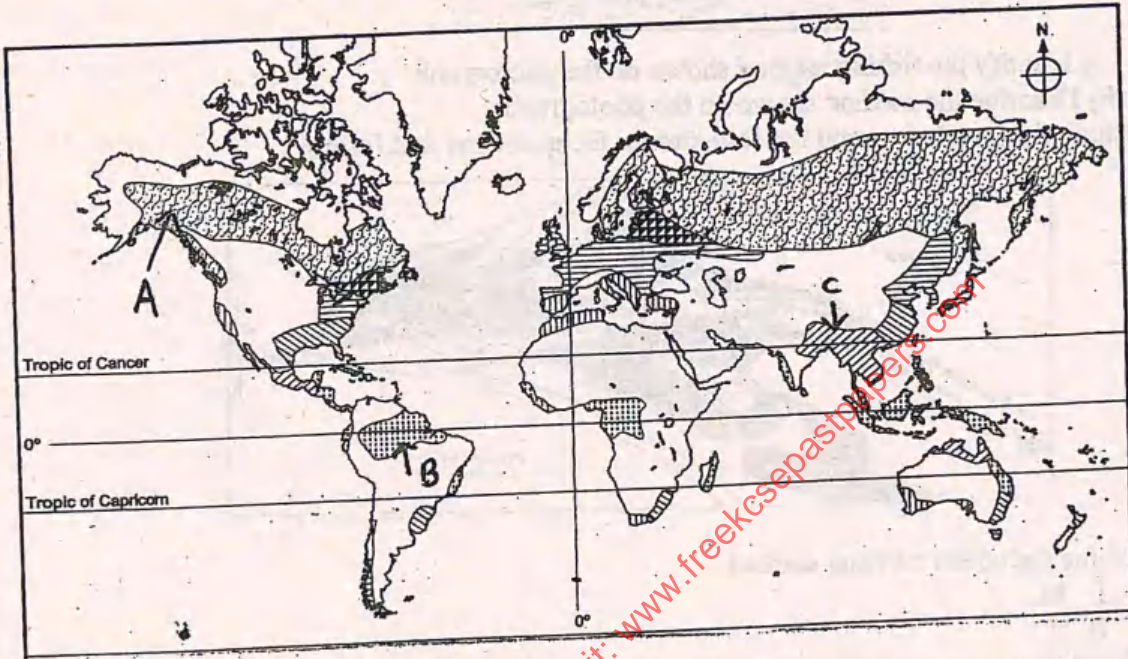
(a) (i) Identify forests marked A and B (2mks)
(ii) State **four** characteristics of the forest marked C (4mks)
(iii) Give **three** uses of trees in the forest identified in (a)(ii) above
(3mks)
(b) (i) What is agro-forestry? (2mks)
(ii) State **three** benefits of agro-forestry in Kenya (3mks)
(iii) Explain **three** reasons being taken by the government of Kenya to control human encroachment on forests. (6mks)
(c) From four students undertook a field study in Kakamega forest.
(i) State **three** importance of having a work schedule for the study
(3mks)
(ii) Give **two** problems which they might have encountered during their field study (2mks)

8. a) Identify three types of fishing (3mks)
   b) Study the photograph below and use it to answer the questions that follow.
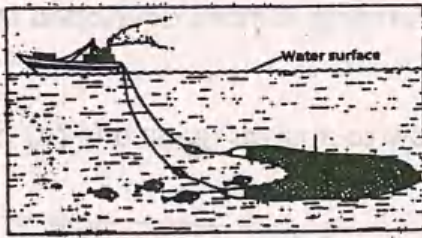
   i) Identify the fishing method shown on the photograph (1mk)
   ii) Describe the method shown on the photograph (1mk)
   c) Study the map below and use it to answer the questions that follow.

   i) Name the ocean currents marked
   I. M (1mk)
   II. N (1mk)
   ii) Identify three types of fish species caught in the North West Atlantic Ocean fishing ground (3mks)
   iii) Explain two ways in which the convergence of the ocean currents marked M and N influencing fishing (4mks)
   d) i) State three ways in which marine fisheries in Kenya can be conserved (3mks)
   ii) Give three differences between fishing in Kenya and Japan (3mks)
9. a) i) Differentiate between manufacturing industries and tertiary industries? (2mks)
   ii) Name three agricultural non-food processing industries in Kenya (3mks)
   b) i) Explain two factors why some industries are located near large urban centres (4mks)
   ii) State three benefits of Jua Kali industries in Kenya (3mks)
   iii) Explain three factors that led to the rapid development of the car manufacturing industry in Japan (6mks)
   c) Your class conducted a field study of the Del Monte Industry in Thika.
   i) What is the main fruit that the industry uses as its raw material? (1mk)
   ii) Formulate three questions you would ask the manager (3mks)
   iii) Why would the use of sampling as a method of data collection be appropriate? (3mks)
10. a) i) Identify three methods of land rehabilitation used in Kenya (3mks)
   ii) Give two benefits of land reclamation of the Yala Swamp (2mks)
   iii) Outline the stages of land reclamation in Nertherlands? (8mks)
   b) i) Name three non-climatic environment hazards (3mks)
   ii) Identify two rivers that causes large – scale flooding in Kenya (2mks)
   d) i) State four effects of windstorms (4mks)
   ii) Identify three non-governmental organizations (NGO's) that take part in management and conservation in Kenya (3mks)

MANGU HIGH SCHOOL

311/1
HISTORY & GOVERNMENT
PAPER 1
MOCK EXAM
JULY 2017
TIME: 2½ HOURS

Kenya Certificate of Secondary Education
MOCK EXAM
History & Government
Paper 1
2½ Hours

INSTRUCTIONS TO CANDIDATES

   i.   This paper consists of **THREE** sections: A, B & C
   ii. Answer **ALL** the questions in section A, **THREE** Questions from section B and
        TWO questions from section C.
   iii. Answers to **ALL** the questions **MUST BE** written in the answer booklet provided.

This paper consists of **3 printed pages**.

Make sure that all the pages are printed and that no page is missing.

Turn Over

1

SECTION A

Answer ALL questions in this section

1. Identify **two** archaeological evidences that show that Kenya was inhabited by Stone Age people (2mks)

2. Name the dispersal area of Western Bantu (1mk)

3. Give the **main** reason why the rulers of Malindi welcomed the Portuguese in the 16th Century (1mk)

4. State **two** religious duties of Orkoiyot among the Nandi (2mks)

5. Identify **one** anti-slavery treaty which led to the abolition of slave trade (1mk)

6. Name **two** African communities that were hostile to the missionaries affecting spread of Christianity in Kenya (2mks)

7. Give **one** economic achievement of the imperial British East Africa Company (IBEA Co.) in Kenya. (1mk)

8. State **two** reason why the colonial government was reluctant to offer academic education to Africans (2mks).

9. Give **one** reason why the Independent Electoral and Boundaries Commission (IEBC) reviews boundaries regularly in Kenya (1mk)

10. State **two** rights entitled to the older members of society (2mks)

11. Identify **one** European who participated in the signing of Heligoland Treaty of 1890 (1mk)

12. Name **one** method used by the moderates in the struggle for independence in Kenya (1mk)

13. Give **two** functions of the Chairman of independent Electoral and Boundaries Commission in Kenya (2mks)

14. State two objectives of the Second Lancaster House conference of 1962. (2mks)

15. Name **two** national philosophies adopted at independence to promote social justice in Kenya (2mks)

16. Define the term "Land Tenure" (1mk)

17. Name **one** parliamentary committee which is a custodian of public finance (1mk)

2

SECTION B
Answer any THREE questions in this section

18. (a) State three reasons why the Maasai kept large herds of cattle in the pre-colonial period (3mks)

    (b) Describe the social organisation of the Maasai in the pre-colonial period (12mks)

19. (a) State **three** reasons for the decline of the Akamba long distance trade (3mks)

    (b) Describe the way of life in the coastal city states before the 19th century (12mks)

20. (a) Give **three** features of African farming during the colonial period (3mks)

    (b) Explain **six** contributions of Lord Delamere to settler farming in Kenya (12mks)

21. (a) State **three** main challenges that Kenya faced at independence (3mks)

    (b) Explain **six** measures used by the government in an attempt to preserve cultural heritage in Kenya since independence (12mks)

SECTION C
Answer any TWO questions in this section

22. (a) Identify **five** functions of the public service in Kenya (5mks)

    (b) Explain **five** challenges facing the Kenya Defence Forces. (10mks)

23. (a) Identify **three** ways through which direct democracy is practiced (3mks)

    (b) Explain how the Kenyan Bill of Rights applies to children (12mks)

24. (a) State **three** principles of devolved government (3mks)

    (b) Explain the ways in which county government revenue is spent (12mks)

18. (a) State three reasons why the Maasai kept large herds of cattle in the pre-colonial period (3mks)

(b) Describe the social organisation of the Maasai in the pre-colonial period (12mks)

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(b) Describe the way of life in the coastal city states before the 19th century (12mks)

20. (a) Identify three features of African farming during the colonial period (3mks)

(b) Explain six contributions of Lord Delamere to settler farming in Kenya (12mks)

21. (a) State three challenges that Kenya faced at independence (3mks)

(b) Explain six measures used by the government in an attempt to preserve cultural heritage in Kenya since independence (12mks)

SECTION C

Answer any TWO questions in this section

22. (a) Identify five functions of the public service in Kenya (5mks)

(b) Explain five challenges facing the Kenya Defence Forces (10mks)

23. (a) Identify three ways through which direct democracy is practised (3mks)

(b) Explain how the Kenyan bill of Rights applies to children (12mks)

24. (a) State three principles of devolved government (3mks)

(b) Explain one ways in which county government revenue is spent (12mks)

311/2
HISTORY & GOVERNMENT
PAPER 2
MOCK EXAM
JULY 2017
TIME: 2½ HOURS

Kenya Certificate of Secondary Education
MOCK EXAM
History & Government
Paper 2
2½ Hours

INSTRUCTIONS TO CANDIDATES

i. This paper consists of **THREE** sections: A, B & C
ii. Answer **ALL** the questions in section A, **THREE** Questions from section B and **TWO** questions from section C.
iii. Answers to **ALL** the questions **MUST BE** written in the answer booklet provided.

This paper consists of **3 printed pages.**

Make sure that all the pages are printed and that no page is missing.

Turn Over

1

SECTION A: 25 MARKS

Answer **all** questions from this section

1. List **two** forms of communication used to send messages to distant places in the shortest possible time. (2mks)

2. What was the **main** source of energy during the early period of the industrial revolution in Europe? (1mk)

3. Give **one** main reason why trade union movements were formed in Europe during the nineteenth century (1mk)

4. State the **main** reason why the independent church movement started during the nineteenth century (1mk)

5. State **two** results of the construction of Suez Canal (2mks)

6. Identify **two** economic effects of industrial revolution in North America (2mks)

7. What was the immediate cause of the First World War? (1mk)

8. In which **two** ways did the organization of African Unity OAU contribute to the liberation of the Southern African countries? (2mks)

9. Name **two** agencies of the United Nations Organisation (UNO) which deal with the problem of health. (2mks)

10. Name **two** houses of the British parliament. (2mks)

11. What event prompted the United States of America (USA) to join the First World War? (1mk)

12. State **two** methods which the international community used to hasten the attainment of majority rule in South Africa. (2mks)

13. Name **one** organization which has been formed by the organization of African Unity (OAU) to promote economic cooperation among the West African countries (1mk)

14. State **one** priviledge which members of the British parliament enjoy. (1mk)

15. Give the **main** political challenge that the Democratic Republic of Congo (Zaire) has faced since independence. (1mk)

16. Give **two** political developments in South Africa between 1990 and 1994 which led to peaceful introduction of majority rule in the country. (2mks)

17. Give the **main** reason why the Pan-African movement was formed at the beginning of the 20th century (1mk)

SECTION B: (45 MARKS)

Answer three questions from this section

18. (a) What **five** factors that undermined the Trans-Saharan Trade (5mks)

    (b) Explain **five** ways in which West African communities benefited from the Trans-Saharan Trade (10mks)

19. (a) What factors led to the development of early agriculture in India? (5mks)

    (b) Explain **five** factors which promoted plantation farming in Europe during the Agrarian Revolution (10mks)

20. (a) State **three** factors that have contributed to the growth of Johannesburg since the end of Apartheid (3mks)

    (b) Describe **six** social problems faced by residents of Johannesburg since the end of apartheid (12mks)

21. (a) Outline **three** reasons why the policy of assimilation was easily applied in the four communes. (3mks)

    (b) Explain **six** reasons why the policy of indirect rule in Southern Nigeria was unsuccessful (12mks)

SECTION C (30MARKS)

Answer two questions from this section

22. (a) Identify **three** duties performed by the Secretary General of the New East African community established in 2001. (3mks)

    (b) Explain **six** benefits of the New East African community established in 2001, to its members (12mks)

23. (a) State **three** reasons that made Tanzania to adopt multi party system of government (3mks)

    (b) Describe **six** reforms Mobutu Sesse Seko adopted as president of Zaire (12mks)

24. (a) Identify **five** ways through which the United Nations (UN) promotes good governance (5mks)

    (b) Explain **five** causes of the cold war after 1945. (10mks)

3

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SECTION C (30 MARKS)
Answer two questions from this section.

22. (a) Identify three duties performed by the Secretary General of the New East African community established in 2001. (3mks)
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    (b) Explain five causes of the cold war after 1945 (10mks)

MANGU HIGH SCHOOL

NAME: _____

ADM. NO. _____ INDEX NO: _____ CLASS: _____

313/1
CHRISTIAN RELIGIOUS EDUCATION
PAPER 1
MOCK
JULY 2017
TIME: 2½ HOURS

Kenya Certificate of Secondary Education
MOCK EXAM 2017
Christian Religious Education
Paper 1
2½ Hrs

Instructions To Candidates

i.   Write your **Name** and **Admission Number** in the spaces provided above
ii. The paper consists of **SIX** questions
iii. Answer any **FIVE** questions in the answer booklet provided.
iv. Each question should be done in a separate foolscap

For Examiner's Use Only

Question	1	2	3	4	5	6	Candidate's Total Score
Candidates Score							

This paper consists of **2 printed pages**. Candidates should check the question paper to ascertain that all pages are printed and no question is missing.

Turn over

1

ANSWER **FIVE** QUESTIONS ONLY

1. (a) Give reasons why Christian religious Education is taught in Kenya schools today (7mks)
   (b) Explain the relationship between God and human beings according to Genesis 1 and 2. (7mks)
   (c) How do Christians continue being co-creators with God? (6mks)

2. (a) Describe the preparations that Moses asked the Israelites to make readiness for the Exodus (8mks)
   (b) Give reasons that made the Israelites break the covenant while at Mr. Sinai Exodus 32:1-35 (5mks)
   (c) What teaching do Christians learn about the nature of God from the Exodus (7mks)

3. (a) What reasons did Samuel give to the Israelites against Kingship (10mks)
   (b) State the achievements of King Solomon (5mks)
   (c) Identify the causes of power struggle in the church today (5mks)

4. (a) Outline the forms of punishment for Israel according to prophet Amos (8mks)
   (b) Describe the call of Amos (7mks)
   (c) State the good qualities that a religious leader should have. (5mks)

5. (a) Outline the social background to Nehemiah (6mks)
   (b) Describe the dedication ceremony of the wall of Jerusalem (8mks)
   (c) Outline six lessons Christians learn from the exemplary life of Nehemiah (6mk)

6. (a) Identify the role of healers in the traditional African society (7mk)
   (b) Explain how the traditional African society take care of widows and orphans (7mk)
   (c) Give **six** reasons why initiation rites continue today (6mks)

2

NAME: _____

ADM. NO. _____ INDEX NO: _____ CLASS: _____

313/2
CHRISTIAN RELIGIOUS EDUCATION
PAPER 2
MOCK
JULY 2017
TIME: 2½ HOURS

Kenya Certificate of Secondary Education
MOCK EXAM 2017
Christian Religious Education
Paper 2
2½ Hrs

Instructions To Candidates
  i.   Write your **Name** and **Admission Number** in the spaces provided above
  ii. The paper consists of **SIX** questions
  iii. Answer any **FIVE** questions in the answer booklet provided.
  iv. Each question should be done in a separate foolscap

For Examiner's Use Only

Question	1	2	3	4	5	6	Candidate's Total Score
Candidates Score							

This paper consists of **2 printed pages**. Candidates should check the question paper to ascertain the all pages are printed and no question is missing.

1

Turn c

ANSWER **FIVE** QUESTIONS ONLY

1.   (a)   Narrate the story of the annunciation of the birth of Jesus to Mary by Angel Gabriel in Luke 1:26-38.   (8mks)

    (b)   Outline **seven** events that took place when John the Baptist was born   (7mks)

    (c)   State **five** ways through which Christians in Kenya express their joy for the birth of Jesus   (5mks)

2.   (a)   Describe the incident in which Jesus forgave the sinful woman in Luke 7:36-50.   (8mks)

    (b)   What lessons do Christians learn from the forgiving of the sinful woman?   (6mks)

    (c)   State **six** ways in which Christians can use to get rid of discrimination in the society today   (6mks)

3.   (a)   Identify **four** teaching about the Kingdom of God from the parable of the yeast and the mustard seed   (8mks)

    (b)   Give **six** teachings of Jesus on eschatology   (6mks)

    (c)   State **six** reasons why resurrection of Jesus is important to Christians today   (6mks)

4.   (a)   Explain Jesus' teaching on the role of the Holy Spirit   (5mks)

    (b)   State **seven** problems that church is facing in the modern society (7mks)

    (c)   Explain the factors that promote unity of believers today   (8mks)

5.   (a)   Outline the traditional African attitude to work   (7mks)

    (b)   Identify **seven** ways in which the Kenyan government is promoting self-employment   (7mks)

    (c)   State and explain **six** virtues related to work   (6mks)

6.   (a)   Explain how modern technology has enhanced evangelism   (7mks)

    (b)   Give **seven** reasons why the church is against genetic engineering (7mks)

    (c)   State **six** ways through which science and technology has negatively affected the environment   (6mks)

MANGU HIGH SCHOOL

NAME: _____

ADM.NO. _____   CLASS: _____

443/1
AGRICULTURE
PAPER 1
MOCK EXAM
JULY 2017
TIME: 2 HOURS

Kenya Certificate of Secondary Education
Mock Exam
Agriculture
Paper 1

INSTRUCTIONS TO CANDIDATES

(i)   This question paper consists of **THREE** sections; **A, B** and **C**
(ii)   Answer **ALL** questions in section **A** and **B** and **ANY TWO** questions in section **C**.
(iii) **ALL** questions should be answered in the spaces provided.

For Examiner's Use Only

Section	Question	Maximum Score	Candidates Score
A	1-20	30	
B	21 -24	20	
C	25 – 27	40	
	TOTAL		

This paper consists of **10 printed pages**. Check the question paper to ensure that all pages are printed and no question is missing.

Turn over

SECTION A: (30MARKS)
Answer all questions in this section

1. Define chitting as used in production of potatoes (½ mk)

2. Define the following terms as used in horticultural production (1 ½ mks)
   i) Pomoculture

   ii) Floriculture

   iii) Olericulture

3. Give three ways by which relative humidity (RH) influences agricultural production (1 ½ mks)

4. State three functions of soil mineral matter (1 ½ mks)

5. State four soil properties which are influenced by its texture (2mks)

6. State four ways of modifying the ph of a given soil (2mks)

7. Give four advantages of ridging in the production of sweet potatoes (2mks)

8. State three advantages of undersowing (1 ½ mks)

9. State three disadvantages of tissue culture (1 ½ mks)

10. State three advantages of mixed cropping (1 ½ mks)

1. Name any four crops which require to be earthed up for maximum production   (2mks)

2. Give three disadvantages of plastic pipes   (1 ½ mks)

3. Give three properties of clean and safe water for use on the farm   (1 ½ mks)

4. List four ways by which water can be harvested for use on the farm   (2mks)

5. Name three types of market structure   (1 ½ mks)

6. Name three books of accounts   (1 ½ mks)

7. Distinguish between risk and uncertainty economics   (1mk)

8. Give three causes of land fragmentation   (1 ½ mks)

9. State three methods of forage conservation   (1 ½ mks)
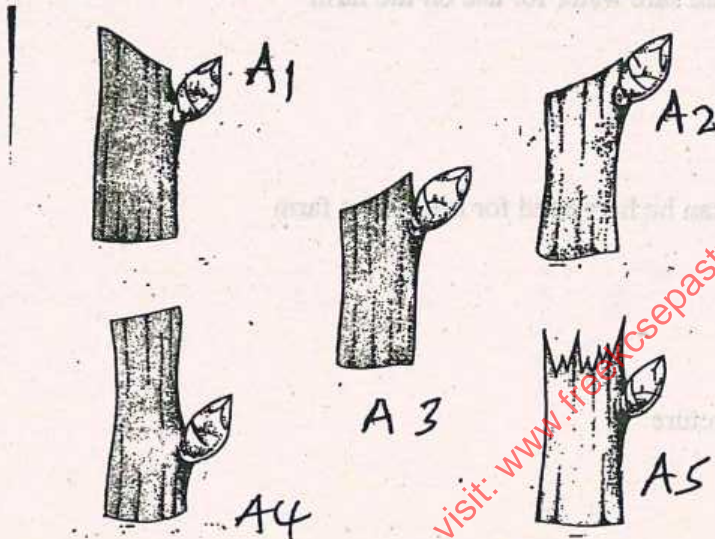
10. Define the term crop propagation   (½ mk)

<u>Answer **all** questions in this section</u>

21.   The diagrams below illustrate different ways of pruning a crop

(a)   Which of the diagrams labeled A1, A2, A3, A4 and A5 represents the correct
       pruning technique   (1mk)

(b)   Give a reason for your choice in (a) above   (1mk)

(c)   List **three** tools used for pruning crops   (1½ mks)

(d)   State **three** methods of pruning   (1½ mks)

22. The diagrams G, H, I, J below illustrate common weeds in the farm

(a) Identify the weed specimens G, H, I J   (2mks)

G _____   H _____
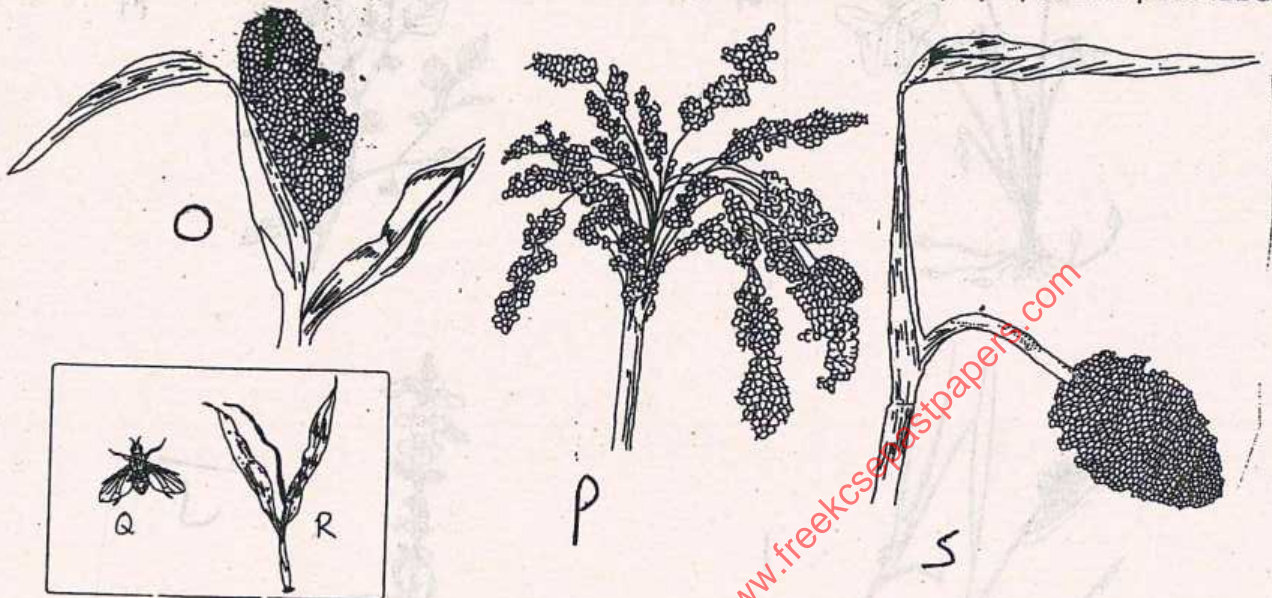
I _____   J _____

(b) Identify the weed specimen which is parasitic on cereals   (1mk)

(c) Identify the specimen which can be dispersed by hairy or furry animals (1mk)

(d) State **two** measure for controlling specimen G   (1mk)

23. The illustrations below show sorghum plants labeled O, P, S, R and pest labeled Q

(a) Name the varieties labeled O, P, S and R   (2mks)

O _____   P _____

S _____   R _____

(b) Name the variety which is resistant to bird attack   (1mk)

_____

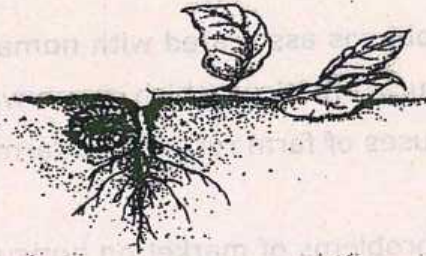(c) Why are varieties O and S prone to bird attack   (1mk)

(d) Identify pest Q which has attacked sorghum seedling labeled R   (1mk)

(e) Give **two** ways of controlling pest Q   (1mk)

(f) State **two** methods of controlling birds in a field of sorghum   (1mk)

24. The diagram below illustrates a cabbage seedling which has been destroyed by a certain pest.

(i) Identify the pest (½ mk)

(ii) Suggest **two** ways of controlling the pest (1mk)

(iii) Name any **two** disease of cabbage (1mk)

(iv) Name any other crop which can be attacked by the pest (½ mk)

SECTION C (40 MARKS)

Answer any **two** questions from this section

25. (a) State **five** problems associated with nomadic pastoralism (5mks)
    (b) State agricultural practices which cause water pollution (5mks)
    (c) Describe the uses of farm record to a farmer (10mks)

26. (a) Describe the problems of marketing agricultural produce (10mks)
    (b) Discuss the importance of budgeting in agricultural production (10mks)

27. (a) Discuss the importance of irrigation in farming (12mks)
    (b) Explain the factors which influence the type of irrigation to be used in a farm (8mks)

MANGU HIGH SCHOOL

NAME: _____

ADM.NO. _____   CLASS: _____

443/2
AGRICULTURE
PAPER 2
MOCK EXAM
JULY 2017
TIME: 2 HOURS

Kenya Certificate of Secondary Education
Mock Exam
Agriculture
Paper 2

INSTRUCTIONS TO CANDIDATES

(i)   This question paper consists of **THREE** sections; **A**, **B** and **C**
(ii)   Answer **ALL** questions in section **A** and **B** and **ANY TWO** questions in section **C**.
(iii)   **ALL** questions should be answered in the spaces provided.

For Examiner's Use Only

Section	Question	Maximum Score	Candidates Score
A	1-20	30	
B	21-23	20	
C	24 - 26	40	
	TOTAL		

This paper consists of **10 printed pages.** Check the question paper to ensure that all pages are printed and no question is missing.

Turn over

SECTION A: (30MARKS)
Answer all questions in this section

1. Name the species of camel which is kept in Kenya   (½ mk)

2. List **two** appropriate tools needed to lead a bull in a livestock show parade   (1mk)

3. Name **two** functions of the crop in the digestive system of poultry   (1mk)

4. State **four** functions of the lubrication system of a tractor   (2mks)

5. State **two** factors that could lead to failure to conceive 1 cows after service   (1mk)

6. Give **three** ways of stimulating milk let down in a dairy cow   (1 ½ mks)

7. State **three** signs of anthrax infection disease observed in the carcass of cattle   (1 ½ mks)

8. Name **four** systems of a tractor engine   (2mks)

9. Define heterosis as used in livestock breeding   (1mk)

10. Distinguish between prolificacy and mothering ability in livestock production   (1mk)

11. State **four** predisposing factors to contracting mastitis in dairy cattle   (2mks)

12. State **four** limitations of using hydroelectric power on the farm   (2mks)

13. State **four** ways in restraining cattle during routine management   (2mks)

14. List **four** materials that can be used in construction of a Kenya Top Bar Hive.   (2mks)

15. State **two** control measures for fowl pox disease in poultry.   (1mk)

16. Give **three** reasons for carrying out maintenance practices on a mower   (1 ½ mks)

17. Give **three** methods of harvesting fish in a pool   (1 ½ mks)

18. State **four** reasons for identification in cattle management   (2mks)

19. State **four** methods of dehorning in the management of cattle   (2mks)

20. State **three** sings of heat observed in rabbits   (1 ½ mks)

SECTION B (20 MARKS)

Answer **all** questions in this section

21. The diagram below shows a farm implement. Study it and answer the questions that follow
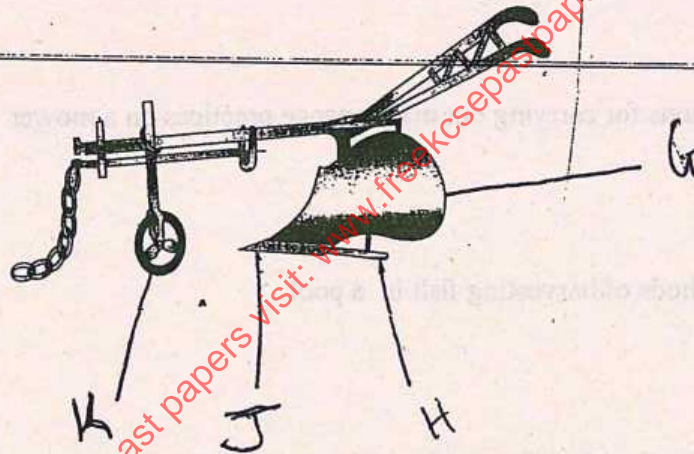
(a) Identify the farm implement shown above   (1mk)

(b) Name the parts labeled G, H, J, K   (2mks)

G _____   H _____

J _____   J _____

(c) State **four** functions of the farm implement illustrated above   (2mks)

-4-

22. The diagram below illustrates a symptom of a disease in poultry. Study it carefully and answer the questions that follow.

Lesions or wounds

Lesions or wounds
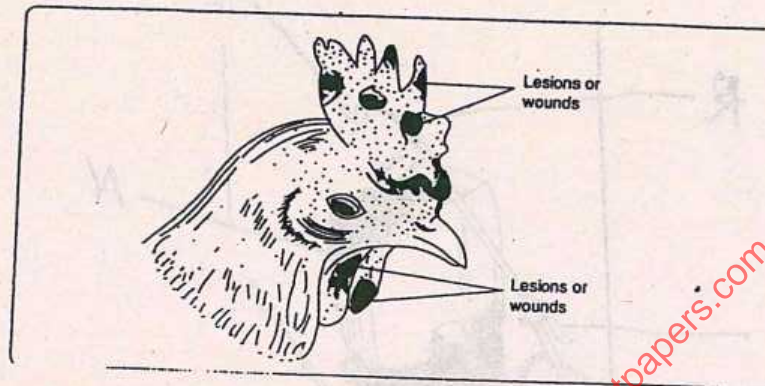
(a)   Identify
       (i)   The disease   (½ mk)

       (ii)   The causal organism   (½ mk)

(b)   Apart from lesions, state two other symptoms of the disease   (2mks)

(c)   State **two** control measures for the disease   (2mks)

23. The diagram below shows a knapsack sprayer. Study it carefully and answer the questions that follow.
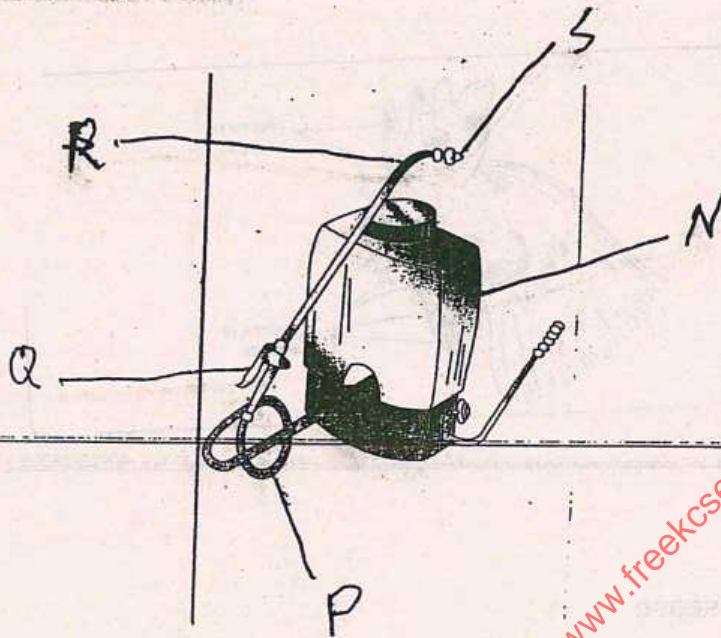
(a) Name the parts labeled N, P, Q and R   (2mks)

N _____   P _____

Q _____   R _____

(b) State **one** function of the part labeled S   (1mk)
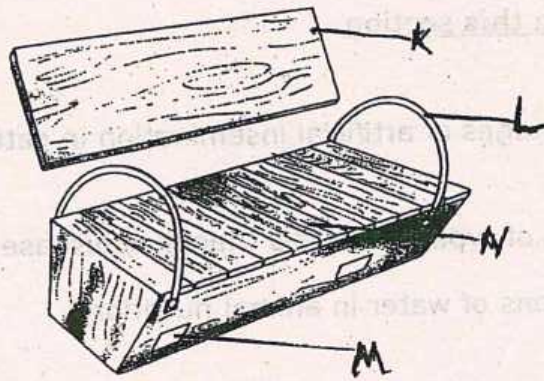
(c) (i) Name the tool shown in the diagram below   (1mk)
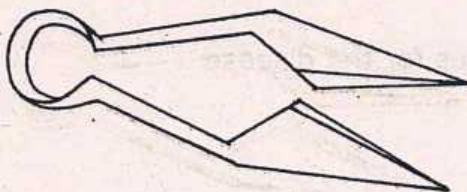
(ii) State the use of the tool   (1mk)

24. The diagram below illustrates a farm structure. Study it carefully and answer the questions that follow

(i) Identify the structure (½ mk)

(ii) Name the parts labeled K, L, M and N (2mks)

K _____ L _____

M _____ N _____

(iii) State **two** advantages of the above structure (1mk)

(iv) State **three** maintenance practices carried out on the structure (1 ½ mks)

SECTION C: 40 MARKS
Answer **any two** questions in this section

24. (a) Outline **five** advantages of artificial insemination in cattle management
(5mks)

    (b) Describe **ten** signs of typanosomiasis (nagana) disease in livestock (10mks)

    (c) Explain **five** functions of water in animal nutrition (5mks)

25. (a) State the differences between a diesel engine and a petrol engine (5mks)

    (b) Explain the factors considered culling livestock (5mks)

    (c) Give **five** effects of liver fluke in sheep rearing (5mks)

    (d) Outline **five** disadvantages of livestock of live fences (hedges) on the farm (5mks)

26. (a) Outline **five** features that enable camels to survive in arid areas (5mks)

    (b) Describe the use of various hand tools required for the sue construction of a wooden rabbits hutch (10mks)

    (c) Outline **five** benefits of using biogas as a source of power on the farm (5mks)

Name —————————————————————— Adm No ——————————

Class ————————— Date—————————

565/1
BUSINESS STUDIES
Paper 1
July 2017
Time: 2 hours

Kenya Certificate of Secondary Education
565/1
Paper 1
BUSINESS STUDIES
2 hours

Instructions to Candidates

❖ Write your name and admission number in the spaces provided above

❖ Write the date of the examination in the spaces provided above

❖ Answer all the questions

❖ All answers must be written in the spaces provided in this booklet

❖ Do not remove any pages from this booklet

❖ This paper consist of 14 printed pages

❖ Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing

For Examiner's use only
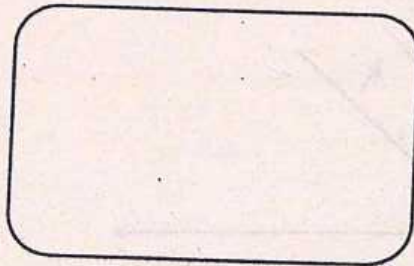
1. The following are descriptions relating to business studies. Identify the business studies term that relates to the description given in the table below. (4mks)

	Description	Term
a)	Refers to the study of how human beings strive to satisfy endless wants	
b)	Study of the activities involved in the process of identifying a business opportunity	
c)	Refers to all activities carried out in an office	
d)	Study of trade and aids to trade	

2. Outline four disadvantages of division of labour to an organization. (4mks)
3. Highlight four factors that an entrepreneur would consider when evaluating a business idea. (4mks)
4. State four characteristics of Hypermarkets. (4mks)
5. In the spaces provided below identify what the Partnership Act of Kenya states in relation to:
   i)   capital contribution:
   ii) books of accounts:
   iii) dissolution:
   iv) drawings:
6. Outline four functions of Consumer Association in Kenya (4mks)
7. State four emerging trends in Matatu PSV transport sector in Kenya (4mks)
8. Highlight four functions of advertising agencies (4mks)
9. Give the name of the insurance policy described in the following table (4mks)

	Description	Name of policy
a)	Covers ships while on a specified voyage and time	
b)	Covers a specified peril when the ship is either being loaded, offloaded or serviced	
c)	Covers cargo against loss or damage while being transported by ship	
	One policy used to cover a number of ships belonging to one organization	

10. State four benefits of warehousing to consumers (4mks)

11. The diagram below shows a shift in supply curve from S_0S_0 to S_1S_1 (4mks)
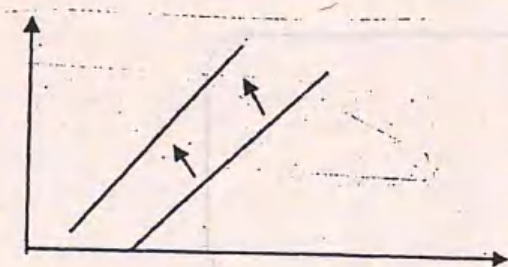
State four factors that may account for the above shift

2

12. Outline four factors that would influence the decision on the type of goods to be produced by a business organization (4mks)

13. Highlight four methods that are used by a monopolistic firm to differentiate products (4mks)

14. Highlight four uses of a Bill of Landing in international trade. (4mks)

15. Outline monetary policy measures that can be used to control the supply of money in an economy (4mks)

16. To many developing countries unemployment is a major economic issue. In the following scenarios identify the type of unemployment being solved:
   i) Government initiating projects to ensure continuous food production
   ii) Retraining teachers to embrace use of technology in teaching and learning:
   iii) Invention of job advertisement sites to ensure easy accessibility by job seekers:
   iv) Parliament passing legislation to accommodate and enable disabled people to acquire jobs:

17. the following information relates to Kuwa Traders for the period ended 30th June 2012

	Sh
Stock (30th June 2012)	124,000
Stock (1st July 2011)	200,000
Purchase for the year	380,000
Sales	440,000
Return Inwards	20,000
Carriage inwards	4,000
Carriage outwards	1,500
Discounts received	3,000

Prepare the business's trading account for the year ended 30th June 2012 (5mks)

18. the terms capital employed, working capital, owner's equity and borrowed capital are types of capital found in a business. Match each of the statements given below with the relevant type of capital (3mks)

Statement	Type of capital
Resources invested into the business by the owner	
Excess of current assets over current liabilities	
Amount invested into the business by outsiders	

19. Indicate the source document and the book of original entry in which each of the following transactions should be recorded.

No	Transaction	Source Document	Book of original entry
a	Purchase of goods on credit		
b	Payment of cash to a creditor		
c	Sale of goods on credit		
d	Sale of fixed asset on cash		

20. State any four money transfer facilities offered by commercial banks (4mks)

21. Outline four factors that determine the amount of revenue to be collected through taxation in an economy (4mks)

22. The following balances were extracted from the books of Rehema traders on 1ˢᵗ January, 2007

Capital	Kshs. 600,000
Creditors	Kshs. 180,000
Motor Van	Kshs. 200,000
Furniture	Kshs. 200,000
Stock	Kshs. 60,000
Debtors	Kshs. 80,000
Cash	Kshs. 240,000

The following transactions took place during the year ended 31ˢᵗ December, 2007

a) Sold furniture worth Kshs. 60,000 for which Kshs. 40,000 cash was received and the balance was due at the end of the year.

Prepare Rehema's Traders Balance Sheet as at 31ˢᵗ December, 2007 showing the items in their relevant classes.

23. Outline four factors that may hinder economic development in a country like Kenya (4mks)

24. On the 1ˢᵗ February 2014, Muthoni traders had a cash book that showed a credit balance of Ksh 150,000 at the bank and a debit balance of Ksh 25,250 in hand. During the month the following transactions took place:

February 5: made cash sales for Kshs. 21,500

February 16: received a cheque for Ksh 360,000 from a debtor

February 28: paid a creditor Ksh 100,000; partly by a cheque of Kshs. 80,000 and the balance in Cash

Prepare a two column cash book for the month (4mks)

25. The cost of consumer goods and services for a representative basket of an average family is given below.

Year	2012	2013
Prices	Ks 1200	Ks 1600

Determine the increase in consumer price index using 2012 as the base year.