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HOLIDAY ASSIGNMENT

FORM 3 SET 2 QNS

Attempt & Present This Work on Opening Day!

For Marking Schemes Call 0705525657

ENGLISH

PAPER 1

(FUNCTIONAL SKILLS)

1. You are a young investigative journalist; you've just visited a welfare organization that received funds from a donor. The organization however feels that the funds can't suffice their plans and therefore appeals for more funds from the donor. Write a report.

.....

2. CLOZE TEST (10mks)

Fill in each blank space in the following passage with a suitable word.

Can you _____1_____ a basic standard two test? You may be schooled but you are not____2_____ this, a woman's baby is dying _____3_____! Picture this, a woman's baby is on the _____3_____ a disease and a nearby poster On the _____4_____ gives details on how to prevent or _____ 5_____ it, yet _____6_____ cannot interpret it despite having attended primary school. This is part of a dilemma that a

group of education researchers are out to ____7_____: Weather Kenya's _____8_____can be read but cannot process information.¬¬¬¬¬_____9_____Education researchers have designed a unique test _____10_____ at reviewing Kenyans? Ability to read and write completely, despite, going through a rigorous school system.

3. ORAL SKILLS (30mks)

a) Read the oral narratives below and answer the questions that follow.

Once upon a time, a woman who was pregnant and about to give birth went to the bush to collect firewood. On went to the bush to collect firewood. On reaching the bush, she suddenly gave birth to a baby boy who was so deformed and ugly that she decided to exchange it for another baby. A normal – looking one she found abandoned and crying in a nearby thicket. She didn't know that this baby was a spirit called Ekipie by the Turkana.

The woman returned home with the baby and since it was evening time, she had to milk the cows. So as usual, she took three gourds and filled them with milk from the numerous cows they owned. She put the milk containers in her hut where her eldest daughter was minding the new baby. Then she went out again to complete some of her other chores.

Later, when she returned to the hut where she had left the baby, she found to her dismay, that there was no milk at all. All the three guards were empty. Surprised, and shocked, she questioned her daughter about the milk and what had happened to it. The girl replied;

"The baby has drunk it all".

"I cant belief such a tale. It's ridiculous for you to say such a thing", She scolded her daughter.

"Don't tell lies. Admit you are just imagining things. Who drank the milk?"

The woman persistent in questioning her daughter in questioning her daughter who swore it was the baby.

Strange as it may sound to you, the same thing happened again the following day and a several consecutive days. The woman grew puzzled and confused. Her husband too began to complain about the non – availability of milk in the household. Now, the woman had no alternative but to tell him the truth.

Questions

i) What would you do to prepare your audience to listen to the above story? (2mks)

.....

ii) What two things would indicate to you that the audience is following the story? (2mks)

.....

.....

iii) What two oral devices would you use in narrating this story?

.....

.....

iv) How would you perform the reply of the girl" The baby has drunk it all"

.....

.....

b) Provide homophones for the following words.

i) Know.....

.....

.

ii) Scene.....

.....

.....

.....

iii) Sight.....

Iv.

Blew.....

.....

.v.

Ewe.....

.....

c) Explain the difference in meaning between the following sentences. (2mks)

i) The thief entered this house

ii) The thief entered this house

.....

.....

d) In the following paragraph, the writer has utilized one of the genres of oral literature to express his feeling about the subject. Answer the following question based on it.

The prince was their, idol

Through he was enjoying the peas.

He was bored and need parrying,

The regency took the queue

To enjoy from the generous air,

The kind sun of the kingdom.

(Karnabomain)

Replace the underlined words with those that have the same sounds to bring out the intended surface/ literal meaning. (3mks)

i).....

.....

v).....

.....

e) " Your Bob owes our bob. If your Bob doesn't give our Bob the bob owes our Bob, Our Bob will give your Bob a bob in the eye?

i) Identify the genre above (2mks)

.

ii) Give one characteristic feature of the genre above. (2mk)

.....

.....

.....

.....

f) Mrs. Jabali of Upendo High School asked her class to decide which of the set books in their syllabus they should perform for the rest of the school. Read the form Four champions discussion below and then answer the questions that follow.

Mrs Jabali: Rose, Would you lead the discussion?

Rose: Aha,Ok. The question is, What play should we pick for our class play?

Does anyone have suggestions? Mercy?

Mercy: I suggest we do an Enemy of the people.

Sharon: How about shreds of Tenderness?

Rose: No, I dislike Shreds of Tenderness Passionately.

Kaunda: I love the River Between.

Mercy: No way! That would make a stupid play! let's do An Enemy of the people.

Rose: Sasha!

Sasha: I have never watched Shreds of Tenderness but .....

Joy: It is a super barb play.

Rose: Joy, Please let Shasa finish then it is your turn.

Joys: Sorry

Sasha: Anyway, I have never seen a play on An Enemy of the People but I have watched a movie and I loved it.

Rose: Lilian

Lilian: I just wanted to say that I like think Shreds of Tenderness is really good play.

Rose: Naom?

Naom: I saw the Movie An Enemy of the people too, and I really liked it. I loved the part where Catherine storms the.....

Rose: Excuse me, Naom, But we should talk about that after the discussion is over. Does anyone have any other suggestions? No? Ok.Mercy proposed An Enemy of the People, Sharon like Shreads of Tenderness and Kaunda wants the River Between.

Has anybody seen or read all three? No? Ok. I suggest that we read them and then continue the discussion in a couple of days. Is that okay with everyone? Ok.

The discussion is over.

i) In terms of effective communication identify five things some members of form four champions did wrong in the discussion. (5mks)

.....

.....

.....

ii) Mention three aspects or etiquette displayed by some members during the discussion. (3mks)

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ENGLISH PAPER TWO

Instructions to candidates.

- Answer ALL the questions only

For Examiners Use Only

Question	Maximum score	Candidate's score
1.Comprehension	20	
2.Literary Appreciation	25	
3.Poetry	20	
4.Grammar	15	
Total score	80	

1. Read the passage below and answer the questions that follow (20mks)

WORRY has completely defeated me. My mind was so confused and troubled that I could see no joy in living. My nerves were so strained that I could neither sleep at night nor relax by day. My three young children were widely separated, living with relatives. My husband was in another city trying to establish a law practice. I felt all the insecurities and uncertainties of the post –war readjustment period.

I was threatening my husband's career, my children natural endowment of a happy, normal home life, and I was also threatening my own life. My husband could find no housing, and the only solution was to build. Everything depended on my getting well. The more I realized this and the harder I would try; the greater would my fear of failure. Then I developed a fear of planning for any responsibility. I felt that I could no longer trust myself. I felt I was a complete failure.

When all was darkest and there seemed to be no help, my mother did something for me that I will never forget or ceases being grateful for. She shocked me into fighting back.

She upbraided me for giving in and for losing control of my nerves and my mind, she

challenged me to get up out of bed and fight for all I had. She said I was giving in to the situation ,fearing it instead of facing it, running from life instead of living it.

So I did start fighting from that day on. That very weekend I told my parents they could go home, because I was going to take over; and I did what seemed impossible at the time. I was left alone to care for my two younger children. I slept well. I began to eat better, and my spirits began to improve.

A week later when they returned to visit me again, they found me singing at my ironing. I had a sense of well -being because I had begun to fight a battle and I was winning. I shall never forget this lesson..... if a situation seems insurmountable, face it! Start fighting! Don't give in.

From that time on I forced myself to work, and lost myself to work. Finally I gathered my children together and joined my husband in our new home. I resolved that I would became well enough to give my family a strong, happy mother. I became engrossed with plans for my children, plans for my husband, and plans for everything except for me. I became too busy to think of myself. And it was that the real miracle happened.

I grew stronger and stronger and could wake up with the joy of well - being , the joy of planning for a new day ahead, the joy of living. And although day of depression did creep in occasionally after that, especially when I was tired, I would tell myself not to think or try to reason with myself on those days and gradually they became fewer and fewer and finally disappeared.

Now, a year later, I have a very happy, successful husband, a beautiful home that I can work in sixteen hours a day, and three healthy, happy children and for myself , peace of mind.

(Adapted from "How to stop worrying and start living")

Questions

(a) Give **five** effects of worry on the writer. (

(b) What do you think was the cause of the writer's worry. (2mks)

(c) Describe the element of **irony i**n the writer's life. (3mks)

(d) How does the writer get out of this terrible situation?

(e) What **steps** does the writer undertake to overcome the problem?

(f) In a paragraph of about **60 words** explain the benefits of the writer's efforts to overcome worry. (4mks)

2. Read the following excerpt and answer the questions that follow

However, the notion that he was about to hand over his own daughter to a gangster continued to **gnaw** at the conscience of Ole Kaelo relentlessly. He felt guilty, especially when he recalled the atrocities that were known to have been committed by Oloisudori over the years. But another voice told him quietly that he was being foolish and unreasonable to question his own conscience over the matter of Oloisudori, for he was just one among many who were enjoying the fruits of their labour. And it was hardly anybody's business to know how honest that labour was. After all, the small voice reassured him tauntingly, those who committed bigger crimes such as Goldenberg and Anglo-leasing, were still enjoying the 'fruits of their labour.' Had they not invested the yields of their ill-gotten money in housing estates, in shares, in import and exports in tourism, in transport and in other trades, just as Oloisudori had done?

When he went to bed later that evening, he remained awake for many hours **pondering** over those disturbing thoughts that went through his mind fleetingly, like water that churned violently in a turbulent sea. He thought of Oloisudori's **impending visit** and his intended marriage to Resian. He knew the success of failure of the event would determine the fate of his business. Even his continued ownership of that house where he and his family lived, depended on the outcomes of that event. Should Oloisudori fail to get Resian and recall the loan he had extended to him to buy that house, **he was done**. And knowing Oloisudori, he could very easily draw the rug from beneath his feet, leaving him vulnerable to all kinds of vagaries. And the thoughts gave him anxious moments.

At dawn when sleep overtook him, Ole Kaelo had a pleasant dream. Resian had consented to Oloisudori's proposal. After Oloisudori reported that to him, he was greatly pleased and relieved.

His wife was rapturous. Although they were astonished at the turn of events, they were relieved to know that they would not have to live with the guilt of having forced their daughter to get married. What a wise child his once hardheaded daughter had turned to be after all! And how devious! After all those years of sullenness, awkwardness and tactlessness, she had finally brought relief to their life and ushered in a period of peace and tranquility. But then, it was just that. A dream!

Questions

a).Place the excerpt in its **immediate** context. (4mks)

b).Discuss three **major issues** in this excerpt. (6mks)

c).Discuss two character t**raits** of ole kaelo in this excerpt. (4mks)

d).“and the thoughts gave him anxious moments” (**add a question tag**.)
(1mk)

Discuss any **three aspects** of **style** in this excerpt. (6mks)

f).Explain the **meaning** of the following expressions from the excerpt.
(4mks)

(i). Gnaw…….

(ii). Pondering……

(iii). Impending visit ……..

(iv). He was done…….

3. Read the following **oral poem** and then answer the questions which follow

O elephant possessor of a saving- basket full of money

O elephant, huge as a hill, even in a crouching posture,

O elephant, enfolded by honour:demon, flapping fans of war.

Demon who snaps tree branches into many pieces and moves on the forest farm,

O elephant, whom ignores ' I have fled to my father for refuge'.

Let alone 'to my mother'Mountains Animal, Huge

Best who tears a man like a garment and hangs him up on a tree,

The sight of whom causes people to stampede towards a hill of safety,

My chant is a salute to the elephant ,Ajanaku who walks with a heavy tread,

Demon who swallows palm-fruit bunches, whole, even with the spiky pistil –cells,

O elephant, praise named, Laaye, massive animal blackish –grey in complexion,

O elephant, who single-handed cause a tremor in a dense tropical forest,

O elephant, who stands sturdy and alert, who walks slowly as if reluctantly,

O elephant, whom one sees and points towards with all one's fingers.

The hunters boast at home is not repeated when he really meets the elephant.

The hunters boast at home is not repeated before the elephant,

Ajanaku looks back with difficulty like a person suffering from a sprained neck.

The elephant has a porter's – knot without having any load on his head.

The elephant's head is his burden which he balances,

O elephant, praise named, Laaye, O death, please stop following me.

This part and parcel of the elephant's appellation.

If you wish to know the elephant, the elephant who is a veritable ferry –man.

The elephant whom honuor matches, the elephant who continually swings his trunk.

His upper fly-switch.,It's the elephant whose eyes are veritable water –jars,

O elephant, the vagrant par excellence.

Whose molar teeth are as wide as palm- oil pits in Ijesaland,

O elephant, lord of the forest, respectfully called Oriiribobo

O elephant whose teeth are like shafts,One tooth of his a porter's load,

O elephant fondly called Otiko,Who has a beast- of burden's proper nock,

O elephant, whom the hunter at other times aces face to face.

O elephant, whom the hunters at other times seas from the rear.

Beast who caries mortars and yet walks with a swaggering gaint.

Primeval leper, animal treading ponderously.

Questions

(a) What **type o**f oral poem is this?
(2mks)

(b) Identify, illustrate and give the effect of any **three** features of style used in the poem.(6mks)

(c) How is the elephant **portrayed** in the poem?

(d) What is the **persona's attitude** towards the elephant?

(e) Identify any **two** economic activities of the community from which this poem is derived.

(f) Identify the main **theme** of this poem. (2mks)

(g) Explain any **two** problems you may encounter when collecting material for this genre.

4. **Grammar**

a). **Rewrite** the following sentences as instructed (2mks

1. My examination results were released only after I had cleared the fee balance.***(Begin: Not until.....)***

2.If I were the Minister for National Security, I would ensure tighter security checks at the borders.

(**Begin:** Were I)

3.They had handled the case so carelessly that we were not satisfied. (**Begin** : So ...)

4. "I shall expect to see you next Wednesday," the teacher told the student.***(Write in reported speech.)***

b).Use the **correct form** of the word in brackets in the sentences that follow.
(3mks)

i. The modern world today has many …….forms of communication (s**ophistication**)

ii The gas was stored in a ……..container (**pressure**)

iii. Do not wait for the bus, it comes to this town very …….. (regular).

c). Give the **meaning** of the underlined **idiomatic expression**.

(2mks)

(i) The teacher asked him to stop beating about the bush.

(ii) The politicians asked them to cross the bridge when they reach it.

d). Choose the correct **pronoun** in the following sentences.
(2mks)

(i) She knew allbout my friend and _____(I/me)

(ii) What would you do if you are_____? (she/her)

e).Complete each blank space in the following sentences with **appropriate choice** from:
(few, a few, little ,a little, some)
(2mks)

(i) If there is tea left in that flask, I would like to have_____

(ii) Since animal proteins are very expensive_____people eat enough

f) .Replace the underlined word with the correct **phrasal verb**.
(2marks)

1.The class teacher promised to solve the problem. (sort)

2.He tried all his dirty tricks on us but he did not succeed . (come)

3. The nurse couldn't **tolerate** the noise

4.The mayor assumed that the problem had been **got rid of**.

g).Rewrite the sentences below as to remove **gender bias**. (1mks)

1. The headmistress advised her girls to keep off drugs.

2. The father left his sons and daughters a big estate.

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ENGLISH PAPER THREE

1. COMPULSORY: IMAGINATIVE COMPOSITION (20 MARKS)

Either,

a) Write a story beginning with the words:

I had not thought it was a big problem until I got involved …….

Or

b) Discuss the measures you would take to curb flooding in our Kenyan urban areas.

2.**The Compulsory Set Text.**

"**Self-interest** is a vice that whoever engages in it is bound to fail." Using ***Blossoms of theSavannah***, write an essay to support this assertion. (20 marks)

3. THE COMPULSORY SET TEXT

A DOLL'S HOUSE by **Henrik Ibsen** (20 marks)

"Love all, trust none." Show how this is portrayed using illustrations from the play, "**A**

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KISWAHILI PAPER ONE

1. Lazima.

   Wewe umehitmu shahada ya uzamifu kutoka Chuo Kikuu cha Malishoni. Umetuma barua ya kuomba kazi katika taasisi moja inayoshughulika na uhifadhi wa mazingira. Andika tawasifu utakayoiwasilisha kwa wanajopo.

2. Fafanua umuhimu wa viranja shuleni .

3. Tunga kisa kitakachodhihirisha maana ya methali ifuatayo: Uzuri wa mkakasi ndani kipande cha mti .

4. Andika insha itakayoanza kwa maneno:

   Siku hiyo nilitoka nyumbani nikiwa nimezongwa na mawazo mengi baada ya mkasa huo.

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KARATASI YA PILI

1. UFAHAMU (ALAMA 15)

Matumizi ya sheng' yameshamiri sana nchini Kenya hata rniongoni rnwa vijana. Ni kilugha ambacho kinakisiwa kuzuka katika miaka ya 60 na 70 katika makazi ya rnashariki mwa jiji la Nairobi kama vile Kaloleni, Mbotela, Bahati na kadhalika.

Kwa sasa ni kilugha kilichoenea kwingi nchini Kenya na kuwa kitambulisho cha takriban vijana wengi. Wataalam rnbalimbali wanabainisha nadharia mbalimbali kuhusu chanzo cha lugha hii. Kuna nadharia mbili kuu kuhusu asili ya lugha ya Sheng; kwamba kilugha hiki kiliibuka kutokana na wahuni na wakora jijini Nairobi ambao lengo lao lilikuwa kuwasiliana kwa siri. Nadharia nyingine ni kuwa kilichipuka kutokana na vijana ambao walizua lugha ya kuwasiliana baada ya uhuru kwa sababu walikichukia Kiswahili ambacho walikiona kama lugha ya uboi.

Dhana hizi kwa muda mrefu, zimeathiri mitazamo kuhusiana na kilugha hiki. Kwa sasa ni kilugha ambacho kinasambaa katika sehemu mbalimbali za Kenya na watu wa matabaka mbalimbali wanakitumia. Kilugha hiki kimeanza kuashiria uhalisia mkubwa wa maisha ya kisasa, zaidi katika jamii ya Wakenya. Aidha, sheng imejitanzua kutoka hali ye kuwa kilugha cha maongezi pekee na sasa kinatumiwa katika baadhi ya vitabu, hata waandishi wa vitabu wameanza kukitumia, kwa mfano katika miaka ya 80, David Mailu katika kitabu chake 'Without Kiinua Mgongo alitumia sheng.

Katika siku za hivi karibuni, Riwaya ya 'Kidagaa Kimemwozea' iliyoandikwa na Ken Walibora kilugha cha sheng kimepewa nafasi kama kitambulisho cha vijana kupitia kwa mhusika DJ Bob.

Vilevile kumezuka vyombo vya habari kama redio, mfano idhaa ya Ghetto, redio ambayo inaendeleza mawasiliano kwa matumizi ya sheng. Kuna vipindi na matangazo ya kibiashara katika runinga ambayo yanaendelezwa kwa sheng. Kwa mfano katika gazeti a Taifa Leo, kuna ukumbi wa 'Mchongoano' ambao umekuwa ukiendelezwa kwa Sheng.

Nchini Kenya ambapo asilimia 60% ya idadi ni vijana, Sheng imetokea kuwatambulisha vijana. Katika enzi hii ya Teknohama, wanaomiliki vyombo vya habari na sekta nyingine za biashara wamegundua kuwa matumizi ya Sheng ndiyo njia mwafaka zaidi ya kulifikia soko kubwa la vijana kwa ajili ya kueneza matangazo ya bidhaa na huduma za kibiashara. Kwa hivyo, Sheng imekuwa daraja la kuwafikia na kuwavutia vijana.

Hata hivyo, kwa upande mwingine matumizi ya Sheng yamelaumiwa na walimu wengi katika shule za msingi na zile za upili kuwa ni sababu mojawapo kuu ya kushuka kwa matokeo ya lugha ya Kiswahili na Kiingeneza miongoni mwa wanafunzi. Sheng imelaumiwa kwamba inasababisha wanafunzi kutozingatia mafunzo ya kanuni za sarufi na tahajia au maendelezo. Wataalam wanadai kuwa nimsimbo ambao hauzingatii sheria za sarufi na tahajia kwa sababu zizizofahamika, kwani ingawa muundo wake wa kisarufi hushahabiana na ule wa Kiswahili, Sheng hupuuza sarufi ya Kiswahili katika matumizi yake.

Ingawa sheng imekuwa ikipigwa vita, kuna wataalam ambao wana mtazamo kwamba juhudi hizo haziwezi kufanikiwa kwani sheng ni chombo cha mawasiliano miongoni mwa vijana na kwa hivyo ma umunimu wake ambao hauwezi kufumbiwa macho. Wanasema kuwa ni chombo ambacho kinafumbata hisia na mshikamano wa kizazi kipya kama ilivyojitokeza katika kauli mbiu ye mgombeaji urais mwaka wa 2012,Tunawesmake.

Katika hali ambapo kiwango cha ubora wa matokeo ya Kiswahili yalidorora katika mtihani wa Kidato Cha nne (KCSE) mwaka wa 2012 na kuwa asilimia 35.81 pekee yakilinganishwa na asilimia

48.82 ya mwaka 2011, sheng imekuwa ikilaumiwa kuwa ndicho chanzo cha kudorora kwa viwango vya ubora wa matokeo. Baadhi ya hao wataalamu wanasema kwamba sheng haipaswi kuhujumiwa,

kinachohitajika kufanywa ni kuwaelimisha vijana kuhusu mipaka ya matumizi yake.

Maswali

a) Taja mada ya kifungu hiki. (Alama1)

……

b) Fafanua nadharia mbili zilizoeleza asili ya lugha ya Sheng. (Alama 2)

……..…..……

c) Eleza matumizi bainifu ya kilugha cha Sheng katika jamii ya sasa. (Alama 3)

……..…..……

……

d) Taja matokeo hasi ya matumizi ya Sheng katika jamii. (Alama 3)

……..…..……

……..…..……

e) Ni kwa nini mwandishi Walibora ameshirikisha matumizi ya Sheng katika kazi yake ya KidagaaKimemwozea. (Alama 2)

f) Eleza maana ya maneno haya kama yalivyotumika katika kifungu hiki. (Alama 4)

i) Teknohama…….

ii) Kudorora……

iii) Msimbo……..

iv) Kuhujumiwa…….

2. UFUPISHO

Kuna dhana nchini ambayo inazidi kuenezwa miongoni mwa vijana na usipochunga,tutakuja kujipata pabaya katika siku za usoni. Kwa kipindi cha miongo miwili hivi iliyopita, sekta ya sanaa nchini imekuwa ikiimarika kwa kasi. Kuna wasanii ambao wamefanikiwa kujiendeleza kimaisha

kutokana na talanta zao lakini pia kuna wale ambao wamebaki katika hali ya uchochole, pengine kutokana na kuwa hawafahamu vyema jinsi ya kujisimamia na kutumia talanta zao kama mbinu ya kujipatia riziki. Kwa muda huo wote, vijana wengi wamejikuta wakivutiwa mno na hali ya kimaisha ya wasanhi waliobobea, hasa wanamuziki, na hivyo basi hujitosa kwenye sekta ya sanaa wakiwa na matumaini makubwa ya kuishi maisha ya kifahari.

Imefikia kiwango ambapo washikadau wa masuala ya kuendeleza maisha ya vijana, ikiwenio Wizara ya Michezo, Vijana na Utamaduni wanawekeza pakubwa kuendeleza sekta ya sanaa. Ni hapa ndipo wasiwasi unaibuka kwa kuwa huenda tukachukulia Kwamba juhudi za kuwezesha vijana kujikimu kimaisha

zitafanikiwa tu iwapo sekta ya sanaa itaimarishwa. Dhana hii ni potovu na ni sharti washikadau wazinduke, waanze kupanna mawazo yao na kuwa na busara kwenye hatua wanazochukua ikiwa wana nia ya kuwezesha vijana kujikimu kimaisha na kuchangia ukuaji wa uchumi wa taifa.

Ukichunguza kwa makini, utapata kuwa ni asilimia ndogo mno ya wanaojitosa kwenye sanaa ambao wanaweza kusemekana wana ari na kipawa cha kutosha kuweza, kuchangia ipasavyo kwenye uchumi wa kitaifa kwa kutumia vipawa hivyo. Hivyo basi, suala ibuka ni je, asilimia kubwa iliyosalia huwa wanafanya nini, na ni jinsi gani wanavyoweza kuwezeshwa wajiendeleza zaidi kimaisha? Hapatakuwa na haja ya kuwekeza mamilioni ya pesa katika kuendeleza sekta ambapo mapato yake hayatakuwa yenye faida kwa taifa.

Humu nchini tumekuwa na tabia ya kupuuza sekta zilizo muhimu sana, na matokeo yake ni kuwa tunaishia kuagiza bidhaa kutoka nje iihali tungeweza kujitengezea wenyewe nchini. Baadhi ya yale tuliyopuuza ni useremala, ushonaji wa nguo, utengezaji wa bidhaa za ngozi na hadi miaka ya hivi majuzi, kilimo kilikuwa kimezikwa kwenye kaburi Ia sahau miongoni mwa vUana. Ni kutokana na hali hii ambapo vijana wengi wanaochukua mikopo kutoka kwa hazina waliotengewa na Serikali huwa hawafanikiwi, kwa kuwa hakuna uwekezaji wa kutosha uliowekwa kuimarisha ujuzi wao wa kibiashara.

Kwa sasa, Serikali iko katika harakati za kuagiza vipakatalishi kutoka India. Na kumbuka vyema serikali ilivyotangaza kuwa vipakatalishi vitakuwa vikitengezwa nchini. Kwa kuviagiza kutoka

mataifa ya kigeni, ni wazi kuwa hatujafikia kiwango cha kujitengezea vifaa hivyo kwa kiwango kikubwa, ingawa kuna watu kadha arnbao huagiza vipuri na kujitengezea kompyuta wenyewe. Vijana wanahitaji kuwezeshwa katika nyanja zote, na wala sb kwa sanaa na niichezo pekee.

Iwapo tutaendelea kutoa picha ya kuwa michezo na sanaa,pekee zilizo muhimu kwa vijana, itafika wakati ambapo tutaanza hata kuagiza mboga kutoka mataifa ya nje tusipojihadhari. Bila shaka tuna nafasi ya kurekebisha mienendo yetu, na ni vyema ikiwa tutachukua hatua hiyo haraka iwezekanavyo.

Maswali

a)Fupisha aya tatu za kwanza kwa maneno 90-95. (Alama 8,1 ya Utiririko)

MATAYARISHO

NAKALA SAFI

……..……

b)Kwa kutumia maneno 70 - 75, eleza masuala ambayo mwandishi anaibua katika aya tatu za mwisho. (Alama 5, 1 ya Utiririko)

MATAYARISHO

……

NAKALA SAFI

……..……

…

……..……

3. MATUMIZI YA LUGHA

a) Taja sauti mbili zenye sifa zifuatazo za matamshi. (Alama 1)

i) Mbele, wastani, tandazwa.

.....

ii) Kati, chini, tandazwa (Alama 1)

.....

.....

b) Bainisha viambishi na mzizi katika neno kunipa. (Alama 3)

……..…..…….……

……..…..…….……

c) Huku ukitoa mfano mmoja bainisha makundi matatu ya vivumishi vya sifa. (Alama 3)

i) ……

ii) ……

iii) ……

d)Tunga sentensi moja yenye chagizo na yambwa. (Alama 2)

....

Kirai ni nini? (Alama 1)

.....

.

ii) Ainisha virai katika sentensi ifuatayo. (Alama 2)

Walimu hao hufunza wanafunzi kwa bidii.

.....

f) Changanua sentensi ifuatayo kwa njia ya mishale. (Alama 4)

Kitabu alichokinunua juzi kina uzuri mwingi.

g) Huku ukitoa mfano mmoja mmoja, eleza namna tatu za kukanusha hali ya KU. (Alama 3)

i)……..…….

ii)……..……

h) Andika wingi wa ukubwa wa sentensi ifuatayo.(Alama 2)

Huyu ndiye mwanamume mwembamba zaidi.

……..……i) Geuza sentensi ifuatayo katika usemi halisi.(Alama 2)

Mwalimu alisema angemwadhibu mwanafunzi siku iliyofuata.

.

j) Andika kinyume cha sentensi ifuatayo.(Alama 1)

Mama ametoka darasani kwa haraka.

.....

.....

k) Kanusha sentensi ifuatayo kwa umoja. (Alama 1)

Walipochekesha watu walipelekwa ng’ambo.

….……..……

l) Eleza maana tatu za sentensi ifuatayo. (Alama 3)

Wakenya hawakienzi Kiswahili kama Watanzania.

m) Andika upya sentensi ifuatayo ukibadilisha neno lililopigiwa mstari kuwa nomino.(Alama 2)

Mlachake **alilewa** hata akashindwa kutembea.

……..

n) Tumia neno **makini** kama nomino katika sentensi. (Alama 1)

……..…….

o) Sahihisha sentensi ifuatayo. (Alama 2)

Wasee hao waliwaambia wamama wale kuwa hawakuwa na kizazi nao hata baada yakuwatusi vibaya.

…….…….

p) Tunga sentensi katika wingi ukitumia nomino hizi pamoja na kisisitizi mwafaka. (Alama 2)

i) noti

ii) kiziwi

…….…….

q) Tunga sentensi ukitumia **ni**kama: (Alama 2)

i) Swali au kiulizi.

.....

.....ii) Amri

r) Tunga sentensi ukitumia neno **labda** kudhihirisha maana zifuatazo. (Alama 2)

i) Shaka

……..…….

ii) Uwezekano.

……..…….

4. ISIMU JAMII (ALAMA 10)

Utafiti wa kiisimu na fasihi unaonyesha kuwa Kiswahili ni lugha ya Kiafrika. Fafanua.(Alama 10)

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KISWAHILI KARATASI YA TATU

102/3: FASIHI.

SEHEMU A USHAIRI (alama 20)

SWALI LA LAZIMA

USHAIRI:

Soma shairi hili kasha ujibu maswali yanayofuata.

SABUNI YA ROHO

Ewe tunu ya mtima, kwa nini wanikimbia?

Ndiwe suluhu la zama, waja wa kukimbilia,

Waja wana kutazama, madeni wakalipia,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Ndiwe mafuta ya roho, walisema wa zamani,

Utanunua majoho, majumba na nyumbani,

Umezitakasa roho, umekuwa mhisani,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Matajiri wakujua, wema wako wameonja,

Nguo zao umefua, wakupata kwa ujanja,

Sura zao mefufua,wanazuru kila Nyanja,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Ndiwe mvunja mlima, onana na maskini,

Watazame mayatima, kwao kumekua wa duni,

Wabebe waliokwama, wainue waliochini,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Ndiwe mvunja mlima, wapi kupata uwezo?

Umezua uhasama, waja kupata mizozo,

Ndiwe chanzo cha zahama, umewaitia vikwamizo,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Umevunja usuhuba, familia zazozana,

Walokuwama habuba, kila mara wagombana,

Roho zao umekaba, majumbani wa chinjana,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Nakutafuta kwa hamu, sabuni unirehemu,

Sinilipue ja bomu, sije kawa marehemu,

Niondoe jehanamu, ya ufukara wa sumu,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

Naondoka wangu moyo, nikuitapo itika,

Fulusi wacha uchoyo, tatua yalonifika,

Nichekeshe kibogoyo, name nipate kuwika,

Ndiwe sabuni ya roho, ndiwe mvunja mlima.

<u>Maswali</u>

a) Mshairi anaongea na nani katika shairi hili? [alama1].

b) Taja majina mengine matatu aliyopewa huyu anayesemeshwa[alama3].

c) Anayezungumziwa katika shairi hili anasababisha balaa gani?[alama2]

d) Mshairi anatoa mwito gani kwa mwenziwe?[alama4]

e) Fafanua maudhui ya ubeti wa sita.[alama2]

f) Mbinu kadha za uandishi zimetumiwa na msanii kuwasilisha ujumbe wake. Taja mbinu zozote tatu na uzitolee mifano katika shairi.[alama3]

g) Fafanua maana ya : sura zao 'mefufua, wanazuru kila nyanja'[alama1]

h) Andika ubeti wa saba katika lugha nathari.[alama4]

SEHEMU B: CHOZI LA HERI[alama20]

Jibu swali la 2 au 3

2.Eleza jinsi mbinu ya majazi imetawala kazi ya kisanaa ya mwandishi wa chozi la heri.[alama 20]

3. Jadili dhana ya chozi katika riwaya ya chozi la Heri.[alama 20]

SEHEMU C: TAMTHILIA (alama 20)

Tamthilia: kigogo

Jibuswali la 4 au 5.

4."Dalili ya mvua ni mawingu, lazima fume macho."

a) Eleza muktadha wa dondoo hili.[alama4]

b) Ni kitu gani kilichopelekea msemaji kutamka kauli hiyo.[alama2]

c) Taja sifa za msemaji.[alama6]

d) Eleza methali zingine tano zilizotumika katika tamthilia hii.[alama8]

5 a Eleza matumizi ya vipengele vya ushairikatikatamthiliayakigogo.[alama7]

b. ukombozi wa jamii yoyote unahitaji uvumilivu kupiga moyo konde .Thibitisha kauli hii ukirejelea tamthilia ya kigogo.[alama6]

c. Tofautisha kwa mifano thabiti mbinu za litifati na tadmini kama zilivyotumika katika tamthilia ya kigogo.[alama7]

SEHEMU D: FASIHI SIMULIZI. (alama 20)

Jibuswali la 6

6. Soma utungo ufuatao kasha ujibu maswali.

Ndimi mwimo mdumishaji ukoo,

Ndimi ndovu mtetemesha ardhi,

Aliyegigang vita, ukoo kiauni,

Ziliporindima zangu nyayo

E dui alinywea, mafahali na mitamba akatukabidhi.

Kwenye misitu sikuwa na kifani

Paa na hata visungura

Vilijikabidhi kwangu

Kwa kuinusatumata

Nani aliyewahi

Ngomani kunifiku?

Makoo hawakunisifu, wakalilianikaha?

Kwenye Nyanja zamichuano

Nan iangethubutu, ndoro kunipigia?

Sikuwa bwaga chini, kwaya ngumaozi, hata kabla hatujavaana?

i. Andika aina ya sifo hii na utaje sifa za kembili. (alama 4)

ii. Bainisha shughuli mbili za kiuchumi na mbili za kijamii zinazoendelezwa n ajamii inayosawiriwa na utanzu huu. (alama 5)

iii. Eleza mambo matano ambayo yanaweza kuzingatiwa ili kufanikisha uwasilishaji wa utungo huu. (alama 5)

iv. Eleza faida sita za matumizi ya nyimbo katika uwasilishaji wa ngano. (alama 6)

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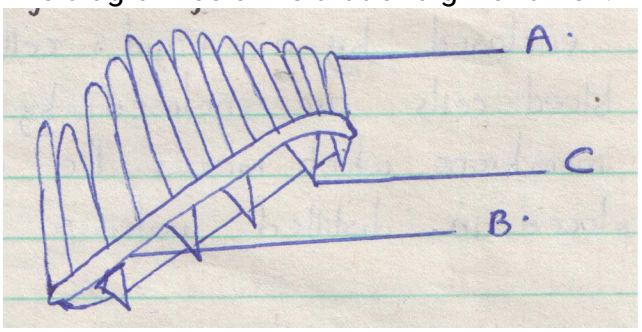
BIOLOGY PP1

Instructions
Answer all the questions in the spaces provided

1. The diagram below is that of a gill of a fish.



a) Name the parts labeled A and B. (2mks)

b) State the function of part labeled C. (1mk)

c) Explain how structure labeled A is adapted to its function. (2mks)

2. (a) Give the products of aerobic respiration in plants and animals. (3mks)

(b) Name two factors that affect the rate of respiration. (2mks)

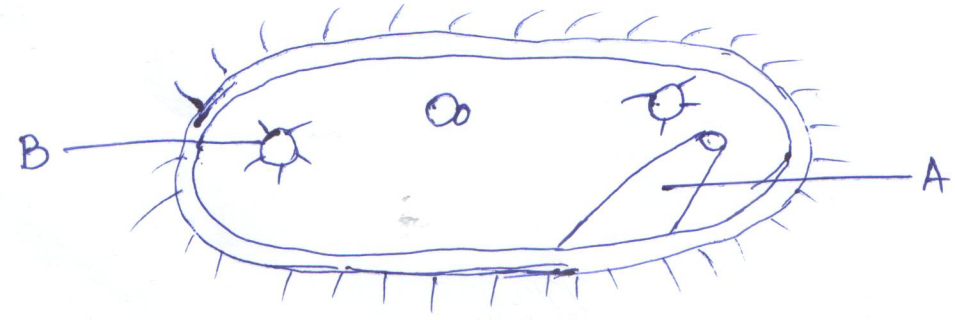
3. Explain why red blood cells burst when placed in distilled water while plant cells remain intact. (3mks)

4. Distinguish between diffusion and osmosis. (2mks)

5. A form three student came across two different types of fruits which are described as follows:
   Fruit A
   Has free central placentation, hard epicarp and fibres air-filled mesocarp.
   Fruit B
   Hasaxile placentation, fleshy mesocarp and brightly colouredepicarp.

   a) Suggest the possible agent of dispersal of each type of fruit. (2mks)

6. A student examining pond water came across a certain living organisms which he drew as shown below.



   i) Identify the organism shown above. (1mk)

   ii) State the kingdom of the above organism. (1mk)

   iii) Name the structure labeled A. (1mk)

   iv) State the function of the part labeled B. (1mk)

7. Give the role of the following hormones during menstrual cycle. (3mks)
   a) Follicle stimulating hormone.

b) Oestrogen.

c) Luteinizing hormone.

8. During a surgical operation, a doctor accidentally cut two blood vessels A and B. Out of blood vessel A, blood was spurting out while through blood vessel B, blood was flowing smoothly.
   i) Identify blood vessels A and B. (2mks)

9. What are the disadvantages of sexual reproduction? (3mks)

10. During cold weather, very small mammals eat more than their own weight of food per day whereas large mammals eat food which is only a small fraction of their weight. Give an explanation for this. (3mks)

11. State the function of the following cell organelles. (3mks)
    a) Lysosomes.

    b) Ribosomes.

    c) Golgi apparatus.

12. Pregnancy would persist after the expiry of the fifth month of pregnancy even if the two ovaries are surgically removed from the body of female individual. Give an account for this. (2mks)

13. List two main branches of biology and for each, give a definition. (2mks)

14. What is the role of vascular bundles in plant nutrition? (3mks)

15. What do you understand by the term double fertilization in flowering plants? (2mks)

16. Define the following terms as used in ecology. (3mks)
    i) Carrying capacity.

    ii) Biosphere.

    iii) Ecological niche.

17. Distinguish between intra-specific and inter-specific competition. (2mks)

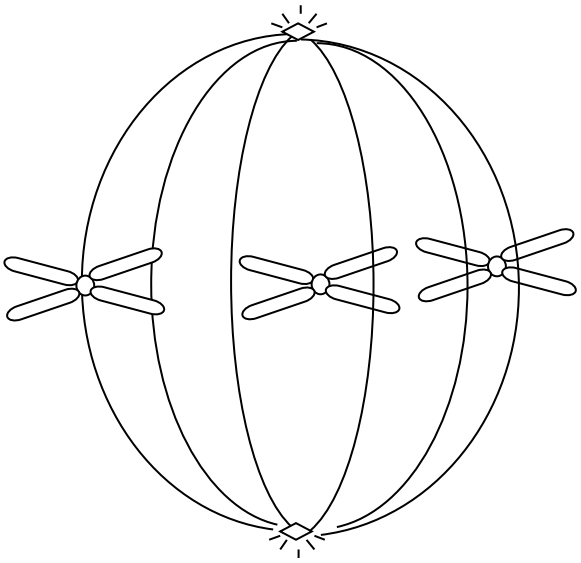
18. (i) Name the process through which free atmospheric nitrogen is converted into nitrates. (1mk)

    (ii) Name the bacteria found in root nodules of leguminous plants. (1mk)

    (iii) What is the role of bacteria named (a) above. (1mk)

19. In a capture-recapture exercise to estimate population size of dragon flies on a stretch of rivers, 250flies were first caught and marked. Two days later 500 flies were caught in the second capture and out of this, 50 flies had marks on their bodies. Estimate the population size of the flies. (show your working)
(3mks)

20. The diagram below shows a stage of a certain type of cell division.



a) Identify the stage and type of the cell division the above cell is undergoing.
(2mks)

b) State two importance of the above type of cell division. (2mks)

21. (a) What is placentation? (1mk)

(b) Give three types of placentation. (3mks)

22. Identify four ways through which the HIV/AIDs virus is transmitted.
(4mks)

23. State the mode of asexual reproduction in; (3mks)
    a) Yeast.

    b) Amoeba.

    c) *Rhizopus* species.
24. (a) Name one defect of circulatory system in humans. (1mk)

    (b) State three functions of blood other than transport. (3mks)

25. What do you understand by the term oxygen debt? (2mks)

26. List any two distinguishing features of class arachnida. (2mks)

27. Give the name used to refer to fruit development without fertilization. (1mk)

28. During which phase of meiosis does crossing over occur? (1mk)

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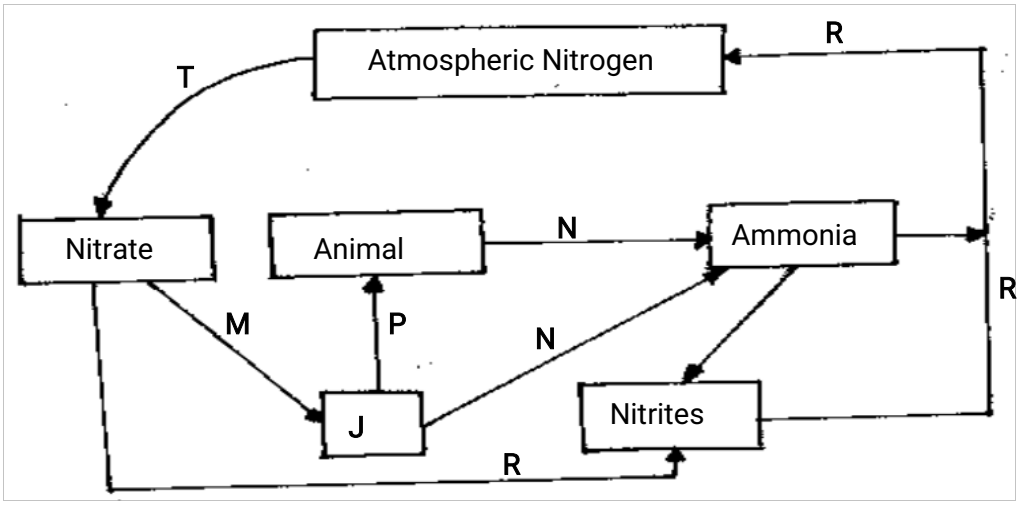
BIOLOGY PAPER TWO

1. The diagram below represents a nitrogen cycle.



(a) Name the groups of organism represented by **J.** (1mrk)

.....

(b) Name the process represented by **R,P,M** and **N.** (4mrks)

R: .....

P: .....

M: .....

N: .....

(c) Name **one** process represented by **T.**

(1mrk)

.....

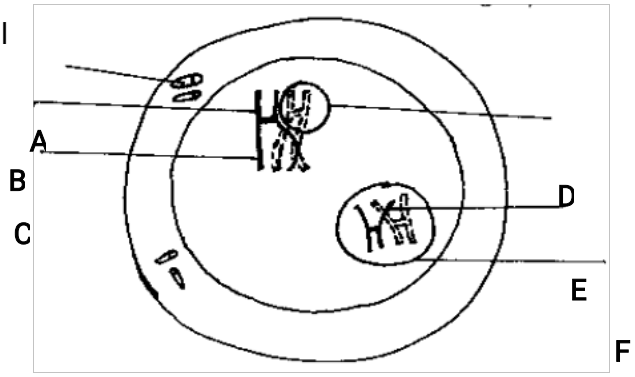
(d) (i) Name a structure in roots involved in process **M.** (1mrk)

.....

(ii) State **one** adaptation of the structure named in d (i) above to its function.(1mrk)

.....

2. The following diagram shows a cell at a certain stage of cell division.



a) Name the type and stage of cell division. (1mrk)

Type.....

Stage.....

(b) (i) Give **one** reason for your answer in (a) above. (1mrk)

.....

(ii) What is the significance of the process shown in the diagram above in relation to the behavior of chromosomes? (1mrk)

.....

.....

(c) What is the general name of organs where the above process occurs? (1mk)

.....

(d) Name the part labeled; (2mrks)

C .....

F .....

(e) State the significance of part labeled A in relation to the process shown above ?. (1mrk)

.....

(f) Name one cell in plants which is haploid (1mrk)

.....

3. In an experiment to analyze a 200cm^3 sample of air was treated with pyrogallic acid. This reduced its volume to 168cm^3. Potassium hydroxide was then added and the volume of gas reduced further to 160cm^3

(a) What was the role of pyrogallic acid? (1mrk)

.....

(b) What was the role of potassium hydroxide? (1mrk)

.....

(c) Calculate the percentage of oxygen and percentage of carbon (iv) oxide in the sample.(2mrks)

(d) Suggest the likely biological source of carbon (iv)oxide gas. (1mrk)

.....

(e) State the behavior of external intercostal muscles during exhalation. (1mk)

……..

……..

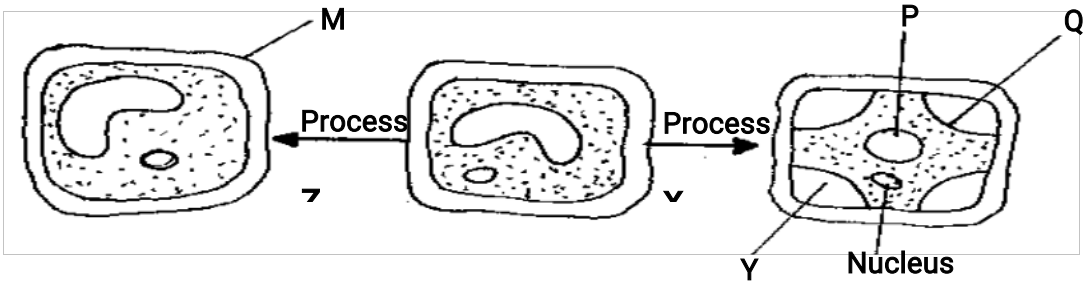
(f) Explain why smokers are more prone to respiratory tract infections than the non-smokers.(2mks)

.....

.....

.....

4. The diagram below represents **two** process underwent by a plant cell.



(a) Identify process **X**..... (1mrk)

(b) Name the state of the cell after undergoing process;
(2mrks)

(i) **X**.....

(ii) **Z** .....

(c) Name the substance which is found in parts labelled; (2mrks)

(i) **P**.....

(ii) **Y** .....

(d) Name parts labelled **M** and **Q.** (2mrks)

M..... **Q**..... (e) Name the cell organelle which is usually referred to as " cell's kitchen". (1mrk)

.....

5. (a) Name **two** substances transported in blood plasma. (2mrks)

(i) .....

(ii) .....

(b) Wanjiru is blood group **A**.

(i) Name an antibody found in her blood plasma. (1mrk)

.....

(ii) Name an antigen found in her red blood cell. (1mrk)

.....

(iii) Name the blood groups she can donate to; (2mrks)

Blood groups-

(i) .....

(ii) .....

(c) What is meant by the term allergy? (1mrk)

.....

.....

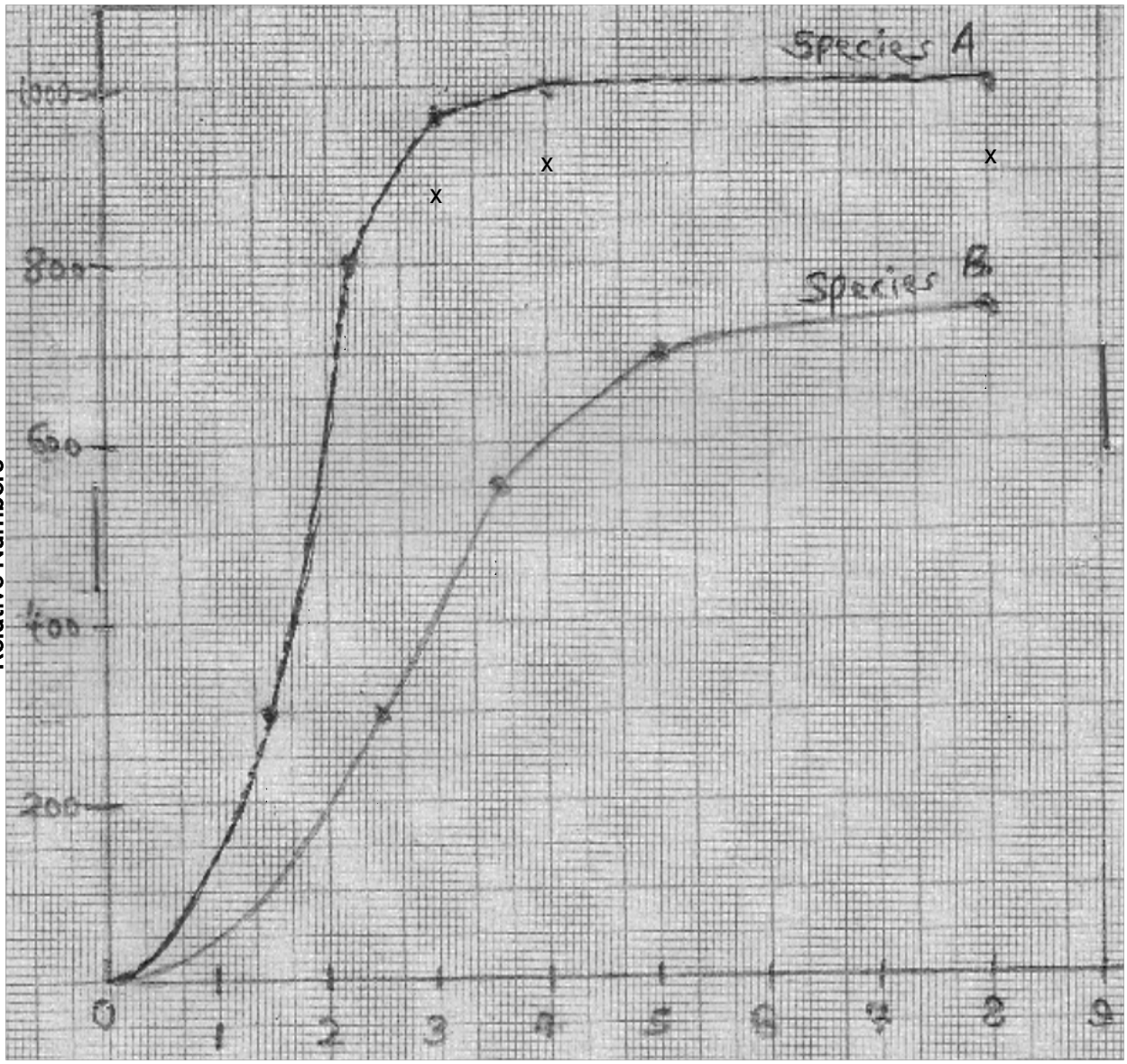
(d) Name **one** substance that can cause allergy. (1mrk)

.....

SECTION B(40MARKS)

Answer questions 6 (Compulsory) and either question 7 or 8 in the spaces provided.

6. Two herbivorous mammal species were introduced into an ecosystem at the same time and in equal numbers. The graph below represents their populations during the first seven years. Study the graph and answer the questions that follow.



(a) (i) Which species has a better competitive ability? (1mrk)

.....

(ii) Give a reason for your answer. (1mrk)

.....

(b) Account for the shape of the curve for spicies **A** between;

(i) One year and three years. (3mrks)

.....

.....

(ii) 4 years and eight years. (3mrks)

.....

(c) A natural predator of species **A** was introduced into the ecosystem. With a reason, state how the population of each species would be affected? (4mrks)

.....

(d) State **four** other biotic factors of the ecosystem which affects organisms distribution in their habitat other than the one illustrated in the above graph.
(4mrks)

.....

(e) Name the instruments used to measure the following;

(i) Light intensity..... (1mrk)

(ii) Light penetration in water..... (1mrk)

(iii) Speed of wind..... (1mrk)

(iv) Atmospheric pressure..... (1mrk)

7. Describe how human male reproductive system is adapted to its functions (20 marks)

8. Describe how seeds and fruits are adapted to different modes of dispersal. (20marks)

……

……

……

……

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BIOLOGY PAPER THREE

Answer all the questions in the spaces provided.

1. You are provided with chemical reagents **Q** (**Iodine solution**), **R** (**NaOH**), **S** (**$CuSO_4$**), **T** (**DCPIP**)and food solution **X**
Using the reagents provided carry out food test on solution **X**
(a) Record your results in the table below. (12marks)

Food substance		**Observation**	**Conclusion**

(b) Suggest the importance of food substance present in solution **X** in a human body. (2mks)

……

……

2. Below is a photograph of a certain animal. Examine it and answer the questions that follow.

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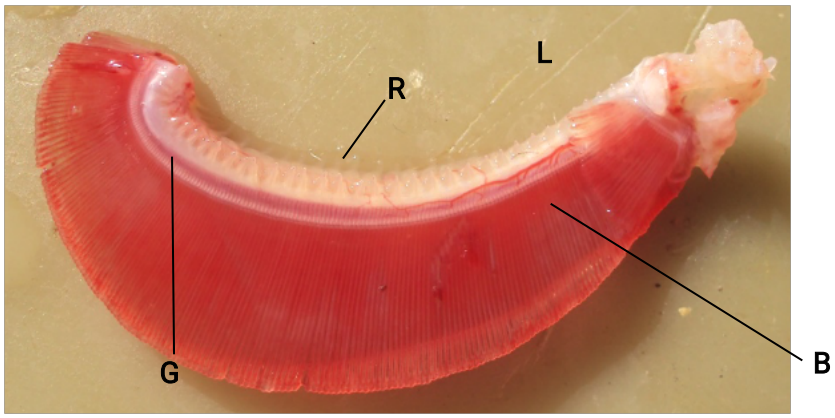
a) Giving a reason in each case, classify the animal into the taxonomic units in the table below. (4 marks)

Taxonomic unit	Name of taxonomic unit	Feature
Phylum		
Class		

(b)Study the photograph shown below part of animal above.



List adaptive characteristics of part labeled **G** to its function. (4mks)

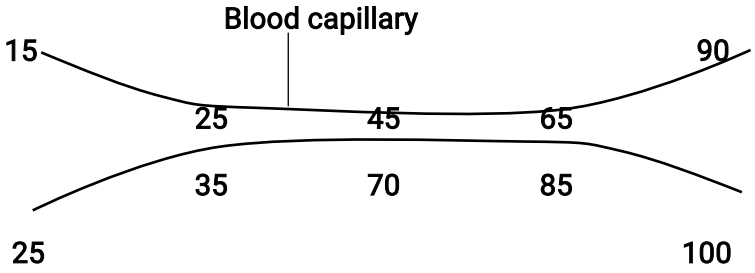
……

……

……

……..

(c).The following illustration shows a flow in the photograph shown above.



N/B; Figures show O_2 SATURATION

(i) Indicate on the illustration the direction of blood and water flow. (1mk)

(ii)Name the type of flow represented in the illustration (1mk)

……

(d)(i)Name the process by which oxygen leaves water into capillaries of filaments. (1mk)

……

(ii)What condition enables an efficient exchange of oxygen by process identified in d(i) above

…….(1mk)

(e)The atmospheric air has more oxygen than that dissolved in water yet a fish dies immediately after being withdrawn from water. Explain. (1mk)

……..

3.Study the photographs of plant structures shown below then answer the questions.

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X2

X
3

X4

R2

(a)For each type of structure shown above state a dispersal agent (4marks)

Structure	Dispersal agent
X1	

X2	
X3	
X4	

(b)Name the observable adaptive features in **X1** and **X2** that enable them to be dispersed by the dispersal agent identified. (2marks)

Structure	Adaptive features
X1	
X2	

(C)(i) Give possible description of leaves and roots of plant of flower labeled **R2**.

Roots……,…….(2mks)

……..

Leaves (3mks)

……..

……..

……..

(ii) Flower **R2** has polypetalous characteristic. Explain. (1mk)

……..

(iii) Name part labeled **Q** on **X3.** **(1mk)**

……..

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BUSINESS STUDIES PAPER ONE

TOTAL MARKS

1. Define the following terms as used in Business Studies. (4 mks)

   (i) Economics……

   ……..

   (ii) Entrepreneurship……..

   ……..

   (iii) Opportunity cost……..

   ……..

   (iv) Scale of preference……...

   ……..

2. Highlight four features of a good filling system. (4 mks)

   (i) ……..
   (ii) ……..
   (iii) ……..
   (iv) ……..

3. Outline four importance of a warehouse to a consumer. (4 mks)

   (i) ……..
   (ii) ……..
   (iii) ……..
   (iv) ……..

4. Outline four benefits of a business plan. (4 mks)

(i) ……

(ii) ……..

(iii) ……..

(iv) ……..

5) State <u>four</u> functions of an entrepreneur.(4mks)

(i) ……

(ii) ……..

(iii) ……..

(iv) ……..

5. State four importance of a balance sheet (4 mks)

(i) ……

(ii) ……..

(iii) ……..

(iv) ……..

6. The following information was extracted from the books of Dawida businesses enterprise for the year ended 30th June 2000.

Capital as at 30th June, 2000	640,000
Capital as at 1st July 1999	420,000
Drawing for the year	180,000
Net profit for the year	140,000

Determine the additional capital during the year. (5 mks)

7. Highlight <u>four</u> barriers to effective communication (4 mks)

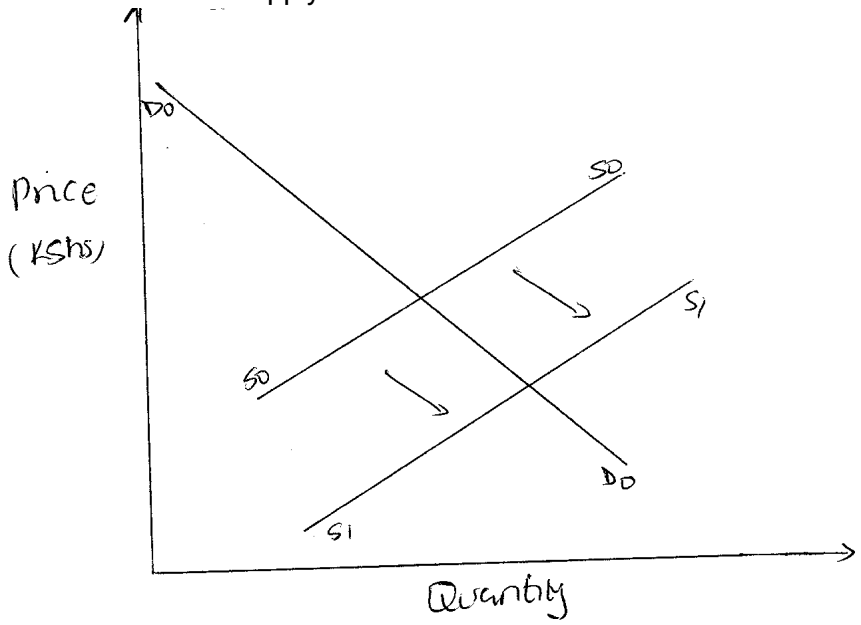
   (i) ……

   (ii) ……

   (iii) ……

   (iv) ……

8. Below is a demand and supply curve.



   Highlight the factors that may have led to the above behavior. (4 mks)

   (i) ……

   (ii) ……

   (iii) ……

   (iv) ……

9. Outline <u>four</u> circumstances under which a cheque maybe be dishonoured.

10. Give the difference between: (4 mks)

(a) Double and co-insurance

……

……

……

(b) Premiums and surrender value

……

……

……

11. Highlight four advantages of indirect production(4 mks)

(i) ……

(ii) ……

(iii) ……

(iv) ……

12. Highlight four methods through which the government get involved in business activities. (4 mks)

(i) ……

(ii) ……

(iii) ……

(iv) ……

13. Highlight four duties of commercial attaches in trade promotion. (4 mks)

14. Complete the table below. (4 mks)

FACTOR OF PRODUCTION	REWARD
Land	
Capital	
Labour	
Entrepreneurship	

15. Outline three leakages in a circular flow of income. (3 mks)

(i) …….

(ii) ……..

(iii) ……..

16. Outline four advantages of using celebrities in product promotion. (4 mks)

(i) …….

(ii) ……..

(iii) ……..

(iv) ……..

17. Distinguish between goods and services. (4 mks)

GOODS	SERVICES

18. Kenya is planning to extend her pipeline transport. State four advantages of pipeline transport to the country. (4 mks)

    (i) ……

    (ii) ……

    (iii) ……

    (iv) ……

19. Outline four factors that determine the size of a firm. (4 mks)

    (i) ……

    (ii) ……

    (iii) ……

    (iv) ……

    (v)

20. Kiburu carried out the following transactions during the month of February 2015.

    February 1: Started business by depositing sh 220,000 in business bank account

    7: Bought goods on credit from Miyogo Sh 72,000

8: Paid rent by cheque Sh 20,000

16: Sold goods to Kamula on credit Sh 50,000.

Required: Post the above transaction in the relevant ledge accounts.(8mks)

21. Highlight four features of perfect competition market. (4 mks)

(i) ……

(ii) ……..

(iii) ……..

(iv) ……..

22. Mention whether the following transactions have an increase, decrease or no effect on the assts, capital and liabilities of a business. (4 mks)

	Transaction	Assets	Capital	Liabilities
(a)	Bought premises on credit			
(b)	Took stock of goods and donated to a local dispensary			
(c)	Withdrew money from bank for office use			
(d)	Sold furniture receiving cash			

23. State the following abbreviations in full (4mks)

(i)GDP……

(ii)GNP……

(iii)NDP……

(iv)NNP……

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BUSINESS STUDIES PAPER ONE

INSTRUCTIONS:
Attempt any five questions from this paper.

1. a) Discuss five factors that may influence entrepreneurial practice positively in the country. (10mks)

   b) Explain five principals of insurance. (10mks)

2. a) Explain five benefits of matatu reforms in transport sector.(10mks)

   b) Using a well labeled diagram, differentiate between shift in demand curve and movement along the demand curve. (10mks)

3. a) Muema is planning to construct a warehouse for renting. Explain five measures that he may take to ensure its smooth operation. (10mks)

   b) Explain five methods used to distribute imported manufactured goods. (10mks)

4. a) Outline five measures that the Kenya government may take to reduce unemployment. (10mks)

   b) Explain five measures that the government may take to increase supply of maize in the market. (10mks)

5. a) Describe any five types of business activities. (10mks)

   b) Munguti, who runs a retail store, had the following assets and liabilitie as at 31st March 2016.

Premises	Sh. 100,000
Debtors	Sh. 4,000
Creditors	Sh. 16,000
Stock	Sh. 2,000
Cash at bank	Sh. 60,000

Cash in hand Sh. 20,000

Loan from AFC Sh. 50,000

During the month of April 2015, the following transactions took place

2015

April 1st sold goods at cost Sh. 2000cash

April 2nd Paid creditors Sh. 8000 cash

April 10th received Sh. 2000 from his debtors in cash

April 15th Bought a motor van for Sh. 35,00 paying by cheque

April 25th purchased goods worth Sh. 15000 and paid by cheque

Required: Prepare a balance sheet as at 25th April 2015. (10mks)

6. a) Describe the following terms as used in accounting.

   i) Assets (2mks)

   ii) Credit transactions. (2mks)

   iii) Networth of a Business. (2mks)

   iv) Ledger. (2mks)

   b) Muinamo started a business on 1st March 2012 with a capital of 240,000 consisting of Sh. 130,00 in bank, Sh. 50,000 in cash and furniture worth Sh. 60,00. Transactions for the first week were as follows;

2012: March 2nd purchased a typewriter by cheque Sh. 20,000
March 3rd bought delivery van for Sh. 450,000 from Mwangaza motors on Credit
March 4th Bought stock worth Sh. 15,000 for cash
March 5th Purchased goods worth Sh. 18,000 from Kinyua on credit
March 6th sold goods worth Sh. 30,000 on credit to Menge
March 7th paid 12,000 to Kinyua by Cheque
March 7th received Sh. 4,000 for rent by cheque

Required: Record the above information in the relevant ledger accounts and balance them off on 7th March 2012. (10mks)

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AGRICULTURE PAPER ONE

SECTION A (30MKS)

ANSWER ALLL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED.

1. Name the part of planted for each of the following crops.[1 1/2]
   a) Sisal

   b) Irish potatoes

   c) Pyrethrum

2. State four factors that influence croo productivity positively [2mks]

3. State four disadvantages of using organic manure in vegetable production [2mks]

4. State two reasons for earthing up in maize production {Imk]

5. State four advantages of manure [2MKS]
6. State two disadvantages of shifting cultivation [Imk]

7. State four reasons for sub- soiling in a maize field [2mks]

8. List four post-harvest practices carried out in tomatoes [2mks]

g. Give four disadvantages of communal land tenure system [2mks]

10. Name any three insects with biting and chewing mouth parts [1 1/2]
11. State four factors affecting the efficiency of pesticides [2mks]

12. List two operation carried out during land preparation [lmk]

13. Name two processes through which carbon is returned to the atmospheres in the carbon cycle (Imk]

14. a) state two objectives of land redistribution in Kenya [Imk]

b) State four functions of a manager on the farm [2mks]

15. Name two pests which attack stems of crops [Imk]

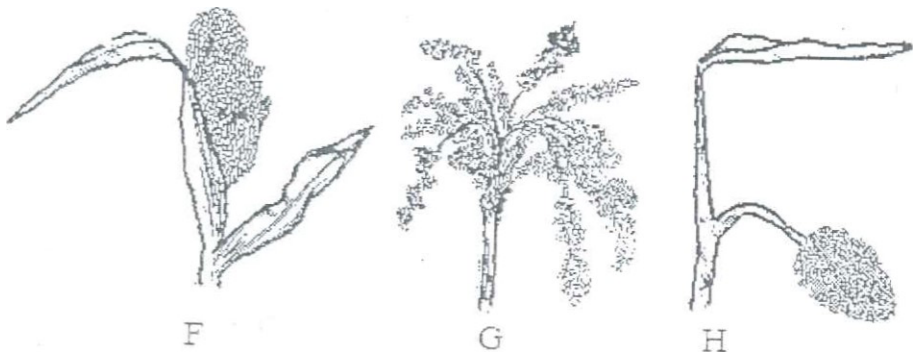
IS. Name icur financia! documents that can be kept in an agricultural fa[2mks]

17. Mention fact" ways of improving land as a factor of production [2nnks]

18. Blarne zwc methods of harvesting agrafcrestry trees [Imk]

SECTION B (20MKS)

Answer ali the questions in this section in the spaces provided 19 study the diagram below end answer the questions that follow



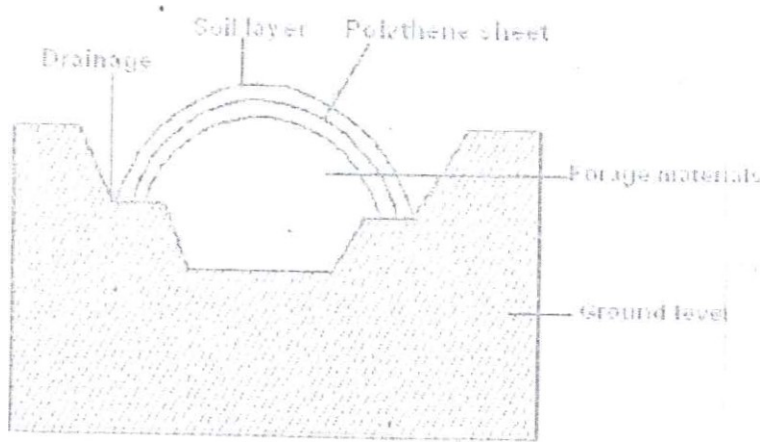
x
Identify the cultivars labeled G and F2mks]

b) State the advantage cf cultivar H over F llmkl

c) Name the major species of birds that ere responsible for most losses experienced by farmers of the crop represented by the cultivars [Imkl

d) Name one disease that attack the grains of the crop [Imk]

Z.The diagram beicw shows a method cf forage presetwetion



i) identify the structure illustrated [Imk]

ii) State the form in which forage is conserved as ii!ustrated above [Imk]

iii) Give the role of Zhe following in the structure above [2Mksj

e) Polythene sheet

b) Drainage

iii) What is the reason for compacting the materia:s [Imk]

21. diagram below illustrates a method of crop propagation

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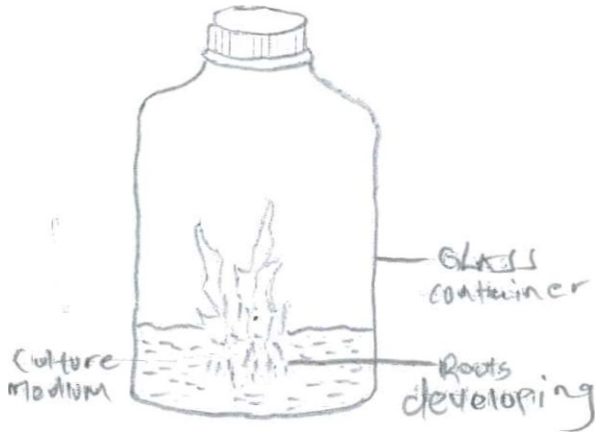
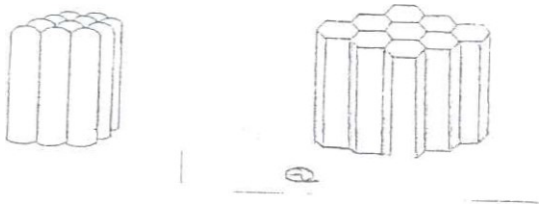


a) iden*iiy the rnethcd of propagation (1 mk]

b) Name one crop propagated thrcc-h t, e nethod[1m k]

c) State three importance of the methodabove [

22. Below are two types cf sci' st Pand Q



a) identfy the types of sot! structures

b)Statewhere the 2bcve soil structures are like!y to be found [Irnk]

d) out:ine three ma:n ways by which scii structure influence crop production {3mks] SECTION C (40MKS)

Answer any two questicns from this section in the spaces provided after questicn 25

23. a) describe four agricuitural support services available to maize farmers in Kenya [8mks]

b) i) what is farm budgeting ii) Name two types of farm budgets

c) A farmer intends to change his enterprise from livestock production to crop production. The cost incurred is as follows

The cost of livestock production include

- Cost of cow ksh.15,000
- Fencing kshs.3,000
- Disease control kshs.5,000 - Spraying costs kshs.500

The cost of crop production includes;

- Land preparation ksh.500
- Seeds ksh.600
- Planting ksh.800
- Fertilizers ksh.1,500
- Disease/ pest control ksh.1,200
- Harvesting ksh.1,100

The revenue from milk sale is ksh.25,000 and sale of calf ksh.4,000 while the revenue he gets from sale of crop s is ksh.23,000. Draw up a partial budget and indicate whether the change is worthwhile or not.

24 a)State the various practices carried out in the field to help control diseases [12mks]

b) Describe eight environmental conditions that may lead to low crop yields [8mks)

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25 a) describe five methods a farmer can use in harvesting water in the farm [5mks]

a) Explain seven ways by which soil loses fertility [7 mks]
b) State the uses of water in the farm [8mksl

AGRICULTURE PAPER ONE

SECTION A (30 MARKS)

Answer all questions in this section.

1. Outline two possible causes of low libido in bucks. (Imk)

3. Give the Functions of Reticulum in Digestion

4. State three properties of concrete that make it more suitable in the construction of farm structures. (11/2mks)

5. State four factors that would contribute to the depreciation of a farm equipment.(2mks)

6. Identify the following breeds of livestock (2mks)

   i) A pig breed with dished face, erect ears and white in colour.

   ii) A beef breed cream white in colour usually very heavy its males weighing up to 1200kg

   iii) A white breed of goat usually with long hair

   ill) A wocl sheep with long cur! wool usually covering its face.

7. List four routes through which pathogens can enter the body of a newly-born calf. (2mks)

8. Name the hormone that is concerned with milk synthesis. (1/2mk)

9. State four symptoms of anthrax infection in the carcass of a cow. (2mks)

9.State three characteristics of colostrum that make it suitable for new born livestock. (1 [1]/ mks)

10.A bull gained 100kg of live weight after eating 400kg of beef concentrates over a period of time.

Calculate its feed conversion ratio. (FCR) (2mks)

11. Give two reasons for raddling in sheep management. (Imk)

12. Name the intermediate host of liver fluke. (Imk)

13.Give the meaning of the following terms as used in livestock breeding.

a)Recessive gene. (Imk)

b) epistasis. (Imk)

14.State four signs that indicate that a doe is about to kindle. (2mks)

15.State four signs of mite attack in poultry. (2mks)

16.State three signs of broodiness in a hen. (11/2rnks)

17.State four advantages of fish farming in Kenya. (2mks)

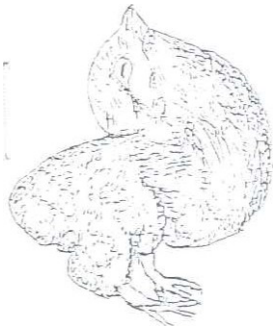
18. Name four methods of docking in sheep rearing.

1? State two cecses of soft shelled eczs. (1m k)

SECTION S

Answer the zuestizns in this section in the speces provided.

20.The diagram L•elcw ihustretes a livestock deficiency disease. Study the diagram and ar,swa e the questia•s tha ict;ow



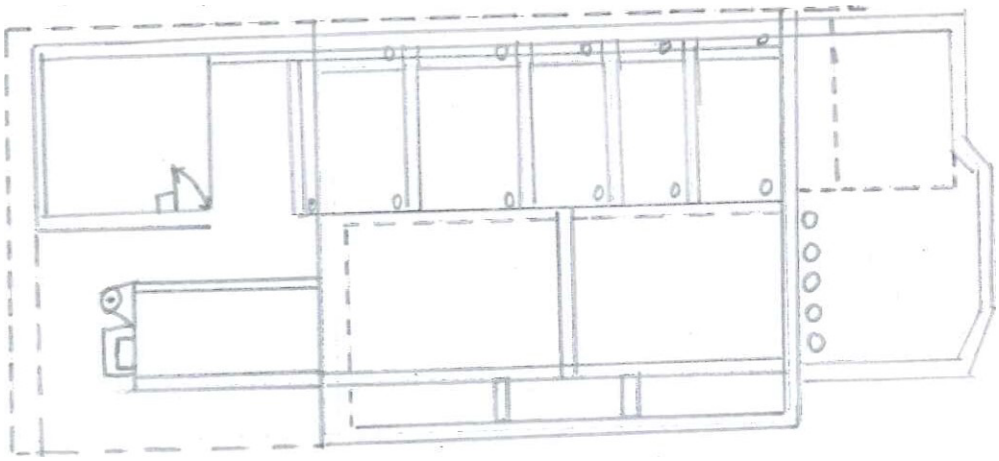
a) Identify the disease. (Imk)
b) Identify the deficient nutrient. (Imk)

c) Apart from the head retraction, state other symptoms cf the deficiency

ciseæse in
(a) above. (2mks)

d) State one role of the nutrient named in (b) above. (Imk)

21. The ground plan of the zero grazing unit shown in the diagram below and answer the questions that follow.



e)Indicate the location of the following parts of zero grazing unit usin: roman numbers on the diagram.

I. Store

II. Ca!f pen

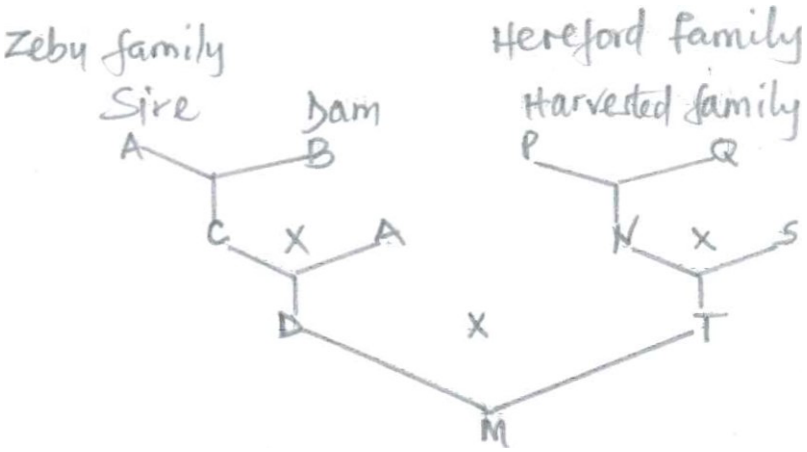
Ill. Walking area

I V. Food and water trough area. (2m!<s)

b)What type of a caf pen is in the zero grazing. (Imk)

c)Stete two structural requirements of a calf pen. (2mks)

22.The illustration below shows different livestock families. Use it to answer questions that follow.



e)Identiiy the breeding system between

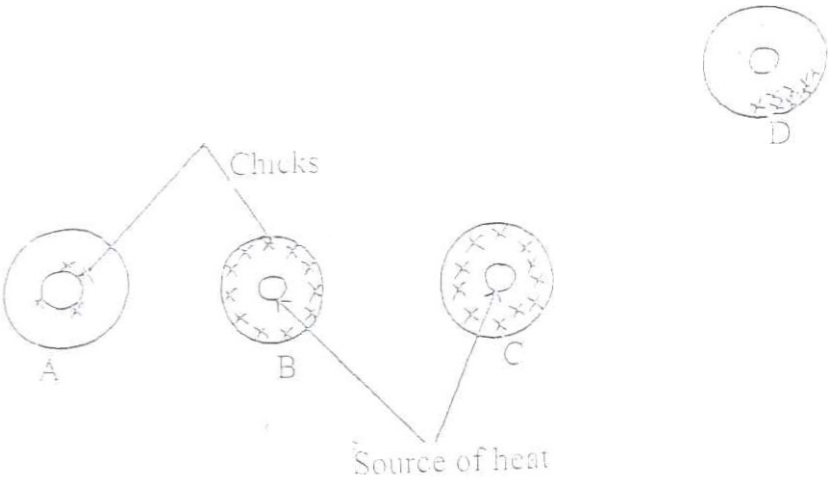
i) C and A

3i)D T (In-:k)

b)3tete two advantages of the breeding system identified in a (ii) above. (2mks)

c'A'Vhy is the freeding system iden-_ified in e (i) not recommended in dairy cattle. (lmk)

23.7he following illustrations shnvv the behavior cf chicks at different temperætures a



brooder.

a)Explain the temperature conditions in each of the four dizgrams and D (2mks)

B.....

C.....

D.....

b)State any four requirements of a good brooder. (2mks)

c)What is the importance of putting a wire gauze around the heat source. (Imk)

SECTION C (40MARKS)

Answer any two questions in the spaces provided.

24.a)Describe hand milking of a dairy cow. (10mks)

b)Explain the practices observed in clean milk production. (8mks)

c)Name two milk equipments (2mks)

25a)Describe how a four stroke cycle engine operates. (12mks)

b)Describe the daily maintenance of a tractor. (8mks)

26.a)Describe the general safety precautions a farmer should observe when using and handling farm tools. (6mks)

b)Outiine the various causes of swarming in bees. (Smks)

c)Highiight six factors that influence the amount of concentrate given to a lactating animal.(6mks)

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PHYSICS PAPER ONE

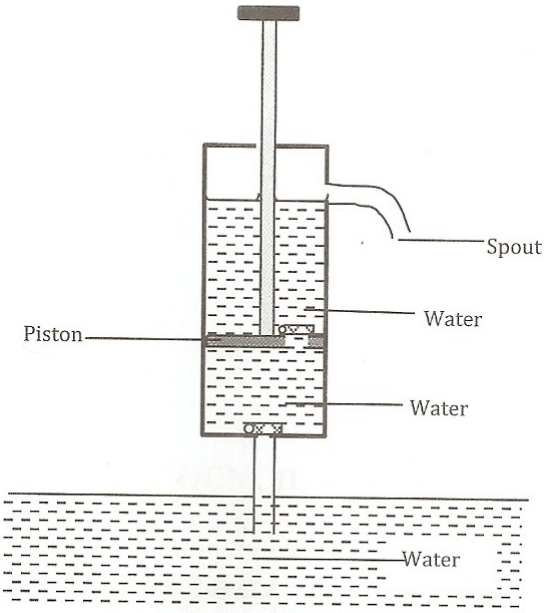
This paper consists of 12 printed pages. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing

SECTION (25 marks)

Answer all the questions in this section in the spaces provided

1. Draw the scale of a micrometer screw gauge with 50 divisions on the thimble scale reading 3.86mm (2 marks)

2. The figure below shows a pump used to draw water from a well.



(i) What is its name. (1 mark)

……..

(ii) Give two limitations of using this type of a pump. (2 marks)

……

……

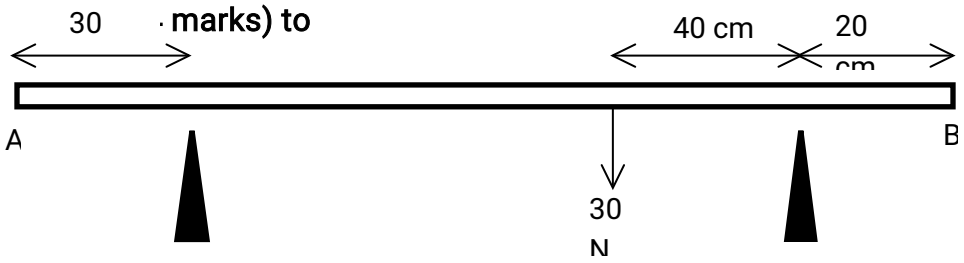
3. Astudentpullsablockofwoodalongahorizontalsurfacebyapplyingaconstantforce.Statethereason why the block move sat a constant velocity. **(1mark)**

……

……

4. The figure below shows a uniform bar 2 m long and of weight 100Nplaced on two supports and a 30N force acting 60cm from end B as shown. If the system is in equilibrium, determine the reaction ineach of the two supports.

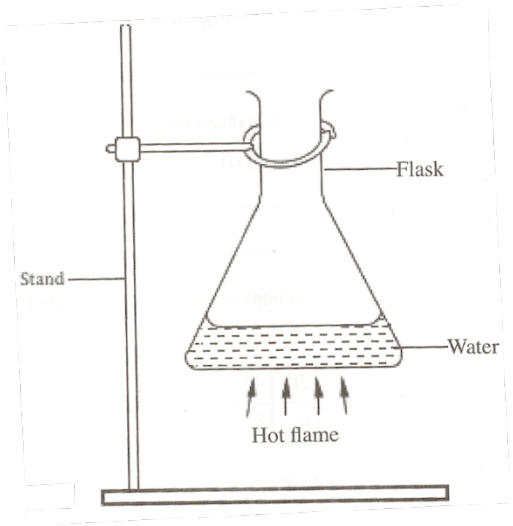
30 · **marks) to**



……

……

5. The figure belowshowsaflat-bottomedflaskcontainingsomewater.Itisheateddirectlywithaveryhotflame.



Explain why the flask is likely to crack. **(2marks)**

……

……

6. A solid weigh 16.5N on the surface of the moon. The force of gravity on the moon is1.7N/kg. Determine the mass of the solid. **(2marks)**

……

……

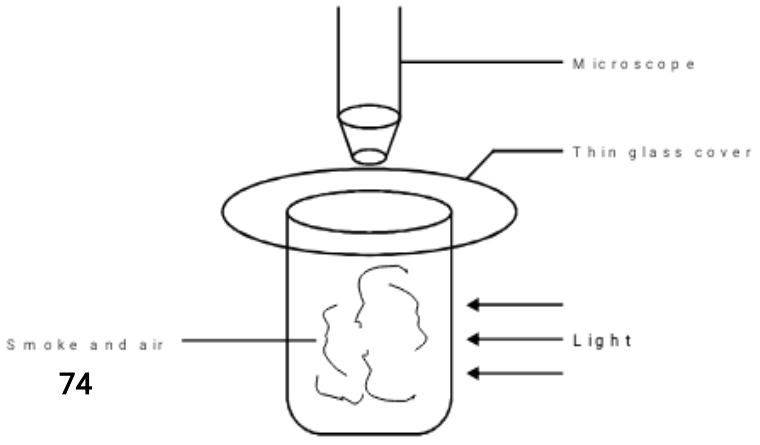
7. A bottle contains a smelling gas is opened at the front of a class room. State the reason why the gas is detected throughout the room.

(1mark)……

……

……

8. The diagram below shows apparatus used to observe the behaviour of smoke particle in air.



(i) Why are smoke particles suitable for use in this experiment? **(1 mark)**

……

……...

(ii) What does the experiment tell you about the behaviour of the air molecules in the cell? **(1 mark)**

……

……

(iii) What difference if any would be seen in the motion of the smoke particles if a weaker light was used.
(1 mark)

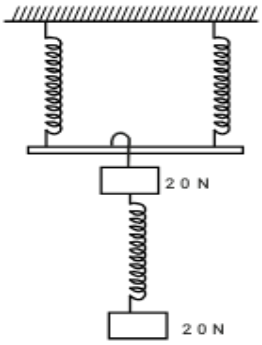
9. State **two** environmental hazards that may occur when oil spills over a large surface area of the sea. **(2marks)**

……

……

……

10. The three springs shown in Fig 11 are identical and have negligible weight. The extension produced on the system of springs is 20cm

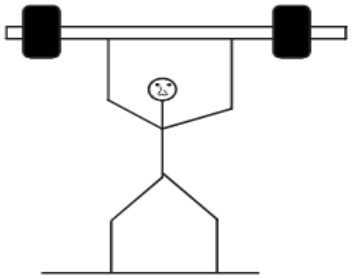


Determine the constant on each spring. **(3 marks)**

……

……

11. The figure below shows an athlete lifting weights while standing with the feet apart.

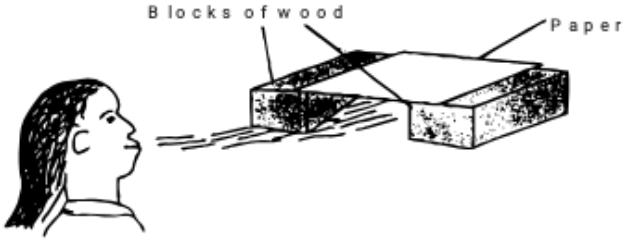


Explain why standing with the feet apart improves the athlete's stability. **(1 mark)**

……

……

12. A girl blew air along the horizontal plane below the paper as shown in figure 5.



State and explain what would be observed. **(2 marks)**

……

……

SECTION B (55 marks)

Answer all the questions in this section in the spaces provided

13. (a) Define the terms;

(i) Inelastic collision. **(1 mark)**

……

……

(ii) Impulse **(1 mark)**

……

……

(b) A bullet of mass 20g leaves the muzzle of a gun at a speed of 350m/s. If the mass of the gun is 3.5kg, calculate the recoil velocity of the gun.
(3 marks)

……
……
……
……

(c) A block of mass 200g rests in a horizontal table. A force of 0.6N pulls the block so that it moves with a constant acceleration of 1m/s^2 calculate;

(i) The time it takes to travel a horizontal distance of 200m. **(3 marks)**

……
……
……
……

(ii) The frictional force between the block and the table. **(2 marks)**

……
……

(iii) The coefficient of kinetic friction between the two forces. **(2 marks)**

……

……

……

……

(iv) A part from frictional force and the normal reaction name any other force.

(1mark)

……

……

……

14. (a) Define momentum and state its SI units (2 marks)

……

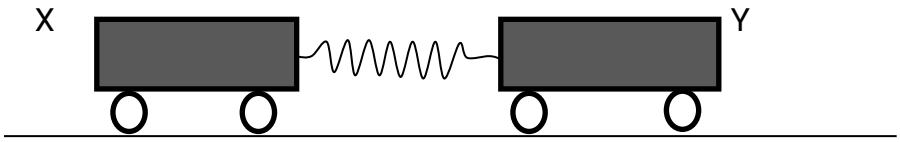
……

(b) State the law of conservation of momentum. (1 mark)

……

……

(c) Two wheeled trolleys, X of mass 3kg and Y of mass 4kg are held together at rest against a compressed spring as shown in the figure below.



When the trolleys are released at the same instant, X moves to the left at 8m/s. calculate;

(i) The velocity of Y immediately after the release. **(3 marks)**

……

……

……

(ii) The kinetic energy of X and Y after release. **(4 marks)**

……

……

……

……

……

……

……

(iii) Calculate the compression of the spring given that it has a spring constant of 1.0 x 10^4N/m.

(3 marks)

……

……

……

(d) An arrow of mass 20g traveling horizontally strikes a block of wood of mass 1980 g resting on a horizontal surface. The impact takes 0.2 seconds before the two moves together with an initial velocity of 5m/s. Calculate;

(i) The velocity of the arrow before the impact. **(3 marks)**

……

……

……

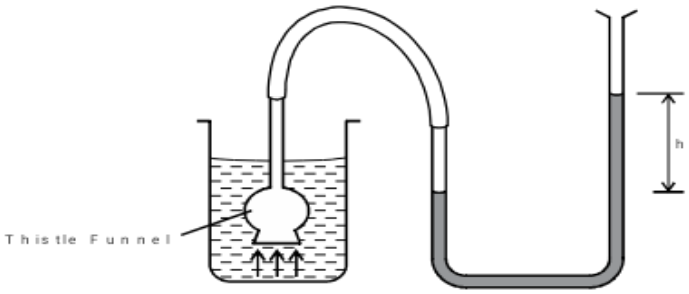
(ii) The force of impact. **(2 marks)**

……

……

……

15. a) The diagram below shows a set up used by a student to show variation of pressure in a liquid. Use it to answer the question that follow.

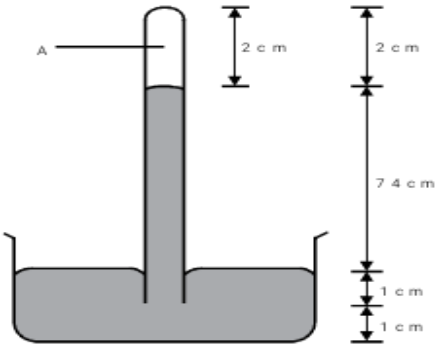


State and explain the effect on the height, h, when the thistle funnel is moved upwards towards the surface of the liquids. **(2 marks)**

……

……

b) Figure below shows a simple barometer.



(i) What is the region A? **(1 mark)**

……

(ii) What keeps the mercury in the tube? **(1 mark)**

……

(iii) What is the value of the atmospheric pressure being shown by the barometer?**(1 mark)**

……

……

(iv) What would happen to the reading if the barometer were taken up a high mountain.

(1 mark)

……

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(v) Give a reason for (d) above. **(1 mark)**

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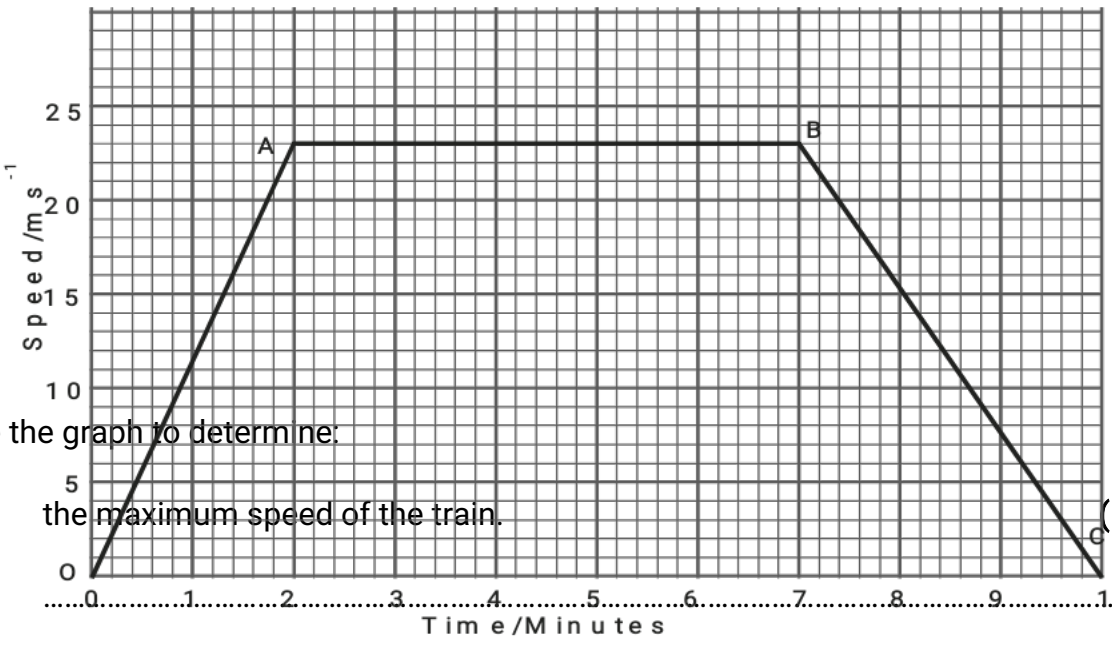
16. The speed of a train, hauled by a locomotive varies as shown below as it travels between two stations along a straight horizontal track.



Use the graph to determine:

(i) the maximum speed of the train. **(1 mark)**

……

……

(ii) The acceleration of the train during the first 2mins of the journey. **(2**

marks)

……

(iii) The time during which the train is slowing down. (2 marks)

……

……

(iv) The total distance, in metres, between the two stations. (4 marks)

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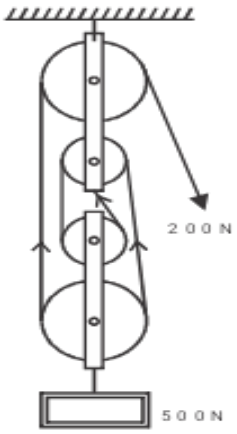
(v) The average speed in ms^{-1} of the train. (2 marks)

……

17.a) The figure below shows a pulley system being used to raise a load.



Given that the size of the load is 500N and the effort applied is 200N, calculate the efficiency of the machine.

(3 marks)

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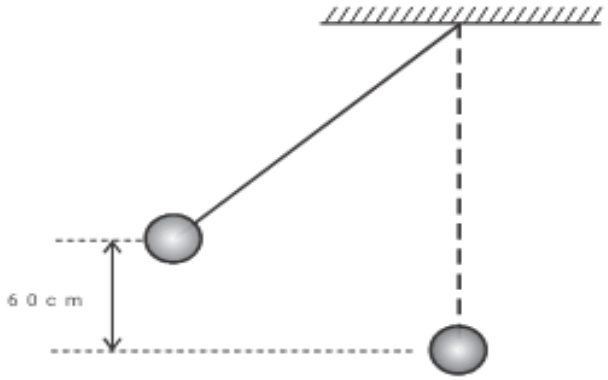
b) A pendulum bob is raised to a height of 60cm above its lowest point and made to swing as shown in the figure.



Determine the velocity of the mass at the height where kinetic energy is equal to the potential energy.

(3 marks)

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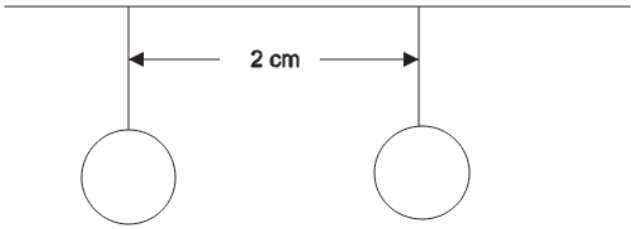
PHYSICS PAPER TWO

SECTION I *(25 marks)*

Answer all the questions in this section

1. The figure below shows two identical balloons inflated with air and suspended with a light cotton threads such that the two balloons are 2 cm apart.



Explain what is observed when a plastic ruler is rubbed vigorously against dry hair (human hair) and placed between the two balloons but without touching them.

(2 marks)

……

……

2. An object dropped into well hits water 3.5seconds after been released. How deep is the well?

Take gas 10m/s^2 *(3 marks)*

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3. A car battery requires topping up with distilled water occasionally. Explain why this is necessary and why distilled water instead of tap water?

(1 mark)

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4. A small object lies at the bottom of a water pond at a depth of 1.2m. given that the refractive index of water is 1.3, determine the apparent depth of the object *(3marks)*

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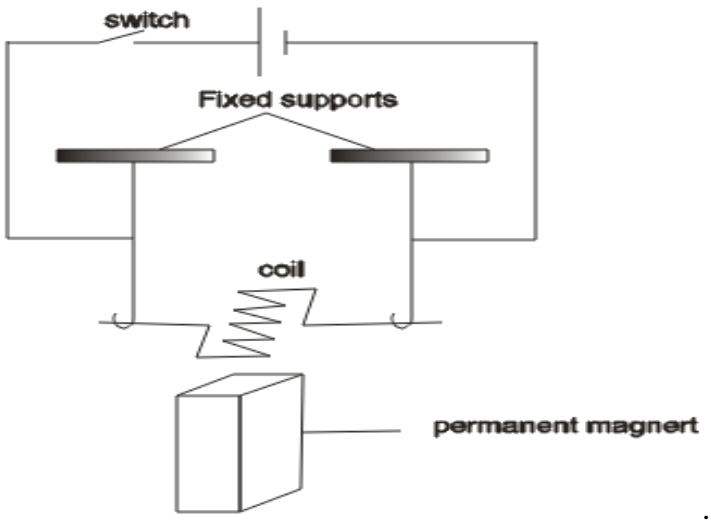
5. The figure below shows a copper kept in a magnetic field and suspended on a frictionless conductor connected with a direct current supply. When the current is switched on, the copper coil rotates on its support. Explain how this motion is caused by the flow of current. *(3 mark)*



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6. Differentiate between transverse and longitudinal waves. *(1 mark)*

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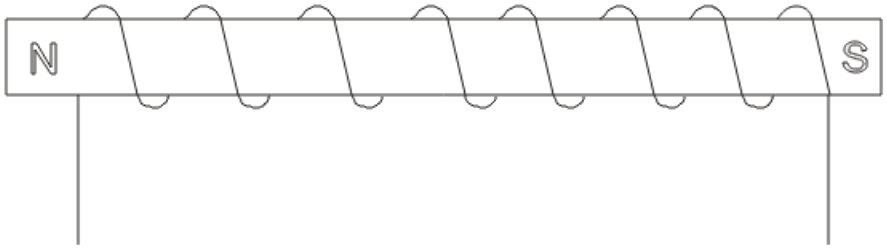
7. The figure below shows a circuit that can be used to magnetize a given bar. Complete the circuit to show the direction of the current around the bar that will result the polarities shown.*(1 mark)*



8. An object is placed 30 cm in front of a concave mirror of focal length 15 cm and another identical object is 30 cm in front of a plane mirror.

   (i) Give one similarity between images formed. *(1 mark)*

   ……

   ……

   (ii) Give one difference between images formed. *(1 mark)*

   ……

   ……

9. Suggest a reason why it is not possible to increase the strength of a magnet indefinitely.*(2 mark)*

……

……

10. Resistors of 2Ω and 3Ω are connected in series with a cell and voltmeter connected across the 3Ω resistor reads 1V, but this increases to 1.2V when an extra 2Ω resistor is connected in parallel with the first 2Ω resistor, calculate the e.m.f and the internal resistance of the cell. *(4 marks)*

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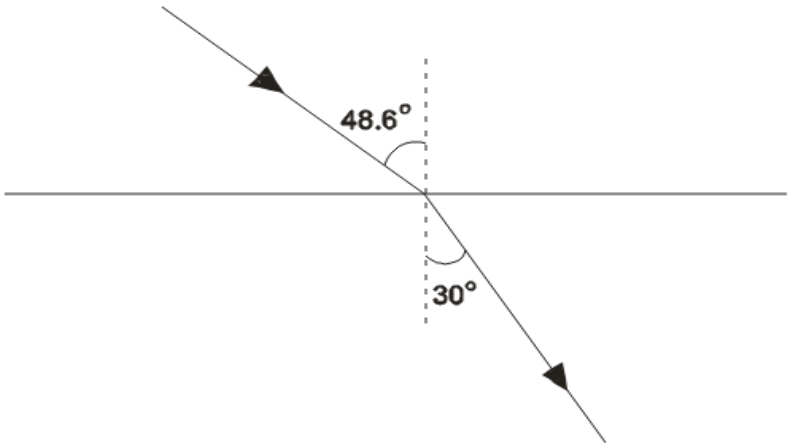
11. The figure below shows a ray of light travelling from air to a liquid. The ray incidents the liquid at 48.6^{o} and is refracted at 30^{o}. Calculate the speed of light in the liquid *(3 marks)*



SECTION II *(45 marks)*

Answer all the questions in this section

12. (a) (i) A pinhole of 1mm diameter is in the middle of a piece of black paper covering one end of a tube 1m long. The end of the tube is covered by a screen of a tracing paper. When the pin hole is directed towards the sun, the diameter of the image is found to be10mm. Draw a ray diagram showing how the images are formed.
(2 marks)

(ii) The sun is just covered by a disc of 2 cm diameter placed about 2 meters from the eye from the eye. In the length of the diameter of the sun's image formed by a pinhole camera is 0.5 cm, calculate the distance from the pinhole to the screen.
(3 marks)

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13. a) You are provided with a metre rule, distant object, concave mirror and a white screen. Briefly describe how you can estimate the focal length of the concave mirror.
(3 marks)

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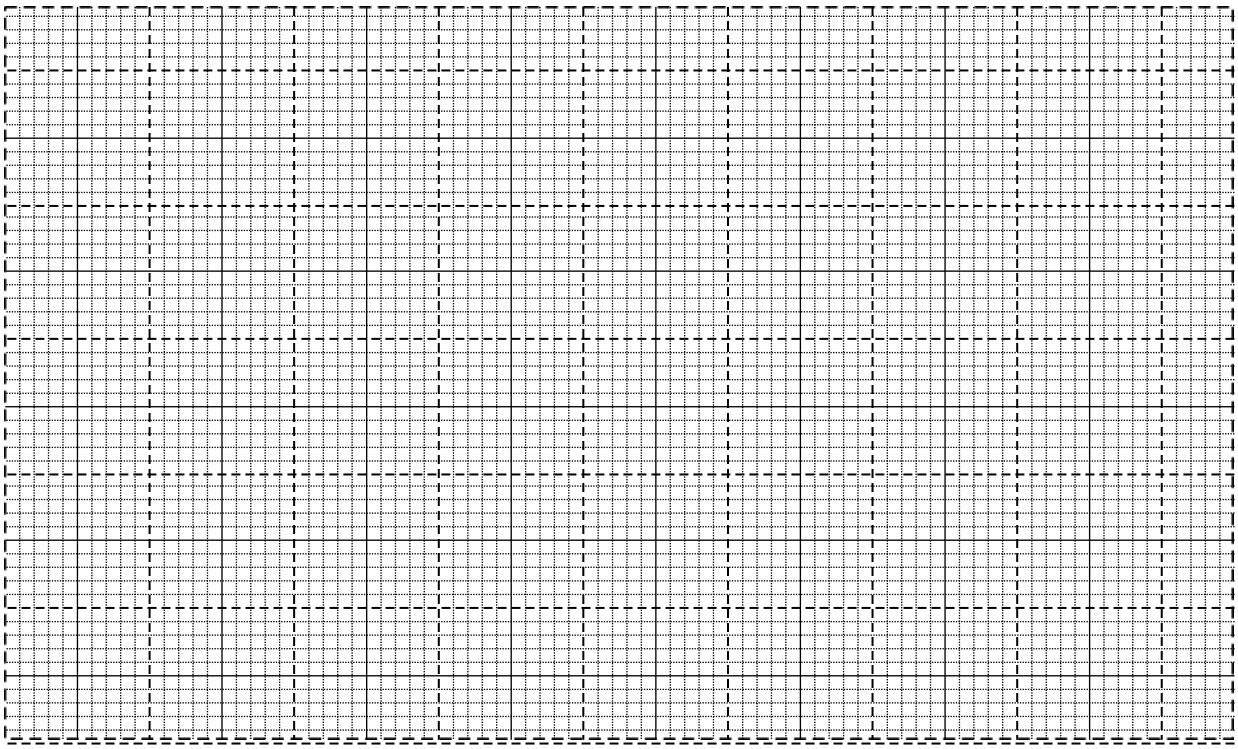
b) In an experiment to determine the focal length of a curved mirror, the results in table below were obtained.

U (cm)	20	25	30	40	50	70
V (cm)	20	16.7	15	13.3	12.5	11.6

(i) Plot a graph of UV (y-axis) against (U + V) (x-axis). *(5marks)*



(ii) From your graph, determine the focal length of the mirror. *(3 marks)*

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c) Explain why a concave mirror is used as a shaving mirror. *(2 mark)*

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d) Give one difference and one similarity between virtual images formed by plane mirrors and concave mirrors.

(2 marks)

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14. (a) State **two** ways of increasing the strength of an electromagnet. *(2 marks)*

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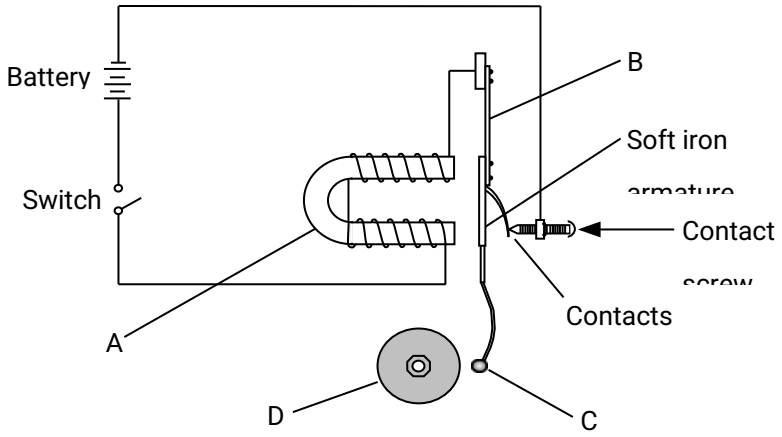
(b) The diagram below shows an electric bell.



(i) Name the parts labeled **A**, **B**, **C** and **D**. *(2 marks)*

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(ii) State and explain what happens to the soft iron armature when the switch is closed.

(2 marks)

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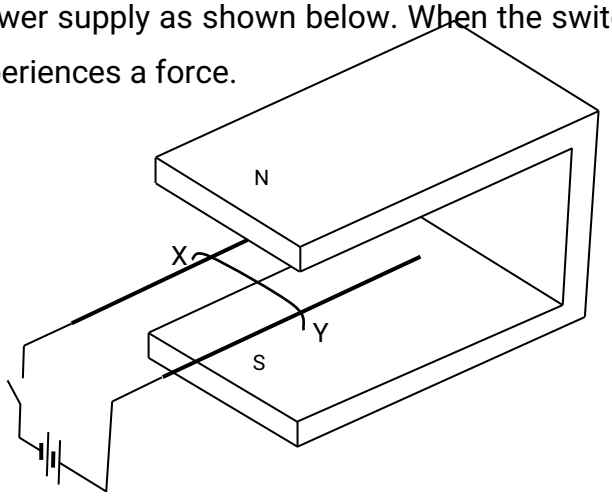
(c) A thin copper wire XY is placed over two parallel thick copper conductors connected to a d.c. power supply as shown below. When the switch in the circuit is closed, the wire XY experiences a force.



(i) Indicate on the diagram direction in which the wire XY experiences the force.

(1 mark)

(ii) Explain how you have determined the direction of the force in (*i*) above. *(2 marks)*

.....

.....

(iii) When is the force acting on the wire XY greatest? *(1 mark)*

.....

.

(iv) What is the effect of reversing the direction of flow of the current? *(1 mark)*

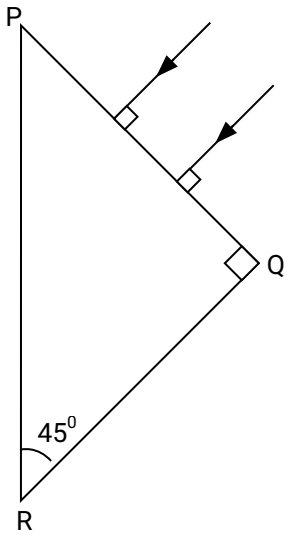
.....

.....

15. (a) State **two** conditions which must be satisfied for total internal reflection to occur. *(2 marks)*

.....

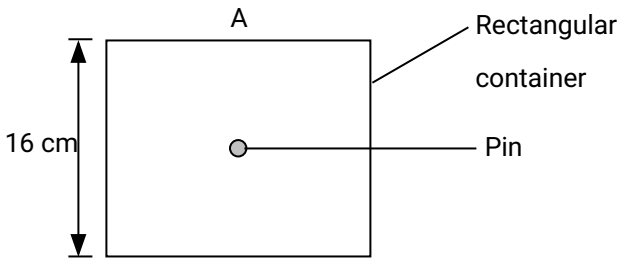
(b) The diagram below shows two rays of light incident normally on face **PQ** of a glass prism, whose critical angle is $\mathbf{42^0}$.



Complete the diagram to show the paths of the two rays as they pass through the prism.

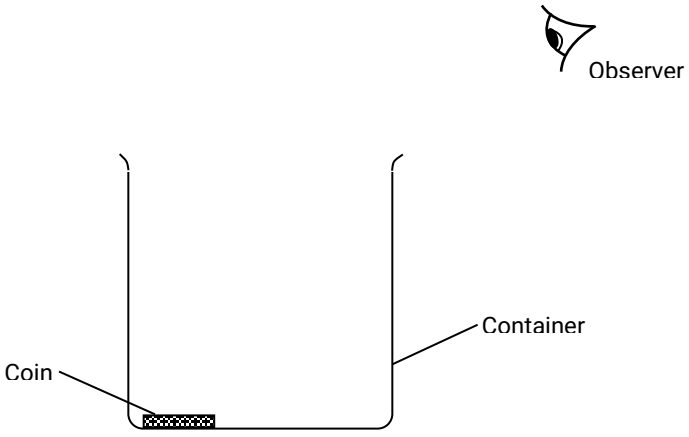
(3 marks)

(c) A pin is fixed horizontally at the centre of a rectangular container with thin transparent walls as shown below.



A transparent liquid is then poured into the container. When viewed from side **A**, the distance of the pin is **6 cm** from the surface of the liquid. Determine the refractive index of the liquid.

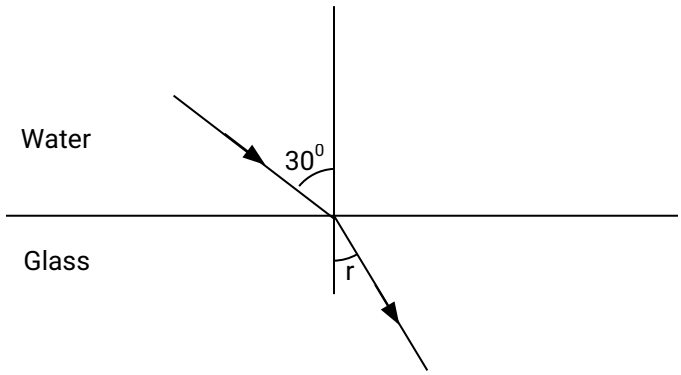
(d) The figure below shows a coin placed in a large empty beaker. An observer looking into the beaker from the position shown is unable to see the coin.



Sketch two rays from a point on the coin to show how the observer is able to see the image of the coin after the container if filled with water.

(3 marks)

(e) A ray of light is incident on a water-glass interface as shown in the diagram below.



Calculate the value of angle, r, given that the refractive index of glass and water are 1.5 and 1.33 respectively.

(3 marks)

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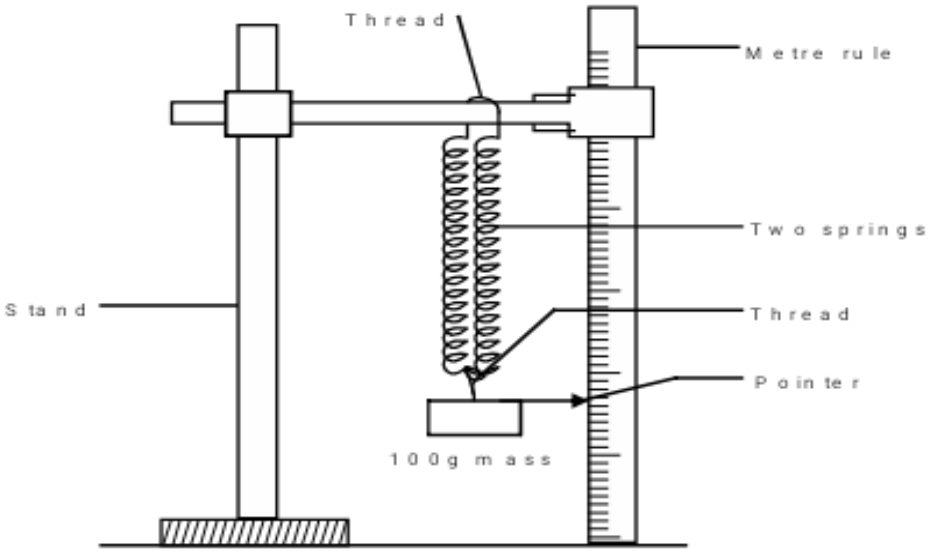
PHYSICS PAPER THREE

Question One

You are provided with the following:

- One stand
- One boss
- One clamp
- Two pieces of thread
- One stopwatch
- One metre rule or half metre rule
- Two springs.
- Six 100g masses
- A piece of cellotape.

a) Hang the springs from rod of a clamp as shown in the figure above.



(i) Tie together the upper end and the lower ends to springs with pieces of thread as shown in the figure.

(ii) Hang a 100g mass from the lower ends of the springs so that the mass is supported by both springs.

(iii) Clamp the rule vertically with zero centimetre mark uppermost.

(iv) Use cellotape to fix the optical pin on the top of the 100g mass so that it acts as a pointer.

(v) Adjust the rule so that the pointer is at 40.0cm mark from the top of the rule.

b) (i) Add a 100g mass to the first mass. Record the new position of the pointer and the extension, *e,* in the table below.

(ii) Add another 100g mass and record the new position of the pointer and the extension in the table.

(iii) Repeat b(ii) until the total mass supported by the spring is 600g.

c) (i) Remove the rule. Displace the 600g mass slightly downwards and release it to oscillate vertically.

(ii) Time 20 oscillations. Record in the table the time, t_1 for 20 oscillations. Repeat this to obtain the average time, t, and theperiod of oscillation T.

(iii) Repeat (c) (i) and (ii) for 500g, 400g 300g and 200g masses.

(iv) Find T^2 and complete the table.

Mass (g)	100	200	300	400	500	600
Position of point (cm)	40.0					
Extension, e, cm	0.0					
Time of t, (s)						
20 oscillations t2(S)						
Average time, t(s)						

Periodic time, T(s)						
$T^2(S^2)$						

d) (i) On the grid provided plot a graph of T^2(vertical axis) against the extension, e. **(5 marks)**

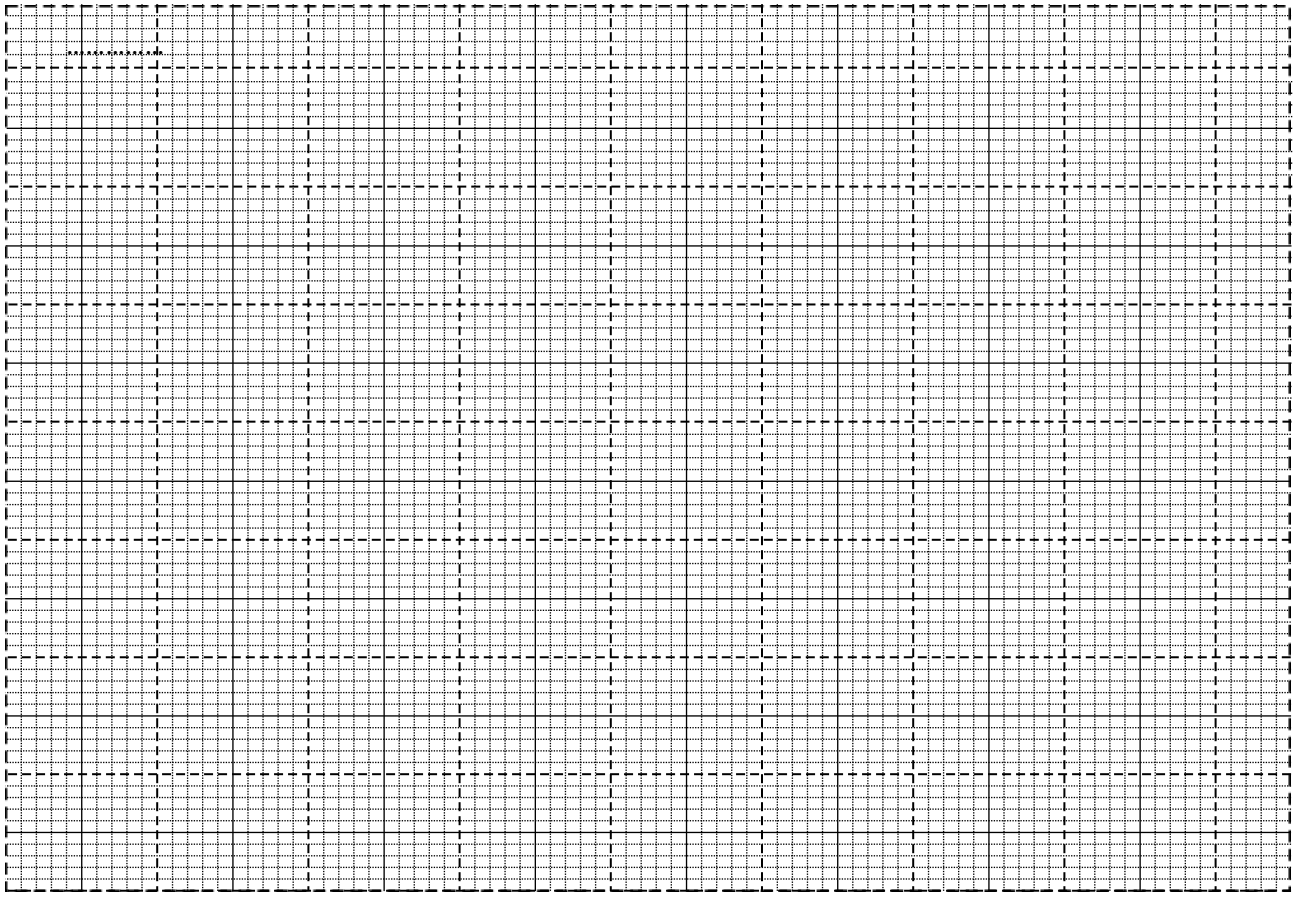
(ii) Determine the gradient of the graph. **(2 marks)**

(iii) The equation of the graph is given by $T^2 = \frac{4\pi^2}{b}e + c$

Where b and c are constants. Determine the value of b. **(1 mark)**

……

(v) What does the value of b represent? **(1 mark)**



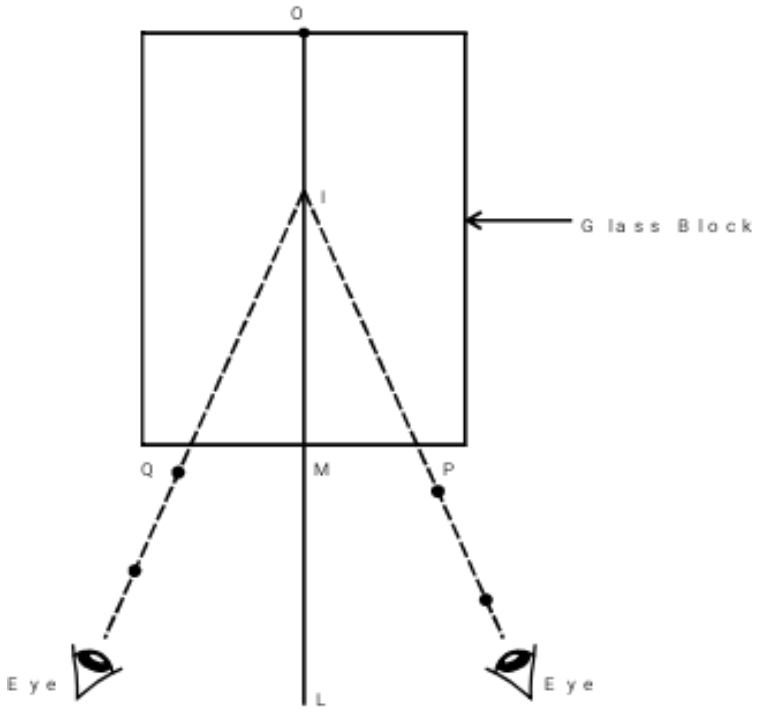
Question Two

You are provided with the following apparatus.

- Rectangular glass block
- 3 optical pins
- A soft board.
- A plane paper
- 4 paper pins.

Place the rectangular glass block in the middle of the plane paper and trace its outline.

Using a pencil remove the block.



Construct a perpendicular line LMO bisecting the shorter sides of M and O.

Mark points P and Q such that PM = MQ = 5cm.

a) Measure **(1 mark)**

OM.....

(i) Place the plane paper on the soft board and carefully replace the glass block so that it fit the outline.

(ii) Press the object pin on O such that it is upright and touching glass block and the second pin on P also upright and touching the block.

(iii) Press the third pin P_1 a short distance from the block such that P_1, P and I lie on a straight line when viewed through the block with one eye. I is the image of the object pin O.

(iv) Repeat the experiment with now on Q. Press the third pin P_2 a short distance from the block such that when viewed P_2, Q and I lie in a straight line.

b) Remove the pins and glass block; draw the lines P_1PI (PI dotted) and P_2 QI (QI) doted meeting OM at I.

IM = ...cm **(1 mark)**

c) Using the above information calculate the refractive index of the glass block by real and apparent depth method. **(2 marks)**

……

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d) NB - Hand in your work on the plane paper. **(1 mark)**

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MATHEMATICS PAPER ONE

1. Without using mathematical tables or calculators, evaluate the following leaving your answer as a

fraction in its simplest form.

(3mks)

$$\sqrt[3]{\frac{0.119 \times 0.256}{0.068 \times 7}}$$

2. Two boys and a girl shared some money .The elder boy got $\frac{1}{9}$ of it, the younger boy got $\frac{2}{5}$ of the

reminder and the girl got the rest. Find the percentage share of the younger boy to the girl's share.

(

3. From a point A, the angle of elevation of top of a watch tower is 20^0.From another point which is

25m from the base of the tower, the angle of elevation of the top of the tower is 26^0.Giving your answer to three decimal places, determine the height of the tower and hence calculate the distance between the points A and B if they are both on the same side of the tower and lie on a straight line with the base of the tower.

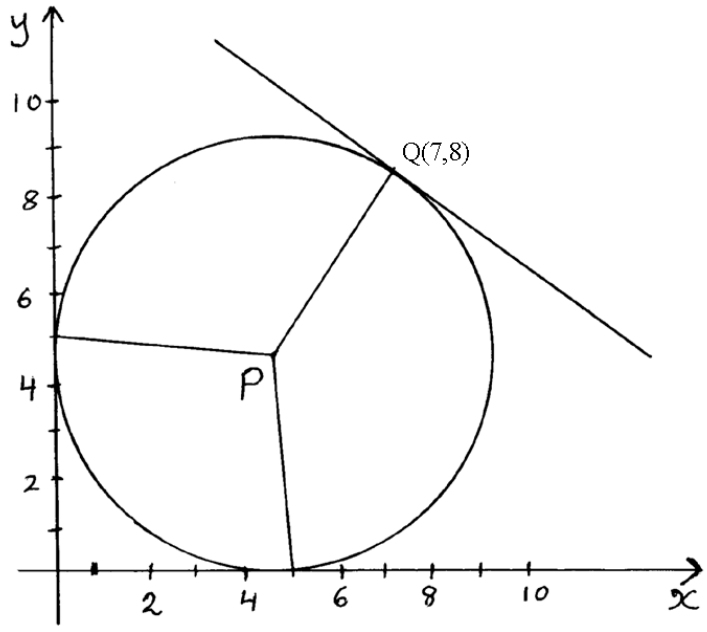
(3mks)

4. If X is a positive integer, find all possible values of x given that $1<\frac{2}{5}x^2<7$. (3mks)

5. A train whose length is 60 metres is travelling at 40km/h in the same direction as a bus whose length is 20m.If the speed of bus is 80km/h and moving parallel to the train, calculate the time it takes the truck to overtake the train completely in seconds. (3mks)

6. A positive two digit number is such that the product of the digits is 20.When the digits are reversed , the number so formed is greater than the original number by 9.Find the number.

7. The diagram below shows a circle with centre P(5,5) and radius 5 units



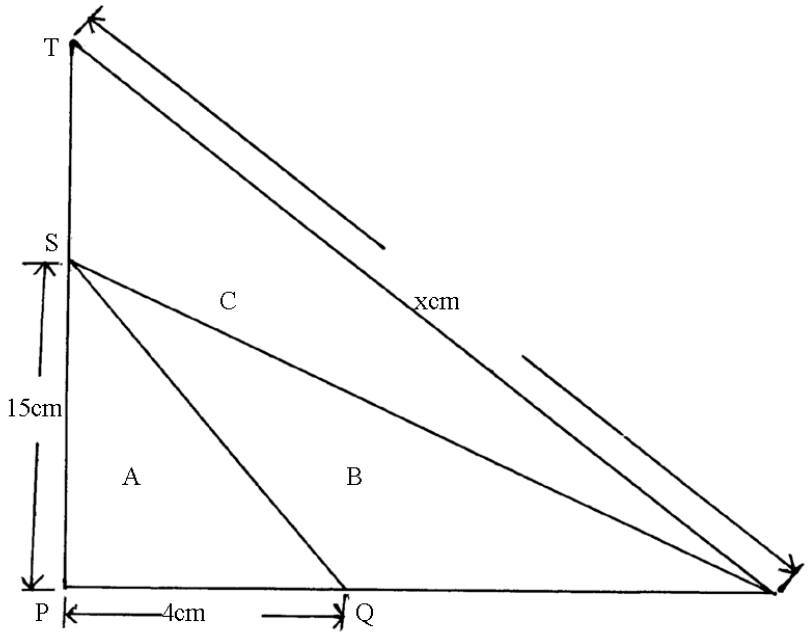
(a) Write down in terms of x and y the equation of the circle in the form $ax^2+by^2+cx+dy+e=0$
where a,b,c,d and e are constants.
(1mk)

(b) Determine the gradient of PQ
(1mk)

(c) Find the equation of the tangent at Q in the form ax+by=c.
(2mks)

8. Find the value of x in the following figure given that area A =Area B=Area C(Give your answer

to 2 decimal places)
(4mks)



9.Odhis car Hire company hires out as follows; sh. 2500 per day and sh. 270 per kilometer covered. They offer a discount of 30km free each day of hire.Makori hires a car for 5 days and drives for 480km.Calculate the total cost.

10.Omwando borrows sh. 90,000 for 5 years at 6 ½ % simple interest p.a.What amount does he have to pay at the end of that time?

(3mks)

11.Solve for t in the equation

$9^{t+1} + 3^{2t} = 30$.

(3mks)

12.Given the curve $y = x^2 - 2x + 6$, find the coordinates of the point on the curve at which the gradient is 4.

13.Mary has some money in two denominations only. Fifty shilling notes and twenty shilling coins. She has three times as many fifty shilling notes as twenty shilling coins. If altogether she has sh. 3400, find the number of fifty shilling notes and 20 shilling coins.

14.In Ngamongo village, a piece of work can be completed by 45 workers in 10 days .They worked for 4 days after which 15 workers were laid off. How many days would it take the remaining workers to complete the work?

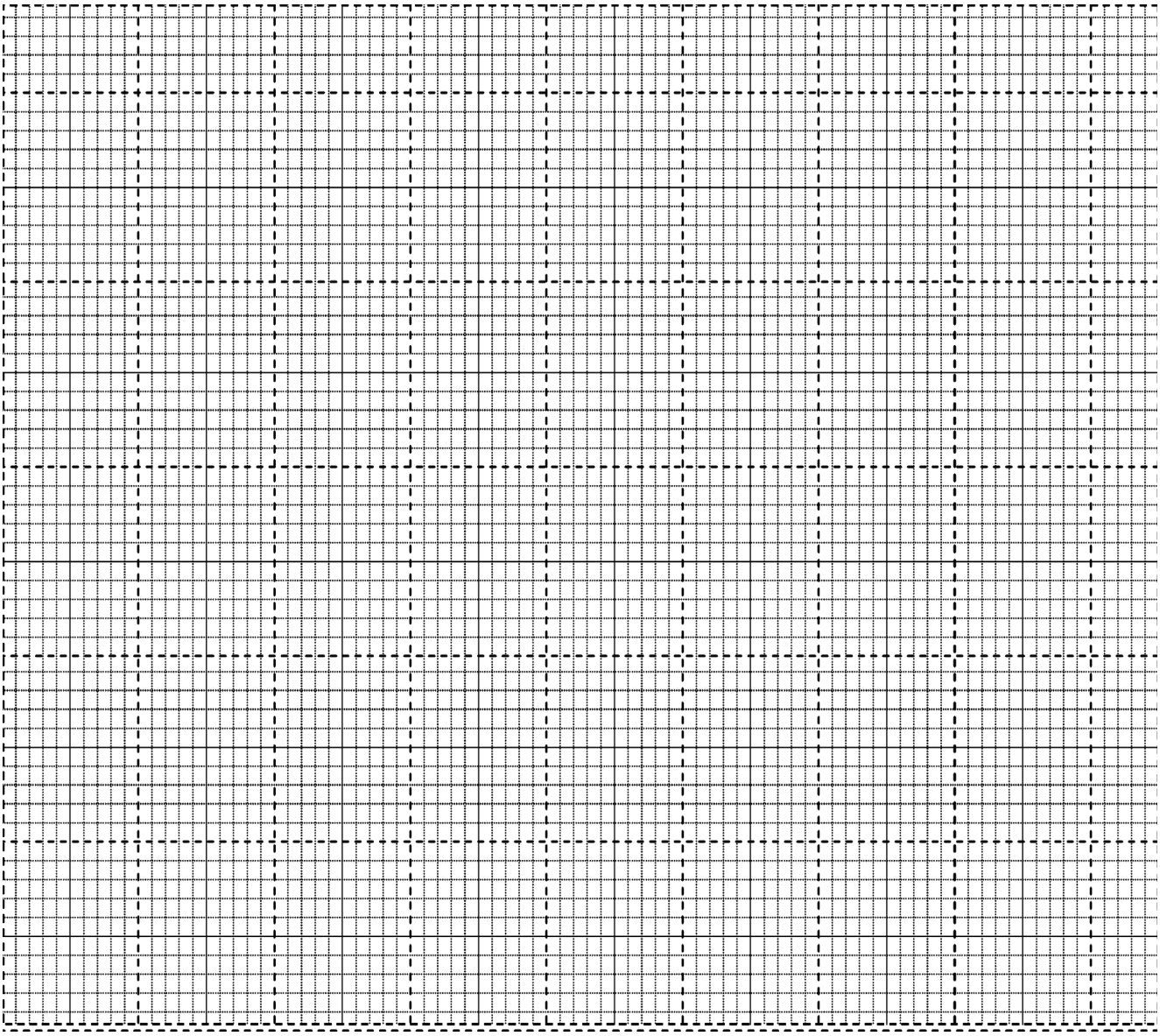
(3mks)

15. The table below shows marks obtained by a form three class in a certain school.

Marks (x)	$8 \leq X < 9$	$9 \leq X < 11$	$11 \leq X < 13$	$13 \leq X < 16$	$16 \leq X < 20$	$20 \leq X < 21$
No. of students (y)	2	6	8	3	2	1

Use the table to represent the information on a histogram.

(3mks)



16. Find the inverse of the matrix $\begin{pmatrix} 2 & 1 \\ 3 & 2 \end{pmatrix}$ and hence solve the simultaneous equations below. (4mks)

2x+y=21

3x+2y=34

SECTION II (50 MARKS)

ANSWER ANY FIVE QUESTIONS.

17. A bag contains 5 red , 4 white and 3 blue beads. Two beads are selected at random.

(a) Draw a tree diagram and list the probability space.
(3mks)

(b) Find the probability that

(i) The last bead selected is red.
(2mks)

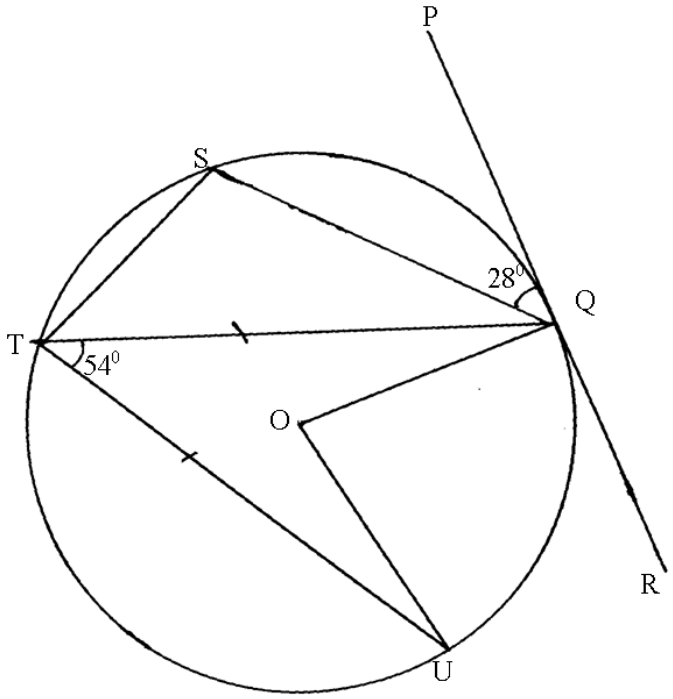
(ii) The beads selected were of the same colour

(2mks)

(iii) At least one of the selected beads is blue.

(3mks)

18. In the figure below,O is the centre of the circle.PQR is a tangent to the circle at Q. Angle PQS=28^0,angle UTQ=54^0 and UT =TQ.



Giving reasons , determine the size of

(a) Angle STQ.

(2mks)

(b) Angle TQU.

(2mks)

(c) Angle TQS

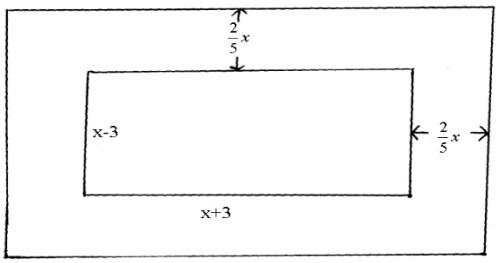
(2mks)

(d) Reflex angle UOQ . (2mks)

(e) Angle TQR.

(2mks)

19.The following figure represent a dancing floor with a carpeted margin all around of $\frac{2}{5}x$ wide leaving a dancing space of (x-3)m by (x+3)m



If the total area of the entire room is 315m^2

(a) Calculate the value of x.

(5mks)

(b) Calculate the area of the carpeted margin.

(3mk

(c) If the carpet cost sh. 750 per m^2,calculate the total cost of the sealed margin.

(2mks)

20. John bought 3 brands of tea, A B and C. The cost price of the three brands were sh 25, sh 30,

sh 45 per kg respectively. He mixed the three brands in the ratio 5:2:1 respectively: After selling the mixture he made a profit of 20%.

(a) How much profit did he make per kilogram of the mixture?
(4 mks)

(b) After one year the cost price of each brand was increased by 10%

(i) For how much did he sell one kilogram of the mixture to make a profit of 15%? (Give your answer to the nearest 5 cents) (3 mks)

(ii) What would have been his percentage profit if he sold one kilogram of the mixture at sh. 45.

(3 mks)

21. A car accelerates from rest for 10 seconds until it reaches a velocity of 12 metres per second.It then continues at this velocity for the next 40 seconds after which it brakes and comes to rest until a constant retardation of 1.5 meres per second

(a) Determine

(i) The acceleration over the first 10 seconds
(2mks)

(ii) The time taken during the retardation

(b) Draw the velocity time graph for the journey and use it to determine.

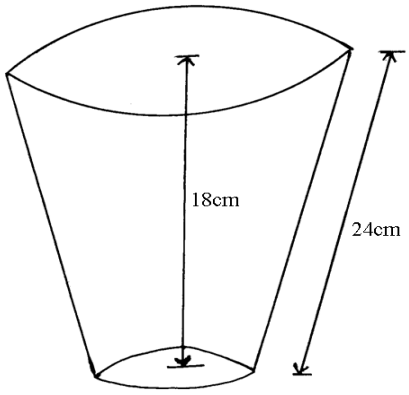
(i) The total distance covered by the car

(4mks)

(ii) The percentage of the total distance which was covered during the first 15 seconds.

22. The diagram below shows a flower vase of depth 18cm.The ratio of the top and bottom diameters is 5:2 (Take $\prod$ =3.142)

Calculate



(a) The volume of the flower vase (7mks)

(b) The curved surface area of the flower vase

(3mks)

23. Given that x-y=3 and 3x+y=17, find without solving for X and Y the value of

(a) $2xy-x^2-y^2$

(2mks

(b) $6xy+y^2+9x^2$ (2mks)

(c) $3x^2-2xy+y^2$

(3mks)

(d) $\frac{3x^2-4xy+y^2}{9x^2-y^2}$

(3mks)

24. Three Kenyan warships A,B and C are at sea such that ship B is 450km on a bearing of 030^0 from ship A. ship C is 700km from ship B on a bearing of 120^0.An enemy ship D is sighted 1000km due south of ship B.

(a) Taking a scale of 1cm to represent 100km locate the position of the ships A,B,C

and D

(b) Find the compass bearing of :

(i) Ship A from ship D

(1mk)

(ii) Ship D from ship C

(1mk)

(c) Use the scale drawing to determine

(i) The distance of D from A

(1mk)

(ii) The distance of C from D

(1mk)

(d) Find the bearing of :

(i) B from C

(1mk)

(ii) A from C

(1mk)

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MATHEMATICS PAPER TWO

ges are printed as indicated and no questions are missing

1. Evaluate without using tables or calculators. (3mks)

$$\sqrt{\frac{0.8064 \times 6.048}{1.008 \times 0.1344}}$$

2. Evaluate $\frac{-4 \text{ of } [(-4 + -5 \div 15) + -3 - 4 \div 6)]}{84 \div -7 + 3 - - 5}$ (2mks)

3. Solve for θ without using table given that $0 \leq \theta \leq 90^{o}$ and that $\sin(2\theta - 30^{o}) - \cos 4\theta = 0$ (3mks)

4. Solve for x given that $5^{2x+2} - 20 \times 5^{2x} = 625$ (3mks)

5. The angle of a quadrilateral ABCD in order are 2 (x -10), 4 (x + 5), 5(x+4) and (x-20) in degrees. Find the exterior angles of the quadrilateral. (4mks)

6. A radio costing kshs. 1240 is marked to sell at a price calculated to give a profit of 40 %. What will be its selling price in sale when 25% is taken off the marked price? (3mks)

7. Show that if OA = - i+ 7j, OB = 3i – 5j and OC = 4j, then points AB and C are collinear. (4mks)

8. Four men can dig 2 acres of land in 3 days working 4 hour a day. How many men are required to dig 5 acres of land in 4 days working 3 hours a day at the same rate. (3mks)

9. The surface area of two similar bottles are 12 cm^2 and 108cm^2 respectively. If the larger one has a volume of 810 cm3. Find the volume of the smaller one. (3mks)

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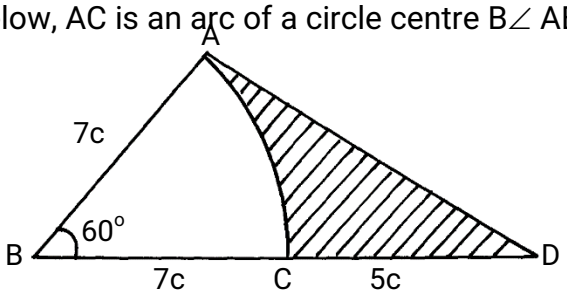
10. In the figure given below, AC is an arc of a circle centre B∠ ABD = 60^o, AB = BC = 7cm and CD= 5 cm.



Calculate

a) The area of triangle ADB (2mks)

b) The area of the shaded region. (2mks

11. Solve the inequalitites and represent the information on the number line. (3mks)

-3+2x<3x+2<4(x-5)

12. Make x the subject of the formula in $3s=2p\sqrt{\frac{x}{3x-5}}$ (3mks)

13. Given x = 13.4cm and y = 4.3 cm. calculate the percentage error in $\frac{x}{y}$ correct to 4 d.p(3mks)

14. A straight line through the point A (2, 1) and B (4,m) is perpendicular to the line whose equation is 3y = 5 – 2x, Determine the value of m. (3mks)

15. Okoth deposited some money at 10% compound interest compounded annually. How long will it take to double the amount to the nearest year? (3mks)

16. Chebet has 5 brown chicken and 3 black ones. She picks two of them for slaughter at random, one after the other. What is the probability that the two are of different colours. (3mks)

SECTION II

Answer only five questions.

17. A bus left Nairobi at 8.00am and traveled towards BUsia at an average speed of 80km/hr. At 8.30 am a car left Busia for Nairobi at an average speed of 120km/hr. Given that the distance between Nairobi and Busia is 400km.

Calculate:

a) The time the car arrived in Nairobi.
(2mks)

b) The time the two vehicles met.
(4mks)

c) The distance from Nairobi to the meeting point.
(2mks)

d) The distance of the bus from Busia when the car arrived in Nairobi.
(2mks)

18. A triangle whose vertices are A (1,4) B (2,1) and C (5,2) is given the following transformation:

i) Reflection in the line y = -x to $A^1B^1C^1$

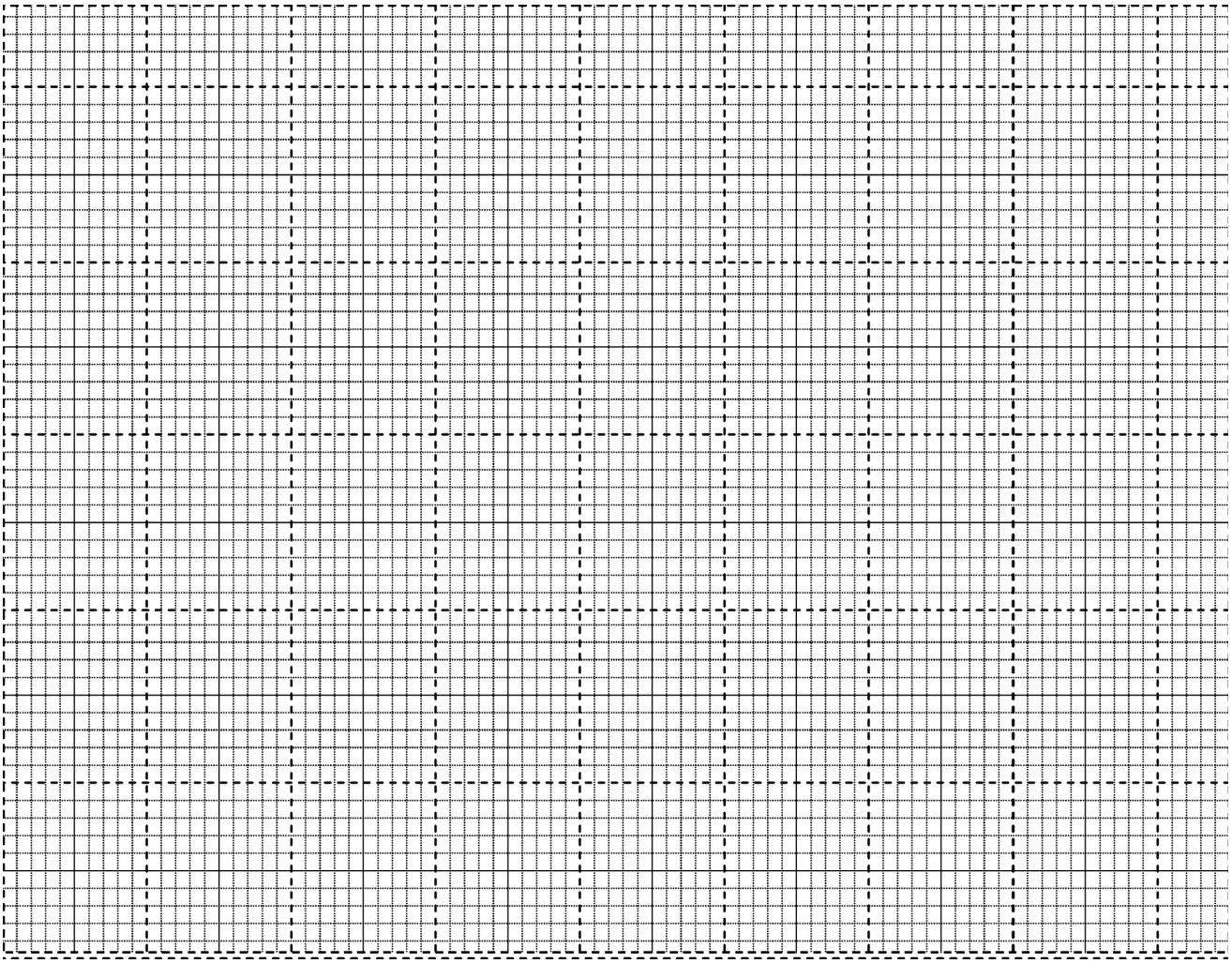
ii) $A^1B^1C^1$ is then given rotation of + 90^o about the origin to $A^{11}B^{11}C^{11}$

iii) $A^{11}B^{11}C^{11}$ is then given a translation vector $\begin{pmatrix} -2 \\ \end{pmatrix}$ to $A^{11}B^{11}C^{11}$

iv) $A^{11}B^{11}C^{11}$ is then given an enlargement scale factor – 2 centre (0, 0) to $A^{IV}B^{IV}C^{IV}$.

On the given grid plot a triangle ABC and it's images $A^1B^1C^1$, $A^{11}B^{11}C^{11}$, $A^{111}B^{111}C^{111}$ and $A^{IV}B^{IV}C^{IV}$. And give coordinates of $A^{IV}B^{IV}C^{IV}$.

(10mks)



19. A Post OT stand vertically on level ground John moves from O, the foot of the flag post to point R, on the level ground. The points T, O and R from a right angled isosceles triangle whose perimeter is 56m. S is another point on the level ground 35m from O calculate:

a) The angle of elevation of T from S.

(6mks)

b) The distance ST.
(2mks)

c) Find the maximum possible distance between R and S.
(2mks)

20. A salesman received a basic salary of sh. 50,000 a year together with a commission of 6 % on the value of goods sold and a car allowance of sh. 2.50 per km.
a) Find the total amount he received in a year in which he sells goods worth sh. 625,000 and travels
10,000km. (4mks)

b) The next year he travels 12,000km and receives a total of shs. 134,000
i) Calculate the value of goods sold.
(4mks)

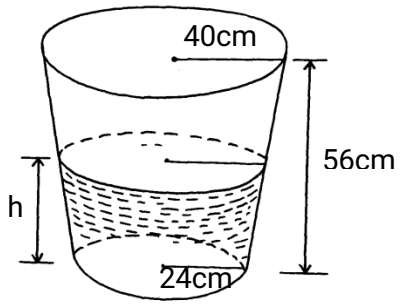
ii) Calculate the percentage increase in the value of the goods sold.
(2mks)

21. Two airports a and B are such that B is 500km due east of A. two plane P and Q take off from A and B respectively and at the same time.
Plane P files at 360km/hr on a bearing of 030^{o}
Plane Q flies at 240km/hr on a bearing of 315^{o}
The two planes land after 90 minutes.
Using a scale of 1: 10,000,000
a) Show the positions of the planes after 90 min.
(6mks)

b) Find the distance between the planes after 90 min.
(2mks)

c) Find the bearing of plane Q from plane P after 90 minutes
(2mks)

22. The figure below shows a container in form a frustrum of an open top radius 40cm and base radiu24 cm.
the depth is 56 cm.



a) Calculate the volume of the container in litres.
(4mks)

b) Of the container is ¾ full of water by volume,
Calculate the radius of the meniscus.
(6mks)

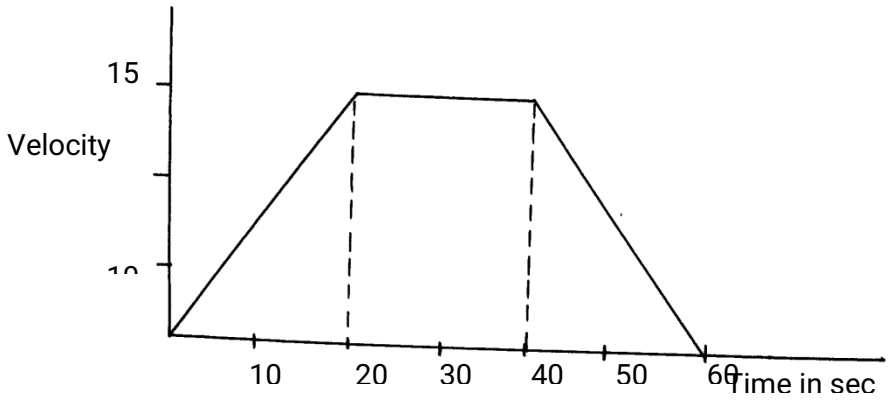
23. Use a ruler and compass only in this question.
a) Construct Δ ABC such that AB = 6cm AC= 8.5 cm and ∠ BAC = 120^{o}
(3mks)

b) Construct the locus ℓ, of points equidistant from A and B
(

c) Construct the locus ℓzof points equidistant from AB and BC

d) Find the points of intersection, P_1 and P_2, of 1_1 and 1_2 and measure P_1P_2
(2mks)

24. The diagram below shows the graph of a moving matatu from one bus stop to another.



a) Find the acceleration of the matatu.
(2mks)

b) Find the deceleration of the matatu
(2mks)

c) Calculate the distance the matatu while accelerating.
(2mks)

d) Calculate the distance the matatu covered while traveling at an acceleration of $0m/s^2$
(2mks)

e) Find the distance between the two bus stops.

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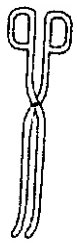
CHEMISTRY PAPER ONE

indicated and that no questions are missing.

1. Identify and state the use of the apparatus represented below. (2 marks)



Name……

Use……

2. Give the systematic name of each of the compounds represented by the formulae below. (3 marks)

(a) $CH_3C{\equiv}CCH_3$

……..

(b) $CH_3CH{=}CHCH_2CH_3$

……..

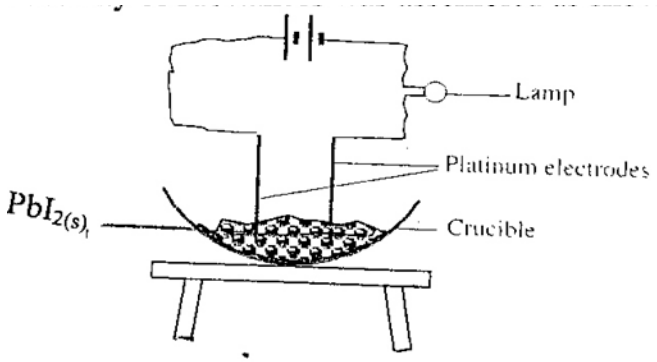
3. A fixed mass of a gas occupies 105cm^3 at -14 ^oC and 650mmHg. At what temperature will it have a volume of 15cm^3 if pressure is adjusted to 690mmHg? (3marks)

4. a) Using dots (.) and crosses (**x**) to represent electrons, show the bonding in the compounds formed between magnesium and fluorine. (Atomic numbers; Mg= 12, F=9) (1 mark)

b) State one likely physical property of the compound formed between magnesium and

fluorine in (a) above. (1 mark)

5. A set-up to investigate electrical conductivity of substances was assembled as shown below.



The bulb did not light.

(a) What was missing in the set-up? (1 mark)

……

(b) The bulb lit when the omission was corrected. Explain. (2 marks)

……

……

6. An oxide of copper in a porcelain boat was reduced by a stream of hydrogen. The results obtained were as follows;

Mass of porcelain boat = 4.5g

Mass of boat + Oxide = 6.40g

Mass of boat + Copper = 6.02 g

i) Determine the empirical formula of the oxide. (3 marks)

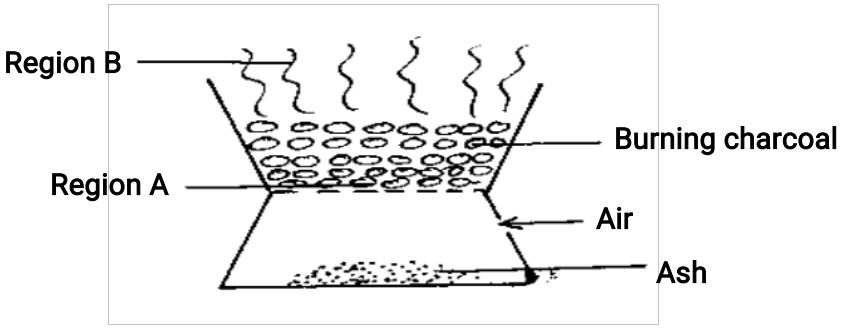
ii) If the relative formula mass of the oxide is 80, determine its chemical formula.
(Cu = 64, O = 16) (1 mark)

7. Starting with copper metal, describe how to prepare solid copper (II) carbonate. (3 marks)

……

……

8. The diagram below shows a 'jiko' when in use. Study it and answer the questions that follow



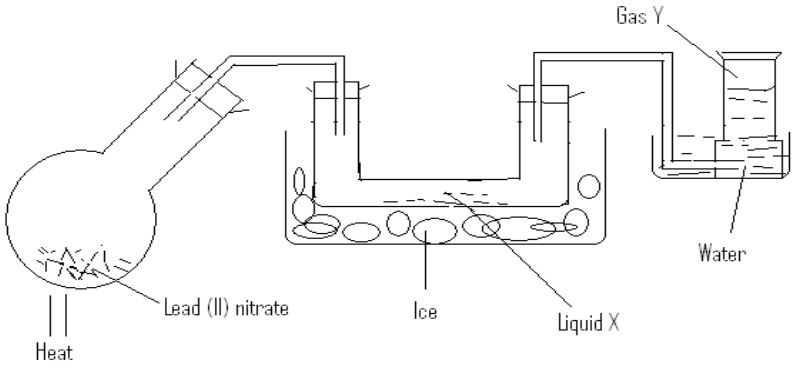
(a) Identify the gas formed at region **B** (1mk)

……

……

(b) State and explain the observation made at region **B** (2mks)

9. A student set up the following experiment to study the effect of heat on lead (II) nitrate.



i)Identify liquid X (1 mark)

……

ii)Describe the test for gas Y. (1 mark)

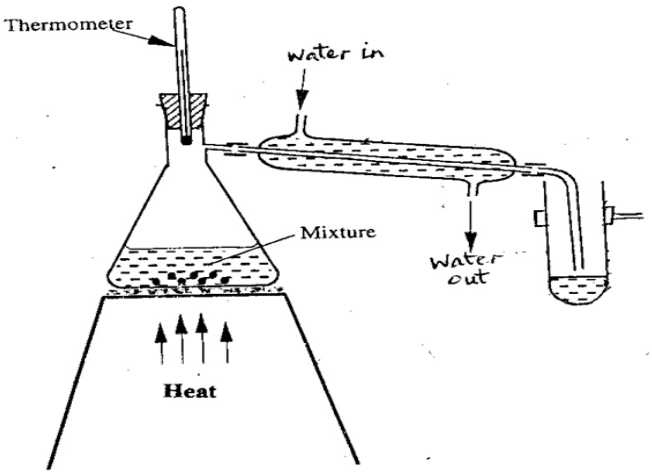
……

……

iii)Write a balanced chemical equation for the reaction. (1 mark)

……

10. The set-up represented below can be used to separate ethanol from its mixture with water.



(a) Identify an error in the set-up. (1 mark)

……

(b) Name this method of separation. (1 mark)

……

(c) What properties make it possible to separate ethanol from water by this method? (1 mark)

……

……

11. Describe how to distinguish between substances I and II .

(3 marks)

I. CH_3CH_3 II. $HCCCH_3$

……

……

12. Element K has two isotopes ^{20}K and ^{22}K with relative abundance of 90% and 10% respectively.

a) What are isotopes? (1 mark) ……

……

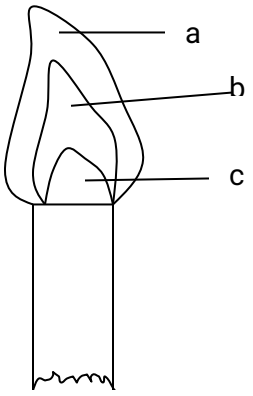
b) Determine the relative atomic mass of element K. (2 marks)

13. Give one application of calcium oxide. (1 mark)

……

……

14. Consider the diagram below.



Name the regions labeled a, b, c. **(3 marks)**

a ……

b …….

c …….

15. State one use of:

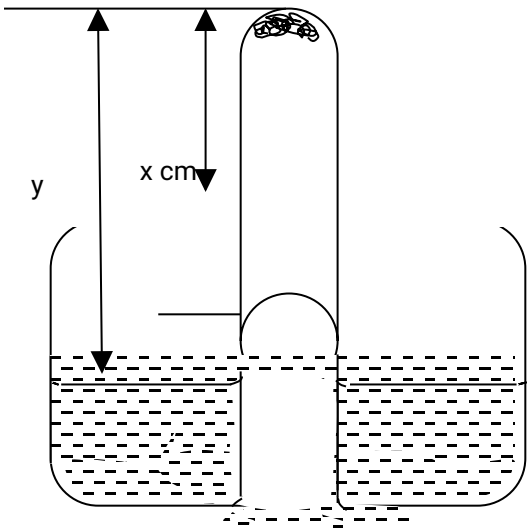
a) Calcium nitrate (1 mark)

…….

b) Magnesium hydroxide (1 mark)

……

16.. Some moist iron wool was placed in a test tube and the tube was inverted and set up as shown below.



The apparatus was left for one week. The water level rose and iron wool turned red-brown.

(i) Write the chemical equation to show the rusting of iron. **(1 mark)**

……

(ii) Write the expression for an approximate percentage. **(1 mark)**

(iii) State two similarities between rusting and combustion.

(a) ……**(1 mark)**

(b) ……**(1 mk)**

17. Sulphur burns in air to form a gaseous product.

i) What is the colour of the flame of burning sulphur? (1 mark)

……

ii) Give an equation for the reaction that takes place when the gaseous product is bubbled through water. (1 mark)

……

iii)State one importance of the product formed in 17(ii) above. (1 mark)

……

18. The pH values of some solutions labeled **E** to I are given in the table **below**. Use the information to answer the questions that follow.

pH	14.0	1.0	8.0	6.5	7.0
Solution	E	F	G	H	I

(a) Identify the solution with the highest concentration of hydroxide ions. Give a reason for your answer. (2 marks)

_____

_____

_____

(b) Which solution can be used as a remedy for acid indigestion in the stomach?(1 mark)

_____

19. Four metals are labeled P, Q, R and S (not actual symbols). Metal P displaces metal S from its oxide but cannot displace R from its oxide. Q when mixed with the oxide of R and heated, a reaction occurs.

Arrange the metals in order of reactivity, starting with the most reactive. (2 marks)

……

20. A certain element Y has atomic number 15 and mass number of 31.

(a) Calculate the number of neutrons in the element.
(1mk)

_____

(b) Write the electron arrangement of the ion formed by element Y. (1mk)

_____

(c) How would the atomic size of the above element compare with another atom X whose atomic number is 11 and mass number 23? Explain. (1mk)

_____

21. The table below shows the first ionisation energies of elements P and Q.

Element	1st Ionisation energy kJ/mole
P	494
Q	418

a)What do these values suggest about the reactivity of P compared to that of Q? Explain. (2 marks)

……

……

a) State two factors that influence ionization energy. (1 mark)

……

……

22. Steam is passed over heated iron filings in a combustion tube.

(a) Name the products of this reaction. (2 mark)

……

……

(b) Write an equation for the reaction that occurs. (1 mark)

1. …… Diamond and graphite are allotropes of carbon.

(i) What are allotropes? (1mk)

……

……In terms of structure and bonding explain why diamond is used in drilling through hard rocks while graphite is a lubricant

(2mks)

24. $30cm^3$ of 0.5M hydrochloric acid was used to neutralize $25cm^3$ of sodium hydroxide solution. Determine the concentration of sodium hydroxide in grams per litre. (3 marks)

(H=1, O=16, Na= 23)

25. The table below gives some information about the physical properties of four substances which are represented by letters. **L M N** and **K.**

Substance	Melting point	Heat of vaporization	Electrical Conductivity	
			Solid	molten
L	High	High	Poor	Poor
M	High	High	Good	Good
N	High	High	Poor	Good
K	Low	Low	Poor	Poor

Select with reasons an element which is likely to be:

(i) Copper metal (1mk)

……

……Silicon (iv) oxide

(1mk)

……

……Potassium iodide

(1mk)

……

26. a) Write balanced chemical equations for reactions between chlorine and; (2 marks)

i) Concentrated sodium hydroxide

……

ii) Dilute sodium hydroxide.

……

b) State one observation made when a gas jar of moist hydrogen sulphide is inverted over a gas jar of dry chlorine gas. (1 mark)

……

27.a) Hydrogen sulphide gas is bubbled through bromine water.

i) Give two observations made. (1 mark)

……

……

ii) Write an equation for the reaction that takes place. (1 mark)

……

b) State the test for hydrogen sulphide gas. (1 mark)

……

……

28.(a) State Gay-Lussac's law. (1 mark)

……

……

b) When 100cm^3 of a gaseous hydrocarbon ($C_xH_{y)}$ burns in 300cm^3 of oxygen, 200cm^3 of carbon(IV)oxide and 200 cm^3 of steam are formed.

Deduce the formula of the hydrocarbon. (2 marks)

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CHEMISTRY PAPER TWO

as indicated and that no questions are missing.

1. The table below shows the elements in the third period, the oxides of the third period and their properties.The letters are not the actual symbols of the elements. Study the information and answer

the questions that follow:

Element	Atomic number	Atomic radius(nm)	Oxide	State at RT	oxide melting point ºC
M	11	0.191	M_2O	Solid	1132
N	……	0.160	NO	Solid	2852
P	13	0.130	……	Solid	2072
Q	14	0.118	QO_2	…….	1610
R	……	0.110	……	Solid	580
S	16	0.102	SO_2	……	-75
T	17	0.099	TO_2	Gas	-60
V	18	0.095	X	X	X

(a) (i) Complete the table above
(3mks)

(ii) Explain the trend in the atomic radius across the period
(2mks)

(iii) Explain why the oxide of element V does not exist
(1mk)

……

(b) Name the type of structure and bond in the following oxide

(2mks)

Oxide	Structure	Bond type
NO		
TO_2		

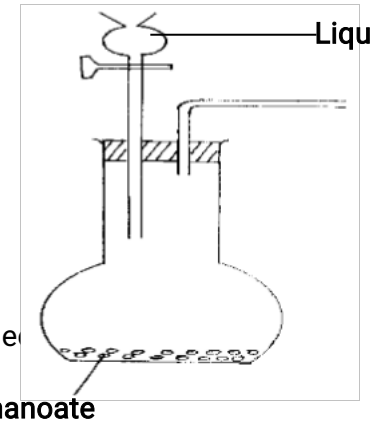
ii) Using dots and crosses to represent electrons. Show the bonding in the oxide, QO_2
(2mks)

(c) (i) Explain why elements **P** conducts electricity but **T** does not
(

……

(ii) The oxide of **P** reacts both acids and alkalis. Give the name of this kind of oxide
(1mk)

2. The set up below was to be used to prepare carbon (II) oxide in the laboratory. Use it to answer the questions that follow.



(a) Complete it in order to colle
(3mks)

……

……

(b) Which is the appropriate identity of the liquid **X**?

(1mk)

……

……

(c) Explain how you can chemically distinguish unlabelled gases of carbon (II) oxide and carbon (IV)

Oxide respectively.

(2mks)

……

……

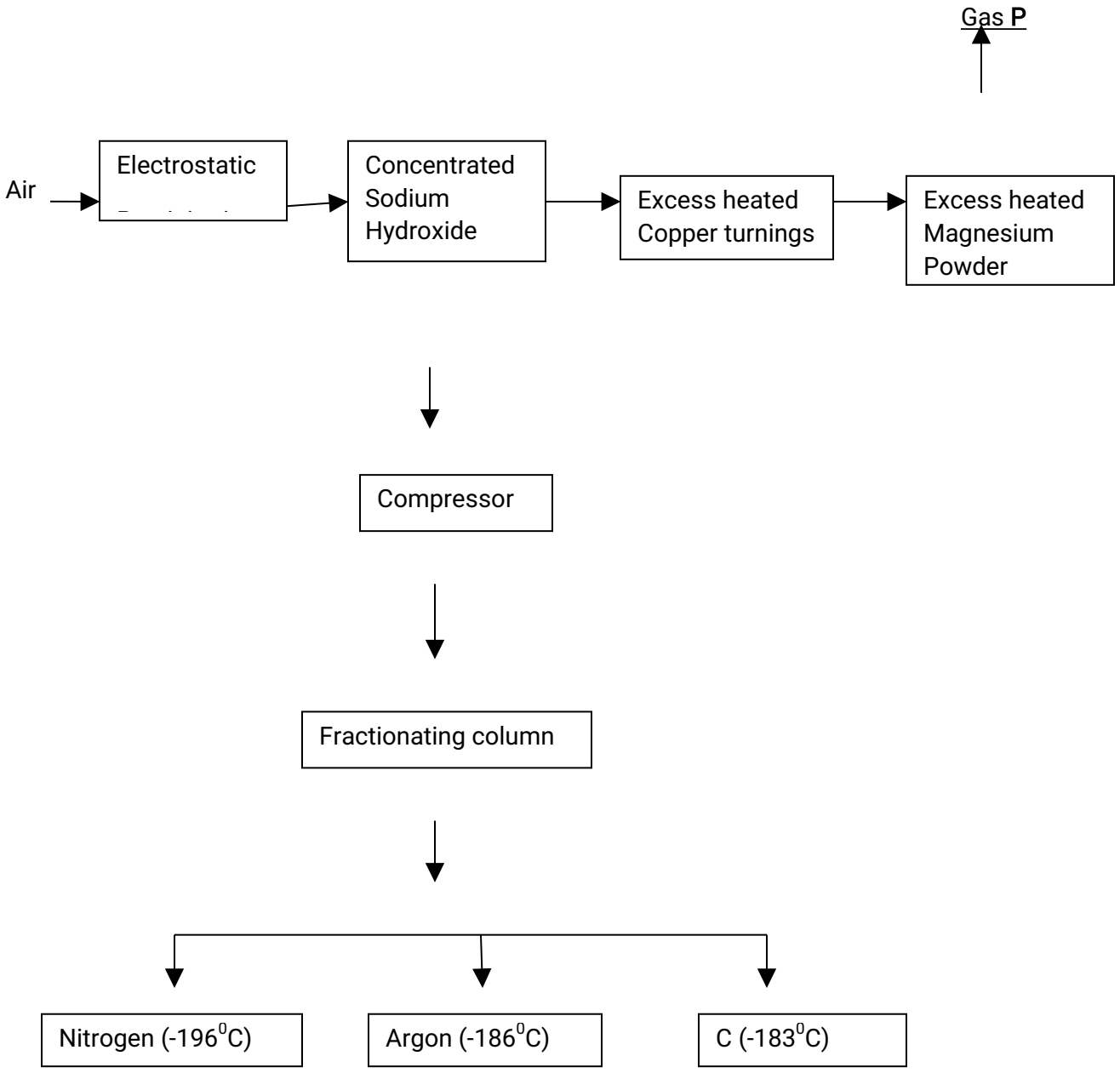
(d) Using dot (●) and crosses **(x)** draw the structure of Carbon (IV) oxide.

(2mks)

(e) Calculate the volume of oxygen that will be required for complete combustion of $100cm^3$ of carbon (II)

oxide.

3. Air was passed through several reagents as shown in the flow chart below.



(a) Name the major components of air.
(2mks)

……

……

(b) Write an equation for the reaction which takes place in the chamber with:

(i) Concentrated sodium hydroxide.
(1mk)

……

……

(ii) Excess heated copper turnings.
(1mk)

……

……

(iii) Excess heated magnesium powder.
(1mk)

……

……

(c) Name **one** gas which escapes from the chamber containing magnesium powder. Give a reason for your answer.
(2mks)

……

……

(d) Name the substance that was eliminated by electrostatic precipitation.
(1mk)

……

(e) Name a reagent that can be used in place of concentrated sodium hydroxide.
(1mk)

……

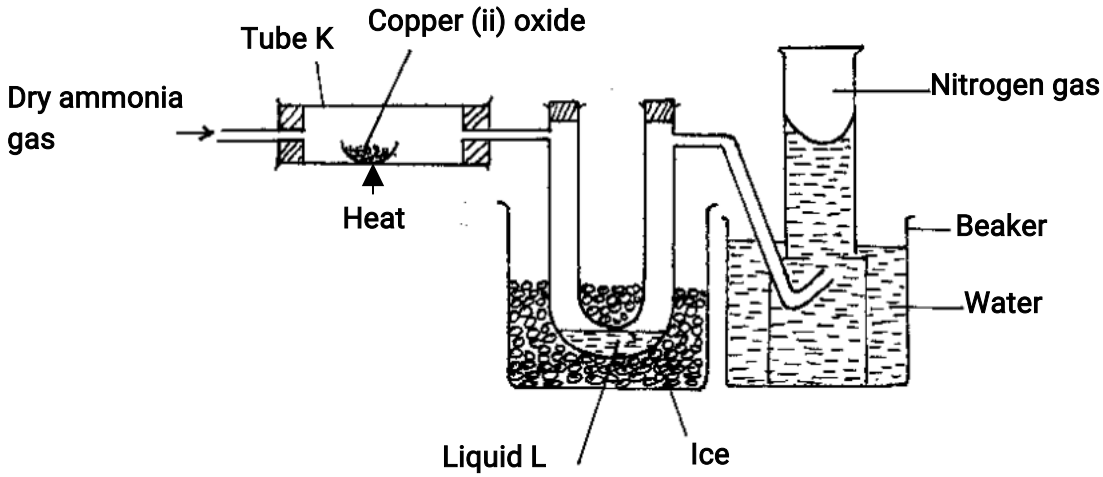
(f) Name substance **C.**
(1mk)

……

(g) State **two** uses of gas **C.**
(1mk)

……

4. The diagram below shows the set up that can be used to obtain nitrogen gas in an experiment carried out by form 3 of Inaya Sec school.



(i) How is the ammonia gas from this process dried?
(1mk) ……

(ii) Name liquid **L**?
(1mk) …… ……
……

(iii) What observation would be made at tube **K** at the end of the experiment?
(1mk) …… ……
……

(iv) Write an equation for the reaction that took place in the tube **K.**

(1mk) …… ……

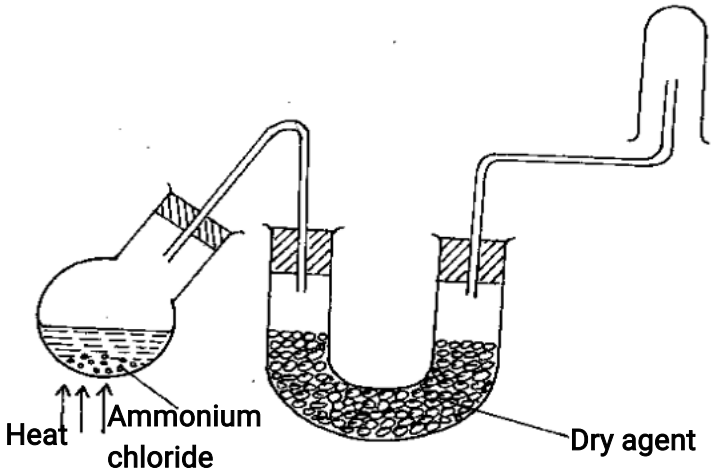
……

(v) At the end of the experiment the pH of water in the beaker was found to be 10.0. Explain. (1mk)

……

……

(b) A student set up the following apparatus for preparing jars of dry ammonia but found that no gas collected in the gas jars, although a reaction occured in the flask.



(i) Explain why their was no gas collected?

(1mk) …… ……

……

(ii) The following alteration were made

- Using a mixture of ammonium chloride and an alkali, $Ca(OH)_2$ instead of NH_4CL
- The flask was made to slope with neck downward.

State the reason for each alteration above

(2mks) …… ……

…… ……

…… ……

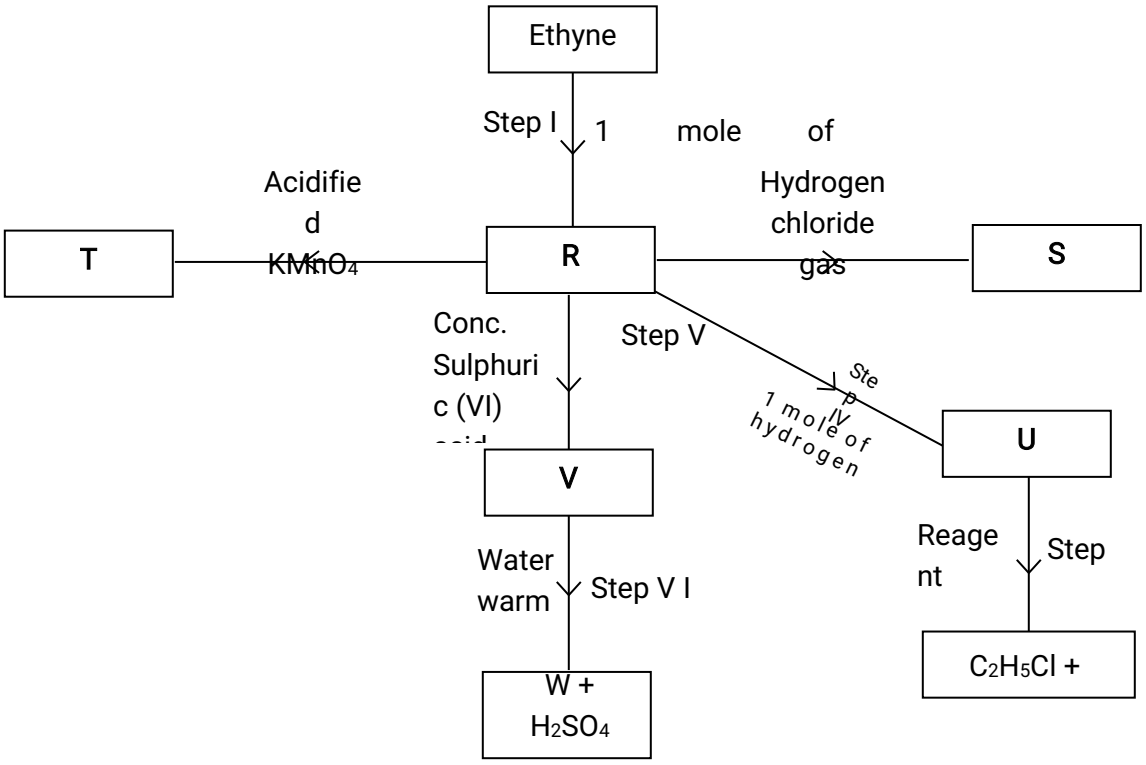
(iii)When ammonia gas is passed into a jar of hydrogen chloride gas, white fumes are formed. Explain with an aid of equation of reaction.

(2mks) …… ……

……..

(iv) Ammonia decompose if sparked electrically, what would you expect to be the products of the decomposition?

5. Study the flow diagram **below** and answer the questions that follow.



(a) Name substances.
(3 marks)

R …….

S …….

T ……

U ……

V …….

W …….

(b) Name reagent **X** and the condition required for the reaction in Step **VII** to occur.
(2 marks)

……

……

(c) Name the type of reaction that occurred in

(i) Step **I** ……(1mrk)

(ii) Step **VII** ……(1mark)

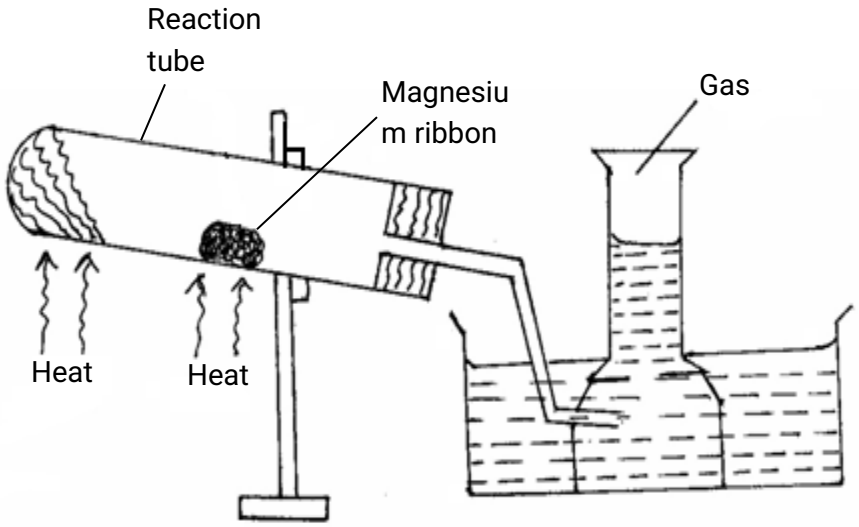
(d) Name the reaction that occurred in

(i) Step **II** …….. (1 mark)

(ii) Step **IV** ……. (1 mark)

(e) Draw and name **two** structural isomers of $C_4 H_{10}$.
(2 marks)

6. The set-up **below** was used to prepare and collect gas **X.** During the experiment cleaned magnesium ribbon was strongly heated before heating the wet glass wool.



(a) Name gas **X**
(1mrk)

(b) Why is magnesium ribbon cleaned before it is used?
(1 mark)

(c) State **one** observation that would be noted in the reaction tube.
(1 mark)

……..

(d) Write the equation for the reaction in the reaction tube. (1 mark)

(e) State **one** industrial use of the solid product formed in the reaction tube.
(1 mark)

(f) What precaution should be taken at the end of experiment? Explain.
(2 marks)

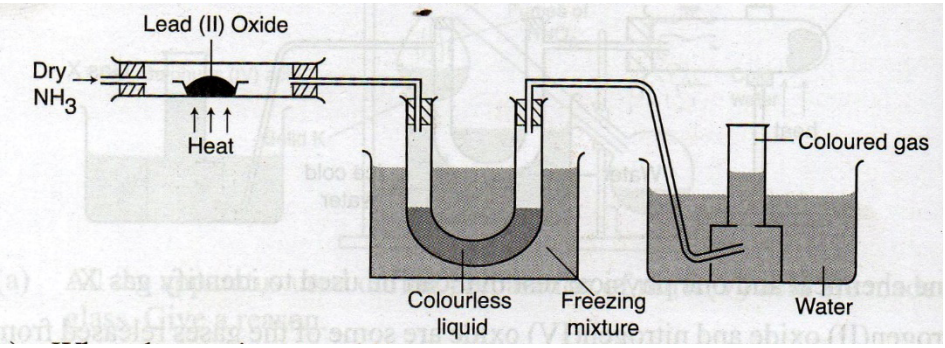
……

(g) At the end of the experiment 96.0cm³ of gas X were collected at 10°C and 1 atmosphere pressure. (Mg = 24, M.G.V = 22.4, T = O°C at stp, P = 1 atmosphere at stp).

(i) Determine the volume gas X would occupy at s.t.p?
(2 marks)

(ii) Calculate the mass of magnesium ribbon used Mg = 24.
(2 marks)

7. (a) Dry ammonia gas is passed over heated lead (II) oxide in a combustion tube as shown in the diagram.



(i) What observation would be made in the combustion tube? Explain. (2mks)

(ii) Write the reaction taking place in the combustion tube. (2mks)

……

……

(iii) Outline a chemical test you would use to identify the colourless liquid collected in the u-tube.
(2mks)

……

(iv) Name the colourless gas.
(1mk)

……..

(v) Name one industrial use of colourless gas.
(1mrk)

……

(vi) State one industrial use of ammonia.
(1mk)

……..

(b) When compound x is heated,a red-brown gas is evolved and a yellow residue is left on cooling.Name

(i) The red-brown gas
(1mrk) ……

(ii) Name the chemical test for gas (i) above
(1mrk)

……

(iii) The ions present in the residue.
(1mrk)

……..

(iv) Compound X. (1mk)

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CHEMISTRY PAPER THREE

1. You are provided with:

   - Solid A : 0.5g of metal carbonate M_2CO_3
   - Solution B: 0.2M sulphuric (vi) acid solution
   - Solution C: sodium hydroxide solution

   You are required to determine:

   - ✓ The relative formula mass of M_2CO_3
   - ✓ Relative atomic mass of M

   PROCEDURE I

   Fill the burette with solution B. Pipette 25cm^3 of solution C and transfer into a conical flask. Add two drops of phenolphthalein indicator. Titrate against solution B from the burette. Repeat two more times and record your results in table 1.

   Table 1

Titre	i	Ii	iii
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution B used (cm^3)			

(4mks)

(a) Determine the average volume of solution B used.
(1mk)

(b) Calculate the moles of sulphuric (vi) acid that reacted.
(1mk)

(c) Calculate the concentration of sodium hydroxide solution **C**.
(3mks)

PROCEDURE II

Using a 100ml measuring cylinder, measure 100cm^3 of solution B and transfer into a clean conical flask. Add the whole of solid A to the solution B in the conical flask. Shake to dissolve solid A until no more effervescence occurs. Label the resultant solution as D.

Pipette 25cm^3 of solution C and transfer into a conical flask and add two drops of phenolphthalein indicator. Fill the burette with solution D. titrate solution C against solution D from the burette. Repeat two more times and record your results in table II.

Table II

Titre	i	ii	iii
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution D used (cm^3)			

(

4mks)

(a) **Calculate:**

(i) The average volume of solution **D** used.
(1mk)

(ii) The moles of solution **D** in d (i) above.
(2mks)

(iii) The moles of H_2SO_4 in $100cm^3$ of solution **D**.
(2mks)

(iv) The moles of in H_2SO_4 $100cm^3$ of solution **B**.
(1mk)

(v) The number of moles of the acid (**solution B**) that reacted with the carbonate. (1mk)

(vi) The moles of carbonate in 0.5g of the carbonate.
(2mks)

(e) **Calculate;**

(i) The relative formula mass of the carbonate.

(ii) The relative atomic mass of **M.**
(1mk)

2. You are provided with solid **Q**. carry out the tests below. You should identify any gases evolved. Record your observations and inferences in the table below.

(a) Place half of solid **Q** in a test tube and heat strongly.

observation	inference
(2mks)	(1mk)

(b) Place the remaining solid **Q** in a test tube and add $3cm^3$ of distilled water. Divide the resultant mixture into two portions

observation	inference
(1mk)	(½ mk)

(c) To the first portion add aqueous ammonia drop wise till in excess.

observation	inference
(1mk)	(1mk)

(d) To the second portion add barium nitrate solution followed by dilute nitric acid

observation	inference
(2mks)	(1mk)

1. You are provided with solid P. carry out the tests below and record your observations and inferences in the table below.

a) Place half of solid P in a clean spatula and ignite.

observation	inference
($1^1/_2$mks)	($^1/_2$mk)

b) Transfer the remaining solid P into a test tube and add about 4 cm^3 of distilled water and shake. Divide the resultant mixture into two portions.

i. To the first portion add two drops of acidified potassium manganate

(vii)

observation	inference
(1mk)	($^1/_2$mk)

ii. To the second portion add two drops of acidified potassium dichromate (vi)

observation	inference
(1mk)	($^1/_2$mk)

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HISTORY AND GOVERNMENT PAPER ONE

SECTION A : 25 MARKS

Answer all the questions in this section.

1. Give the ***main*** source of information on unwritten history

2. Give ***two*** functions age set among the Agikuyu in pre-colonial Kenya.

3. Give ***two*** ways of interaction between Kenya societies in the 19^{th} century.

4. Identify the name of the council of elders among Mijikenda community.

5. Why was 1957 elections in important in history of Kenya.

6. Give ***two*** contributions of the early missionaries in the field of education

7. Give ***two*** characteristics of a good constitution.

8. Identify ***two*** special groups whose rights are protected by Kenyan constitution.
9. State ***two*** reasons why colonial government encouraged settler farming in Kenya

10. Identify ***two*** communities that showed mixed reactions in Kenya.

11. Identify ***one*** reason why trade unions were not formed in Kenya by 1914.

12. Name ***two*** cash crop that Africans were prohibited from growing in colonial Kenya.

13. Name the body in charge of election in Kenya.

14. Identify ***two*** features of independent schools and churches in colonial Kenya.

15. Give the political parties that represented Kenya during the 2nd Lancaster House Conference of 1962.(2 mk

Section B (45 marks)

Answer any three questions from this section

16. a) Give three reasons why early visitors came to the East African Coast. (3 marks)

(b) **Explain six factors which led to the decline of Coastal towns after 1500A.D**

17. (a) Give ***five*** reasons why the Maasai collaborated with the British during the colonial period in Kenya..(5 marks)

(b) Explain ***five*** reasons why the Nandi resisted the British for so long. (10 marks)

18. (a) Identify ***five*** results of Devonshire White Paper of 1923. (5 marks)

(b) Explain ***five*** consequences of colonial land policies in Kenya. (10 marks)

19. (a) Give ***five*** characteristics of early political organizations in Kenya. (5 marks)

(b) Explain five problems faced by trade union movements in Kenya during colonial

period.
(10 marks)

Section C (30 marks)

Answer any two questions from this section

20. (a) Name ***five*** members of African Elected Members Organization.
(5 marks)

(b) Describe ***five*** impacts of the First Lancaster House Conference of 1960.
(12 marks)

21. a) State t***hree*** methods that were used by African Nationalist during the struggle for independence.(3 marks)

b) Explain the role of women in the Mau Mau movement.
(12 marks)

22. (a) Identify ***five*** levels of conflicts
(5 marks)

(b) Explain ***five*** factors that promote national unity in Kenya.

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HISTORY AND GOVERNMENT PAPER TWO

SECTION A (25 Marks (Answer ***ALL*** the Questions in this section)

1. State ***two*** arms of Government. (2 Mark)
2. Identify ***one*** theory explaining the origin of man. (1 Mark)
3. Name ***two*** species of Homo sapiens. (2 Marks)
4. Name any ***two*** centers of Agricultural Revolution. (2 Marks)
5. State the ***two*** main methods of trade. (2 Marks)
6. Give ***two*** examples of regional trade. (2 Marks)
7. Identify ***two*** means of transport that comprised early land transport. (2 Marks)
8. Identify the sailing ship used by the Greeks. (1 Mark)
9. Identify ***one*** early source of energy. (1Mark)\
10. Give the major limitation of using water as a source of energy. (1
11. List ***two*** factors for the growth of Meroe. (2 Marks)
12. Identify ***one*** historical building in Kilwa. (1 Mark)
13. Identify the symbol of national unity among the Shona. (1
14. State ***two*** sources of the principles on which the British constitution is made. (2
15. Name ***one*** missionary society that came to spread Christianity in Africa. (1
16. State ***one*** function of Emirs in Northern Nigeria. (1 Mark)
17. Who was the first Prime Minister of India. (1 Mark)

SECTION B (45 Marks)

(Answer ***Any Three*** Questions from this section)

18. (a) State ***five*** stages of evolution of man before Homo erectus. (5 Marks)

    (b) Describe the way of life of human beings during the late stone age period. (10 Mark)

19. (a) Give ***three*** negative impacts of scientific inventions in agriculture. (3 Marks)

    (b) Explain factors that have hindered industrialization in Africa. (12 Marks)

20. (a) State ***five*** methods used by the British to colonize Buganda kingdom. (5 Marks)

    (b) What benefits did the Buganda people get as a result of their collaboration? (10 Marks)

21. (a) How did the attainment of independence of Ghana contribute to liberation of other African countries? (3 Marks)

    (b) Describe African Nationalists activities that intensified the struggle for independence in South Africa.
    (12 Marks)

    SECTION C (30 Marks)

    (Answer ***Any Three*** Questions from this section)

22. (a) Identify the privileges enjoyed by assimilated Africans in the four communes in Senegal
    (5 Marks)

    (b) Explain reasons why French policy of assimilation failed. (5 Marks)

23. (a) Outline three features of direct rule in Zimbabwe. (3 Marks)

    (b) What were the disadvantages of indirect rule system of administration? (12 Marks)

24. (a) State the terms of the Rudd Concession treaty of 1883. (3 Marks)

    (b) State six grievances of the Ndebele and the Shona during the Chimurenga war of 1896- 1897
    (12 Marks

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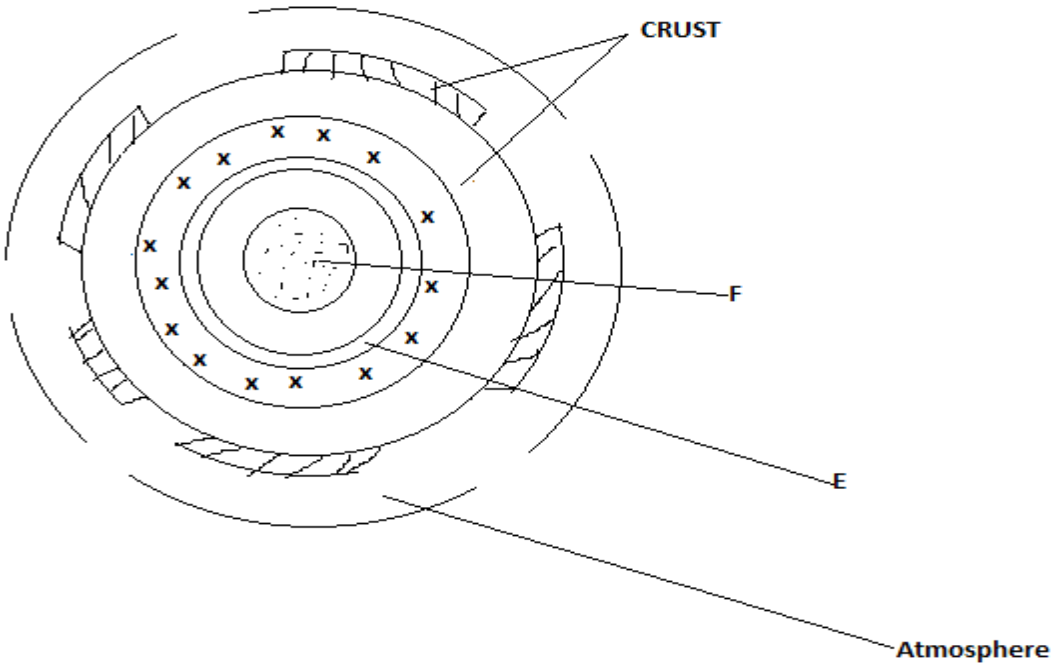
GEOGRAPHY PAPER ONE(312/1)

1) The diagram below shows the structure of the earth. use it to answer (a)



(a) Name the parts marked E and F (2mks)

(b) State three characteristics of the atmosphere (3mks)

2 (a) Identify two forms of rock metamorphism (2mks)

(b) State the exclusive equivalent of the following intrusive igneous rocks

(i) Granite (1mk)

(ii) Diorite (1mk)

(iii) Gabbro (1mk)

3 (a) What is a seismic wave? (2mks)

(b) State three ways in which earth quakes affect human activities. (3mks)

4. (a) Differentiate between illuviation and salinization. (2mks)

(b) State three importance of water as a soil property. (3mks)

5 (a) Identify two types of deltas. (2mks)

(b) State three conditions ideal for the formation of a delta (3mks)

6. Study the data in the following table and answer questions (a) and (b). Kenyas leading imports by value (Ksh Million)

Crop/year	Wheat	Maize	Rice	Coca
2006	5400	4700	2000	700
2007	7200	3800	2600	420
2008	6400	1400	1900	580
2009	6800	4600	2400	800

(a) Calculate the percentage increase in expenditure on importation of wheat in the year 2006 and 2007 (2mks)

(b) (i) Draw a compound bar graph to represent the Kenya's leading import crops by value between 2006 and 2009 (8mks)

(ii) State two advantages of using compound bar graphs to represent data (2mks)

(c) State four reasons why Kenya imports maize, wheat and rice and she still produces them? (4mks)

c)(i) State physical conditions favouring wheat growing in Kenya (3mks)

(ii) Explain three reasons why Canada produces more wheat than Kenya (

7 Differentiate between fissure and vent eruption (2mks)

(b) Describe how the following features are formed

(i) Batholiths (6mks)

(ii) Volcanic plug (5mks)

(c) Explain three negative effects of volcanicity on human activities (6mks)

(d) You are planning to carry out a field study on features formed by volcanicity on the landscape

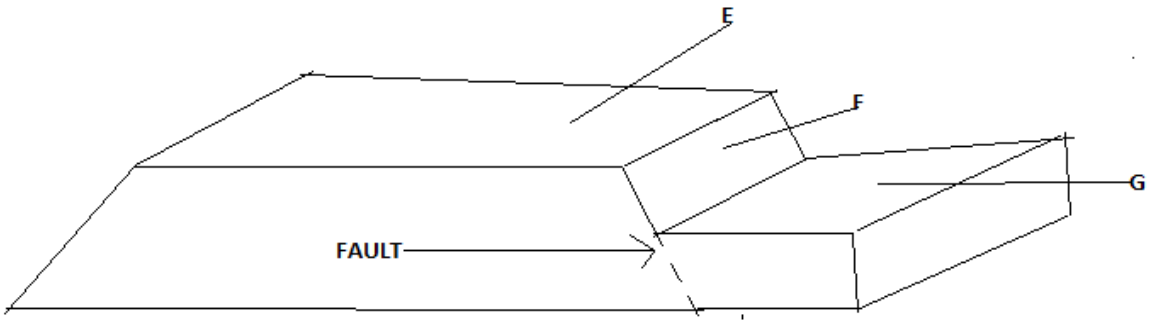
(i) Formulate two null hypotheses for the study (2mks)

(ii) Name two drainage features you are likely to study (2mks)

(iii) State two methods you would use to record information during the study. (2mks)

8. (i) What is reverse fault? (2mks)

(ii) The diagram bellow represents an area affected by faulting Name the parts marked E,F and G (3mks)



b Describe the processes involved in the formation of the following features

(i) Fault steps (5mks)

(ii) Rift valley by anticlinal arching

c Explain four ways in which block mountains influence climate

9. Name two mountains in East Africa where congelifraction is common (2mks)

(b) Describe the following types of weathering

(i) Pressure release (5mks)

(ii) Hydration (4mks)

(iii) Oxidation (4mks)

(c) Explain three ways in which plants cause weatherings (6mks)

(d) What is an avalanche? (1mk)

(ii) State three effects of avalanche (3mks)

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GEOGRAPHY PAPER TWO(312/2)

1. Name three patterns of human settlements. (3mks)
2. i) List any two products from Jua kali industry in Kenya exported to other countries. (2mks)

   ii) Name two renewable sources of energy used in Kenyan industries. (2mks)

3. a) Name three surfaces that are reclaimed in Kenya. (3mks)

   b) Identify the method of reclamation used in each surface mentioned in 3(a) (3mks)

4. Explain how the following practices help in soil conservation

   i) Mulching (2mks)

   ii) Terracing (2mks)

5. a) Describe how deep-shaft mining takes place. (5mks)

   b) Name three products from an oil refinery other than petrol. (3mks)

SECTION B

Answer question 6 and any other two questions in this section.

6. The table below shows milk yield in kilograms per dialy cow in Denmark between 1990 and 1995.

Year	1990	1991	1992	1993	1994	1995
Yields in kg	5243	6693	7398	7610	7792	7946

(a) (i) Draw a divided circle of radius 3-5cm to represent the milk yield in Denmrk,

Show all your calculations (2mks)

(ii) State two advantages of using the divided circle to represent data (2mks)

(iii) Name two other methods, apart from the divided circle, that could be used to represent the above data. (2mks)

(b) (i) Explain three physical factors that have favoured farming in Denmark (6mks)

(ii) State three problems facing dairyFarmers in Kenya (3mks)

(c) Explain two reasons why beef farming is more developed in Argentina than in Kenya. (4mks)

7 (a) (i) State any two forms in which minerals occur (2mks)

(ii) Name any three places where limestone is mined in Kenya (3mks)

(b) Explain how the following factors influence the exploitation of a mineral

(i) Market (2mks)

(ii) The quality of ore (2mks)

(iii) Technology (2mks)

(c) (i) Name two provinces in south Africa where gold is mined (2mks)

(ii) Explain three problems facing gold mining in south Africa (6mks)

(d) Describe the processing of diamond in south Africa.

8 (a) (i) Apart from oil, name **two** sources of non-renewable energy. (2 mks)

(ii) List **three** advantages of solar energy. (3 mks)

(b) Explain **four** problems encountered in mineral exploitation in Kenya. (8 mks)

(c) Explain the effects of over-relience on oil as a source of energy. (8 mks)

(d) State **four** methods the Government of Kenya uses to manage and conserve her

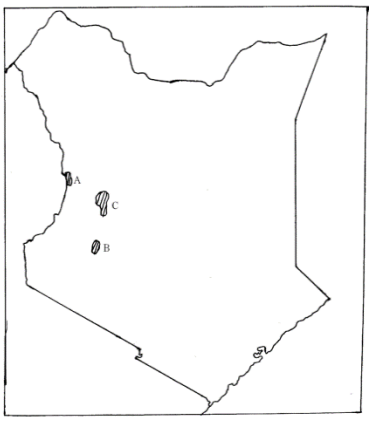
energy resources. (4 mks)

9 a) i) define the term forestry. (1 mark)

ii) Give three differences between natural forest and planted forests.(3 marks)

b) Explain FOUR causes of forest depletion in Kenya today. (8 marks)

c) i) From the map below, give the names of the forests marked A, B ad C



ii)State FOUR measures that are being undertaken by the Kenya Government to conserve forests. (4 marks)

d)Explain THREE factors favouring the exploitation of softwoods inCanada(6mks)

End

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CHRISTIAN RELIGIOUS EDUCATION PAPER ONE

ANSWER ALL THE FIVE QUESTIONS

1. (a) Mention five versions of the Bible used in Kenya today (5mks)

   (b) Explain four differences between the first creation account and the second creation account. (8mks)

   (c) State the effects of translating the Bible into local languages. (7mks)

2. a) How did the early life of Moses prepare him for future leadership? (6mks)

   b) Outline the conditions given by God to the Israelites during the renewal of the Sinai covenant. (8mks)

   c) What do Christians learn about the nature of God from the exodus? (6mks)

3. (a) Explain four ways in which King Solomon fulfilled Samuel's prophecy against kingship in Israel. (8mks)

   (b) Outline God's promises to King David through Prophet Nathan. (6mks)

   (c) Give six ways in which Christians can deal with challenges they face in modern society. (6mks)

4. (a) Outline **six** characteristics of true prophets in the Old Testament. (6 marks)

   (b) State **four** ways in which the rich oppressed the poor during the time of Prophet Amos. (8 marks)

   (c) Give **six** reasons why Christians find it difficult to help the needy in society today. (6 marks)

5 (a) Outline the message of Jeremiah in his letter to the exiles Jer.29:1 – 14. (7mks)

   (b) Identify **four** similarities in the life and experience of Nehemiah and Jesus. (8mks)

   (c) Give **five** reasons why it is difficult to have reforms in Kenya. (5mks)

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CHRISTIAN RELIGIOUS EDUCATION PAPER TWO

ANSWER ALL THE FIVE QUESTIONS

1. (a) Outline what Angel Gabriel revealed about Jesus when he announced his birth to Mary. (6mks)

   (b) From the story of the early life of Jesus up to twelve years, identify ways through which he is seen as coming from a poor background. (8mks)

   (c) Give reasons why children should take part in church activities. (6mks)

2. (a) Describe the incident when Jesus was rejected at Nazareth. (Lk4:16-30) (7mks)

   (b) Give **four** reasons why Jesus faced opposition from the Pharisees in Galilee. (Lk. 5:12 – 6:11) (8mks)

   (c) State **five** ways in which church leaders can respond to those who oppose them in their work. (5mks)

3. (a)State **five** reasons why Jesus celebrated the last supper with his disciples.(5mks)

   (b) Explain **five** revelations about the disciples of Jesus during the last supper. (10mks)

   (c) What lessons can Christians learn from the testimony of the repentant thief in Luke 23: 9-43. (5mks)

4. (a) With reference to John 15: 1-10 outline the teaching of Jesus on the "vine and the branches." (8mks)

   (b) How can Christians promote unity among themselves? (6mks)

   (c) Give **six** ways in which the Holy Spirit manifests himself among Christians today. (6mks)

5. (a) Explain the traditional understanding of marriage. (8mks)

(b) Identify six forms of irresponsible sexual behavior in the society today. (6mks)

c) outline 6 method used in choosing a marriage partner in African Traditional society 6 marks

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COMPUTER STUDIES PAPER ONE

Total Marks	

SECTION A (40 Marks)

*Answer **all** the questions in this section in the spaces provided.*

1. Define the following.
   (2 marks)
   i) Information.

……

……

   ii) Information Systems.

……

……

2. List **two** differences between analogue and digital data. **(2 marks)**

……

……

3. Define the term data processing as used in computer science. **(1 mark)**

……

……

4. One of the keys, which can be used when designing a database, is primary key. What is a primary key?
   (1 mark)

……

……

5. Differentiate between the following.
   i) Online and Batch processing.

(2 marks)

……

……

ii) Multitasking and Multiprocessing. (2 marks)

……

……

……

iii) Cold booting and Warm booting.
(2 marks)

……

……

6. (i) Mention any two examples of pointing input devices (2 marks)

……

……

(ii) Explain the term “Disk formatting” (2 marks)

……

……

7. Define an operating system
(2 marks)

……

……

8. Explain TWO characteristics of the 5^{th} generation computers. (2 marks)

……

……

9. State two functions performed by the UPS (2 marks)

……

10. a) Explain why the following controls should be implemented for computer based systems **(2 marks)**

i) Back-ups

……

……

……

……

ii) Passwords

……

……

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……

ii) Work out the binary subtraction $10101_2 - 110_2$ **(2 marks)**

……

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……

……

11. Mention 2 advantages and 2 disadvantages of Real-Time processing.
(4 marks)

……

……

12. a) What is a word processor? **(1 mark)**

……

……

……

b) Outline any 4 editing features of a word processor. **(2 marks)**

……

……

…

13. List 3 advantages of using electronic spreadsheets over manual worksheets **(3 marks)**

……

……

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14. Explain the meaning of the following terms.

i) Logical file **(1 mark)**

……

ii) Physical file **(1mark)**

……

……

15. Give one example for each of the following types of function used in spreadsheet **(2 marks)**

i) Statistical

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ii) Mathematical

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SECTION B (60 MARKS)

*Answer question **16** and any other **3** questions*.

16. **a)** What is programming? **(2 marks)**

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……

b) Differentiate between the following terms **(4 marks)**

i) Compiler from interpreter

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ii) Source program from object program

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iii) Pseudo-code from flowchart

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iv) High level computer language from low-level computer language

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……

c) i) **Explain the difference between Random Access Memory and Read Only Memory**

(2 marks)

ii) Define;

(4 marks)

i) File

……

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ii) Record

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iii) Form

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iv) Field

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d) Explain three effects of introduction of ICT in workplaces. **(3 marks)**

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17. a) What is a database? (1 mark)

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……

b) Differentiate a table and a query as used in database (2 marks)

……

c) State and briefly explain any two-database models (4 marks)

……

……

d) List down the six stages in program development. (6 marks)

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……

e) State two types of errors associated with program testing and debugging. (2 marks)

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18. The teacher has bought a computer system. The hardware items include 800MHz processor, 640MB of RAM, a sound card, speakers, a monitor, a keyboard, a 12 GB hard disk, a floppy disk drive, a CDRW drive, a mouse, a modem, an inkjet printer and a

joystick. The software supplied included: an OS, a BASIC interpreter and the following packages: spreadsheets, graphics, word processor, art database and games.

a) List **three** input devices from the given specifications. **(3 marks)**

……

……

……

……

b) Explain the meaning of the following **(6 marks)**

i) 800Mhz

……

……

ii) 640 MB

……

……

……

iii) 12GB

……

……

Some of the students in the school use the computer to do homework. Name the packages used to:-

i) Do calculations and draw graphs
(1 mark)

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……

ii) Write an essay
(1 mark)

……

……

……

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iii) Make a poster

(1 mark)

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d) Students enjoy playing noisy computer games

i) Which hardware items do you need to produce sound? (2 marks)

……

ii) Which input device is used only for playing games?

(1 Mark)

……

……

19. (a) Explain the following terms as used in computer science. (3 marks)

(i) Hacking.

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(ii) Data privacy.

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(iii) Data integrity.

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(b) Computer virus is one of the major data security threat in the world today.

i) What is a virus **(1 mark)**

……

……

ii) State any three ways virus can transmitted **(3 marks)**

……

iii) Explain any four measures that should be taken to prevent data loss through viruses.

(8 marks)

……

iv) Differentiate mechanical data processing method from electronic data **(2 marks)**

processing method.

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……

v) Differentiate between data security and data privacy. **(2 marks)**

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FOR MARKING SCHEMES

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