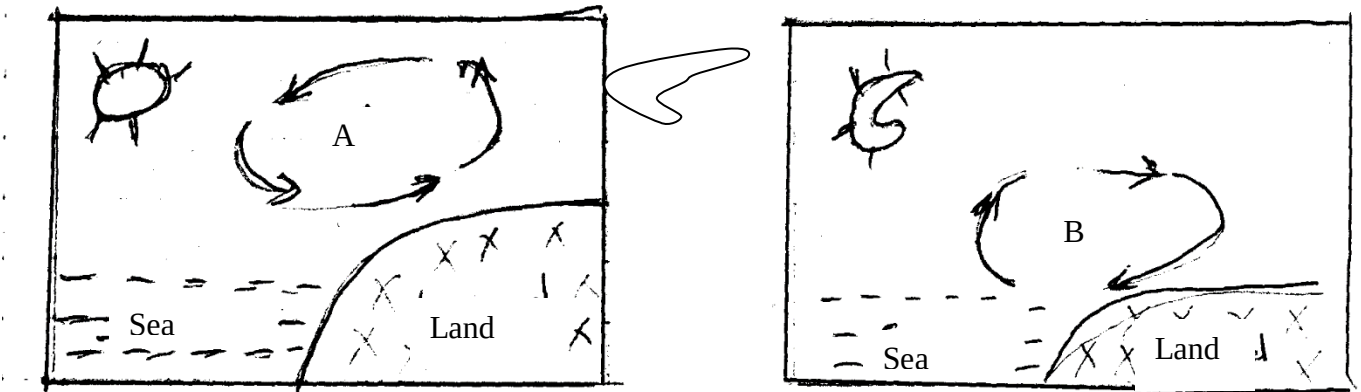


FORM 1 MIDTERM 2 EXAMS

SMART-G

6. (a) (i) *The diagram below shows types of local winds. Study them and answer the questions that follow;*



- (ii) Identify the local winds labeled **A** and **B** (2mks)
- (b) (i) What is a **rock**? (2mks)
- (ii) Describe **two** processes through which sedimentary rocks change into metamorphic rocks. (4mks)
- (iii) Give an example of each of the following types of igneous rocks; (3mks)
- (a) Plutonic rocks
- (b) Hypabyssal rocks
- (c) Volcanic rocks
- (iv) Suppose you were to carry out a field study of rocks within the vicinity of your school;
- (a) Name **two** secondary sources of information you would use to prepare for the field study. (2mks)
- (b) State **two** activities you would be involved in during the study. (2mks)
- (c) State **two** problems you are likely to experience in the field. (2mks)
7. (a) (i) List **four** ways in which mineral ores may occur. (4mks)
- (ii) List **four** methods of mining. (4mks)
- (iii) Name **two** problems facing the mining industry in Kenya. (2mks)
- (iv) State **four** significances of soda ash to the economy of Kenya. (4mks)

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES

AGRICULTURE

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:

- Answers *all* questions in the spaces provided.

QUESTIONS

1. Name **two** areas of scientific study which show that Agriculture is a science (2mks)

.....
.....

2. Give **two** reasons why Agriculture is important for the development of industries. (2mks)

.....
.....
.....

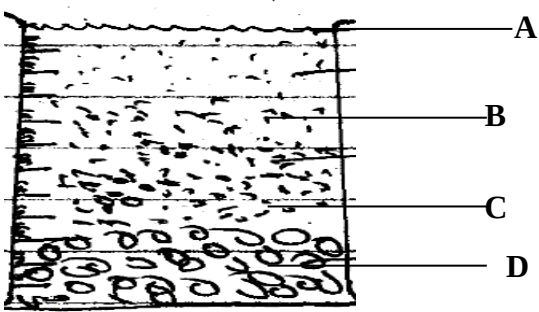
3. State **four** main branches of agriculture (4mks)

.....
.....
.....
.....
.....

4. List **two** disadvantages of shifting cultivation (2mks)

.....
.....

5. A form one student put some soil sample in a measuring cylinder, added some water containing sodium carbonate, covered the cylinder with the hand and shook the cylinder for about two minutes. He left the cylinder on the bench for one hour.



(i) Name the layer marked A,B,C and D (4mks)

A.....
B.....
C.....
D.....

(ii) What was the function of sodium carbonate in this experiment? (1mk)

.....

6. Name **three** soil forming factors. (3mks)

.....
.....
.....

7. State **four** problems farmers face in agricultural production? (4mks)

.....
.....
.....
.....

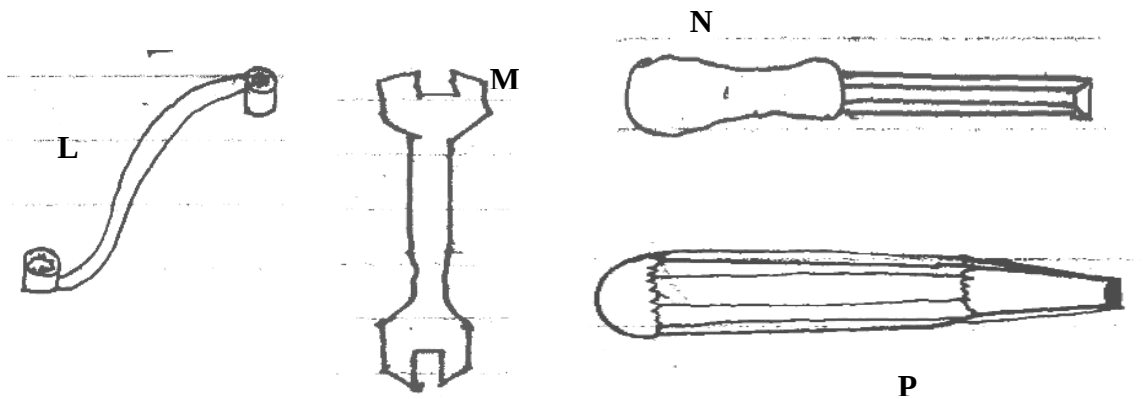
8. Give **three** aspects of light that influence crop production. (3mks)

.....

.....

.....

9. Below are diagrams of farm tools. Use them to answer the question that follow.



(i) Identify the tools (4mks)

L.....

M.....

N.....

P

(ii) State **one** advantage of tool L over M (1mk)

.....

.....

(iii) State **one** functional difference between N and P (2mks)

.....

.....

iv) Give **four** reasons for maintaining farm tools properly (4mks)

.....

.....

.....
.....
.....

10. State **two** reasons for cultivation during dry period. (2mks)

.....
.....

11. For each of the following Tertiary operations, give one reason why it is carried out (3mks)

(i) Ridging.....

(ii) Rolling

(iii) Leveling.....

12. Give **four** factors that determine the number of times a farmer would harrow his land. (4mks)

.....
.....
.....
.....
.....

13.(i) What is water conveyance ? (1mk)

.....
.....

(ii) Name **two** types of pipes used in the farm. (2mks)

.....
.....

(iii) State **three** uses of water on the farm (3mks)

.....
.....
.....

14. State **two** surface irrigation methods. (2mks)

.....

.....

15. List **two** feature of plastic pipes a farmer should consider before buying the pipes. (2mks)

.....

.....

16. State **five** ways by which soil loses its fertility. (5mks)

.....

.....

.....

.....

.....

17. Give **three** factors considered when siting compost manure on the farm. (3mks)

.....

.....

.....

.....

18. List **three** dairy goat breeds. (3mks)

.....

.....

.....

19. Name a breed of dairy cattle having the following characteristics: red coat with white marking on the legs, face, tail/switch and girth. (1mk)

.....

.....

20. State **four** characteristics of beef calf that makes it suitable for beef Production. (4mks)

.....

.....

.....

.....

.....

21. Give **two** advantages of keeping a Jersey cow instead of a Friesian cow for milk production. (2mks)

.....

.....

.....

22. State **two** adaptations of camel to its environment. (2mks)

.....

.....

.....

23. Name **four** types of farm record. (4mks)

.....

.....

.....

.....

.....

24. Give **two** advantages of organic farming in relation to environmental conservation. (2mks)

.....

.....

.....

This image shows a full page of a document template designed for handwritten notes or essays. It features approximately 28 evenly spaced, horizontal grey lines across the entire page. The margins are consistent on all sides, providing a clear area for writing. There are no titles, headers, or other markings present on the page.

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES BUSINESS STUDIES

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:

- Write **your name** and **admission number** in the spaces provided.
- Answer **all** the questions in the spaces provided.

For Examiner's Use Only

QUESTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MARKS														

QUESTION	15	16	17	18	19	20	21	22	23	24	25
MARKS											

TOTAL MARKS

--

QUESTIONS

1. Distinguish between **commercial production** and **subsistence production**. (4mks)

.....

.....

.....

.....

.....

2. State **four** features of an efficient office layout. (4mks)

.....

.....

.....

.....

3. State **five** external forces that may affect a business and its operations. (4mks)

.....

.....

.....

.....

.....

4. Highlight **five** favourable factors for business to grow (5mks)

.....

.....

.....

.....

.....

5. State **five** problems that consumers may encountered as they try to satisfy their wants. (5mks)

.....

.....

.....

.....

.....

.....

6. Differentiate between basic wants and secondary wants. (4mks)

Basic wants	Secondary wants

7. Define the following terms;

(a) Utility (1mk)

.....

(b) Scale of preference (1mk)

.....

(c) Opportunity cost (1mk)

.....

(d) Production (1mk)

.....

8. State **four** reasons why a consumer should satisfy basic wants before secondary wants. (4mks)

.....

.....

.....

.....

.....

9. Classify each of the following resources as man-made, natural human;

Resource	Classification
Hydrogen	
Solar energy	
Dams	
Tyres	
Expertise	
Satellites	
H.E. P turbines	
Typist	
Quarries	

10. Indicate whether the following resources are renewable or non-renewable; (6mks)

Resource	Classification
Limestone	
Natural rubber	
Solar energy	
Biogas	
Rivers	
Quarry	

11. State the level of production that each of the following activities belong. (12mks)

Activity	Production level
1. Welding work	
2. Shop keeping	
3. Oil refining	
4. Mining	
5. Milk processing	
6. Milking a cow	

7. Lumbering	
8. Insurance	
9. Farming	
10. Bridge construction	
11. Banking	
12. Advertising	

12. Name **four** factors of production and state the reward for each. (4mks)

.....

.....

.....

.....

13. State any **five** roles played by entrepreneurs in the economy of country (5mks)

.....

.....

.....

.....

.....

14. Outline what a business should do to uphold accepted business ethics. (4mks)

.....

.....

.....

.....

15. Outline **five** demerits of office machines. (5mks)

.....

.....

.....

.....

.....

16. State any **four** functions of retailers to the consumers. (4mks)

.....

.....

.....

.....

.....

17. Outline **four** features of automatic vending machines (4mks)

.....

.....

.....

.....

.....

18. Outline any **four** disadvantages of supermarket. (4mks)

.....

.....

.....

.....

.....

19. Outline **seven** advantages of office machines. (7mks)

.....

.....

.....

.....

.....

.....

.....

.....

20. Outline any **five** features of economic resources. (5mks)

.....

.....

.....

.....

.....

.....

21. State any **three** limitations of division of labour. (3mks)

.....

.....

.....

.....

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES

ENGLISH

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:-

- Write your **name**, **adm. Number** . and **the name of your school** in the spaces provided above.
- **Sign** and **write** the date of examination in the spaces provided above.
- Answer **all** questions in this question paper.
- Answers to **all** questions **must** be written in the spaces provided in this booklet.

FOR EXAMINER'S USE ONLY:

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
TOTAL SCORE	60	

1.

COMPREHENSION

Read the passage below and answer the questions that follow:

UGALI

As ugali becomes more and more **popular** among Kenyan families, the ways of preparing it continue to increase. For instance, the way ugali is cooked in other parts of the country is different from the method used in the Western region, in preparing ugali. When Achiko, a lady from the western region, is preparing ugali, she measures out the amount of water and flour she need to prepare enough ugali to feed the family. Achiko has four brothers and one sister. She has learnt how much water and flour she needs to feed the whole family. She knows that when there are no visitors, she needs to measure three litres of water and one and three quarter kilogrammes of flour. She has to keep checking on the fire to make sure that there is enough firewood to speed up the rate of boiling. This is because when water boils quickly, it ensures a dish of well cooked ugali and as Achiko's cookery is rarely criticized, she is always anxious to produce **commendable results**. To make sure this happens, she gets all she needs ready while the water is still getting hot.

As soon as the water starts bubbling, Achiko adds four handfuls of flour to it. This lowers the temperature of the water and it stops producing bubbles. She has to wait for the temperature to rise again before she can begin stirring the mixture of water and flour. While she is waiting to see bubbles, she checks on the cleanliness of cooking stick and holds it at the ready. As soon as the mixture has produced enough **froth** to almost submerge the flour, Achiko stirs the flour in the water three times. Noticing that the temperature has dropped once more, she pauses to give it time to rise. When bubbles appear again, she stirs the mixture.

She must be careful how long she pauses or how soon she adds flour to the boiling soft mixture. This is because failure to pause for the heat to **build up** after the **initial contact** of water and flour ruins the results. Thereafter, it does not matter how high or hot the flame under the pit is, the ugali will remain half-cooked. Therefore, **maximum concentration** is required at this stage.

Once the bubbles in the mixture grow wild, Achiko knows it is time to add more flour and turn the mixture in the pot vigorously to get rid of any lumps of raw flour in the increasingly stiffening mixture. As the mixture thickens, the amount of flour added decreases until it is a matter of a **sprinkled** to complete the process.

Achiko insists on silence when she is cooking ugali. She says this is important because the time people prepare ugali is the same time **ghosts** of people who died of starvation long ago are roaming homesteads. As soon as she adds the first handful of four to the water, she meaningfully looks at the children who are surrounding the pot. They immediately interpret the message. Repeating what her mother has told her about ugali disappearing if it is prepared in a noisy room, Achiko shocks the children by telling them that whistling interfered with the mixing of hot water, flour and air. Chacha, who likes whistling, has to promise never to do it again. All are silent, but eager.

In anticipation, the children watch Achiko's arms skillfully turning over the increasingly stiffening lump in the pot. Her neck, back and arms grow more and more taut as works at the pot. While she is still cooking, she uses her finger to test the texture of the cooking ugali. She keeps this up until the ugali is thoroughly cooked. Finally she sets the meal before he family.

QUESTIONS

(i) Why does Achiko maintain silence when she is cooking? (2mks)

.....

.....

.....

(ii) Why does she have to keep on checking he fire? (2mks)

.....

.....

.....

(iii) Why does the water have to boil before she adds the flour? (2mks)

.....

.....

.....

(iv) Explain why Achiko is always anxious about her cooking. (2mks)

.....

.....

.....

(v) Explain what message the children get from Achiko's look before she starts stirring the mixture (2mks)

.....

.....

.....

(vi) According to the passage, why is whistling bad? (2mks)

.....
.....

(vii) What kind of superstitions are associated with cooking ugali in this passage? (4mks)

.....
.....
.....
.....

(ix) Explain the meaning of the following words and phrases as used in the passage (5mks)

Popular
Ghosts
Commendable Result.....
Froth
Build up.....
Taut

2. Read the poem below and answer the questions that follow:

Crack the glass,
And the crack,
Will always remain
The human heart
Has the same vein,
Its' just as delicate
To the strain.

Once it is hurt,
It is too hard
To fade the stain.
Though parts can
Fix together...
You've just to touch the wound,
To make it drain again.

Sheikha – El. Miskery

(From poems from East Africa edited by David cook and David Rubadini. Hernemann, 1986, 36)

(i) How is the human heart similar to glass according to the poem? (2mks)

.....

.....

.....

(ii) Identify the rhyming words in the poem. (2mks)

.....

.....

.....

(iii) *Explain the following lines as used in the poem:* (2mks)

(a) And the crack

Will always remain

.....

.....

.....

(b) You've just to touch the wound

To make it drain again.

.....

.....

.....

(iv) Give the poem the title. (2mks)

.....

(v) In what **two** ways, in your opinion, can love and peace heal broke hearts? (2mks)

.....

.....

.....

3. (a) Fill in the blanks below with the correct form of the present simple tense in

brackets.

(13mks)

Cows(is/are) important animals in our country. We all(feel/feels) that if the country(encourage/encourages) and(pump/pumps) money into the dairy industry, our country will be able to produce enough milk to feed the people and to export. At the moment, the country(have/has) enough milk to go round, but research into agricultural potential of this land(show/shows) that we(is/are) able to produce twenty times more milk than we(produce/produces) today. The need for this(is / are) seen on the radiant face. The face says, "This(is/are) heavenly." Thus the child(congratulate/congratulates) the farmer and at the same time(pass/passes) a vote of confidence in his country, the source of the milk. The milk, therefore(preach/preaches) patriotism.

(b) Complete the following sentences by filling in the blank spaces with the correct form

of the words in brackets

(7mks)

- (i) Neither the headmaster nor his deputy(is/are) around.
- (ii) Neither the prefects nor the monitors(have/has the lost bell.
- (iii) He told me that none of the girls(was/were) allowed to sit for the exam.
- (iv) One of the my friends(is/are) coming to my home tomorrow.
- (v) Pastor Muiru with his Maximum kids (come/comes) to out Church this Sunday.
- (vi) Either the Principal or the teachers(is/are) to blame.
- (vii) None of them(were/was) found with the stolen items.

(c) Supply the missing words in the words in the table below :

(10mks)

Present	Past
Take	
.....	Learnt
Forbid	
Shake	

.....	Won
Sing	
Wind	
.....	Put
Break	
steal	

(d) *Write five sentences using the following verbs*

(5mks)

(i) swim

.....
.....

(ii) cultivate

.....
.....

(iii) read

.....
.....

(iv) promise

.....
.....

(v) borrow

.....
.....

(e) *Fill in the blank spaces in the following sentences with the most appropriate preposition*

(5mks)

(i) He tookhis clothes and dived into the pool.

(ii) She will presidethe function.

(iii) The exercise was conducted in accordanceregulations.

(iv) Mutiso arrived at the airport justtime to catch the plane.

(v) He cannot prevent megoing if I want to.

(f) Choose the correct alternative from the word(s) given in brackets to complete each of the following sentences **(5mks)**

- (i) This is one of those stories that(seem, seems) to have no ending.
- (ii) He is the longest serving of all Kenya's
(attorney generals, attorneys general).
- (iii) A range of issues(was, were) discussed.
- (iv) The chaos(has, have) been quelled by the police.
- (v) They have remained hopeful inspite of many(crisis, crises) they have faced.

(g) Fill in the blanks in the following sentences with appropriate articles **(5mks)**

- (i) Braille is system of reading and writing by touch forblind.
- (ii) What joinsAtlantic and Pacific oceans?
- (iii) The king wantedheir to his thorne.
- (iv) Cheptoo isonly child in the family.

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES

KISWAHILI

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

MAAGIZO:

- Andika **Jina lako** na **namba** yako katika nafasi ulizoachwa hapo juu.
- Weka sahihi yako na tarehe ya mtihani
- Jibu maswali yote.
- Andika majibu yako katika nafasi ulizoachiwa.

UFAHAMU (ALAMA 15)

Soma nakala kisha ujibu maswali;

Huku tukiadhimisha siku yakina mama duniani, kuna haja ya kutafakari kuhususan nafasi ya wanawake katika jamii.

Kwanza kabisa tunafaa kufahamu mama ni nani. Mama ni mtu yeyote wa kike ambaye hulea na kuonyesha familia na jamii mahitaji haya awe dada, nyanya shangazi, **Mfadhili**, Jirani miongoni mwa wengine ni mama kwa mujibu wa mkutadha huu.

Ni dhahiri kuwa mama wamekuwa wakitekeleza majukumu muhimu maishani mwa familia na jamii lakini kama punda, wengi wetu huishia kuwalipa kwa mateke.

Sio viongozi wa serikali, sio kina baba wala watoto: miongoni mwao kuna wale ambao wamejitolea kuto watambua na kuto waheshimu binadamu hawa wenye nguvu, uwezo na mapenzi. Kina mama na wanawake kwa jumla wamekuwa walengwa wakuu wa ghasia katika familia.

Katika familia, kwa mifano. Kina mama wengi mpaka leo wanapigwa na kuteswa na wanaume zao bila sababu. Wengi wao wameachiwa jukumu la kuwalea watoto hata baada ya kukubali mzingo huo mzito, wana chapwa kila siku.

Visa vya kina mama wanaorauka kila siku kwenda kutafutia wanao chakula na wanaporudi wanapigwa na waume pia hukaa ndee kuwasubiri wake wao watafute na kisha huwanyang'anya kibaba chao kuongezea kwa machozi.

Baadhi ya wanawake mpaka sasa wamesalia watumwa na waume ambao hutoa amri na hawatarajii maswali wala manung'uniko.

Haki za ndoa za kina mama zinaendelela kuvunjwa na mabwana zao ambao wame jigeuza **madubwana** pili, watoto, hasa wa kiume ambao hingiwa na kasumba za dhuluma kutoka kwa baba na jamii pia wamekuwa waki wakosea kina mama heshima bila kujali sio na hata kushuhudia kina mama wakipigwa na watoto wao wa kiume baada ya mzoano.

Watoto w akiume wamejaa utundu, kwa mfano, ni mzigo mkubwa kwa kina mama mbali na kuwa tishio kwa furaha na amani yao katika familia na jamii wengi wa watoto hao hukataa shule na kujiunga na magenge ya wahuni ambayo hutumia dawa za kulevya na kila baada jya kulewa wao huishia kuwa chokoza mama zao.

Baadhi yao hutaka mambo yasiowezekana na kukosa kufanya wanachotaka huwa na matuzi nakichapo cha mbwa kwa mama.

Viongozi wa serikali na kisiasa pia wamekuwa wakijikosea heshima kwa kuendelezmateso ya akina mama. Baadhi yao hudai wanawake hawana haki ya kuongea mbele yao. Huku wengine waki washambulia wakati wa kampeni.

MASWALI

(a) Pendekeza kichwa mwafaka cha taarifa hii (ala. 1)

.....
.....

(b) kwa mujibu wa kifungu , ni nani anastahili kuitwa mama (ala. 3)

.....
.....
.....

(c) Ni matatizo gani yanayowakabili mama. (ala.3)

.....
.....
.....

d) Taja makundi mbali mbali yanayonyanyasa akina mama. (ala.3)

.....

.....

.....

e) Eleza kwa nini mwandishi anafananisha kina mama na punda. (ala. 2)

.....

.....

.....

f) Eleza maana ya maneno haya kama yalivyotumiwa katika kifungu. (ala.2)

(i) Mfadhili

.....

.....

(ii) Madubwana

.....

.....

MATUMIZI YA LUGHA.

a) Onyesha tofauti ya vitate hivi kwa kuvitungia sentensi. (ala.2)

(i) Shaka.....

(ii) Chaka.....

b) Jaza nafasi zilizoachwa wazi katika sentensi ifuatayo kwa viambishi vifaavyo. (ala.2)

Mgeni_____refu_____Li_____kuja amendaliwa chakula_____tamu.

c) Katika sentensi ifuatayo tambulisha. (ala.4)

(i) Kivumishi _____ (ii) Kitenzi _____

(iii) Kiunganishi _____ (iv) Nomino _____

Wazee walijitahidi lakini walishindwa na vijana machachari.

d. Sahihisha sentensi ifuatayo il kuunda sentensi tatu sahihi.

(ala. 3)

Mahali kwenyewe panavutia

.....

.....

.....

.....

.....

e Fafanunua maana ya misemo katika sentensi zifuatazo

(ala.2)

(i) Ali cheza kamari lakini jitihada zake za kushinda **ziliambulia Patupu.**

.....

.....

.....

(ii) Kilimo bado ni Uti wa mgongo wa uchumi wetu.

.....

.....

.....

f Andika kwa maneno

(ala.2)

(i) 11,001

.....

.....

(ii) 10,001

.....

.....

g. Tunga sentensi kuonyesha maana tatu za neno chunga

(ala.3)

.....

.....

.....

.....

h. Andika upya sentensi zifuatazo kwa ukubwa:

(i)Pako na ngamia wanafaidi watu sana.

.....

(ii) Mtoto alitishwa na mtu mrefu.

.....

i Kamilisha sentensi zifuatazo kwa kutumia tashbihi mwafaka (ala. 2)

(i) Huyu cheruiyot hachezi na wenzake nje; anachungwa kama

.....

(ii) Mtu huyu ni mchafu kama

.....

j. Toa mfano wa nomino mbili mbili zipataikanazo katika ngeli zifuatazo. (ala.2)

(i) I _____ I _____

(ii) U _____ Zi _____

k Ainisha maeno yafuatayo ilikubanisha viambishi na mzizi. (ala.4)

(i) Alikupiga.

.....

.....

(ii) Walimchezea.

.....

.....

l Eleza sifa moja moja kuu ya vitamkwa vifuatavyo kisha utoe mfano: (ala. 2)

(i) Kimadende

.....

.....

(ii) Kipasuo.

.....

.....

m. *Toa methali inayoafikiana na maelezo yafautayo;*

(ala.2)

Mtu anapokuwa, akipahama mahali hapaswi kupaharibu au kupatu kanisha kwa kuwa huenda atahitaji kurudi hapo.

.....

.....

.....

n. *Uganisha sentensi hizi kwa kutumia kirejeshi ‘amba’*

(ala.1)

(i) Mwanafunzi amepita mtihani

.....

(ii) Mwanafunzi ni mtiifu.

.....

o. *Kamilisha tanakali za sauti zifuatazo.*

(ala.2)

(i) Nyooka.....

(ii) Nyeusi.....

p. *Andika kinyume cha vitenzi vilivyopigwa mstari*

(ala.2)

(i) Alikashifiwa kwa kazi aliyofanya

.....

.....

(ii) Kuimba kulifurahisha hadhira.

.....

.....

q. *Eleza maana mbili ya sentensi ifuatayo.*

(ala.1)

Bibi yake amefika.

.....

.....

.....

r. *Geuza sentensi zifuatazo kwenda kauli ya kitenzi ilizooyeshwa kwenye mabano*

(ala.2)

(i) Mhunzi anamhesabia mfinyanzi pesa (Kutendeanana)

.....

.....

.....

FASIHI SIMULIZI.

(a) Eleza aina mbili za nyimbo

(ala. 4)

.....

.....

.....

.....

.....

(b) Eleza sifa tatu zinazo tofautyisha fasihi simulizi na fasihi andishi.

(ala6)

.....

.....

.....

.....

.....

.....

.....

.....

c) Eleza dhana zifuatazo za fasihi simulizi:

(ala.6)

(i) Visasili

.....

.....

(ii) Hurafa:

.....

.....

(iii) Hekaya.

.....

.....

d) Taja umuhimu nne wa fasihi.

.....

.....

.....

.....

.....

e) Taja vipawa alivyohitajika kuwa navyo mtambaji wa hadithi.

(ala.3)

.....

.....

.....

f. Vitendawili ni nini? Toa mfano wa kitendawili

(ala. 2)

.....

.....

.....

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES HOME-SCIENCE

TIME: 2½ HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:

- This paper consists of **three** sections; **A**, **B** and **C**
- Answer **all** the questions in section **A** on the spaces provided.
- Answer **all** parts of the question in section **B** on the separate answer booklets provided. This section is **compulsory**.
- Answer **any two** questions in section **C** on the separate answer sheets provided.

QUESTIONS

1. a) Name **four** symptoms of food poisoning. (2mks)

.....

.....

.....

.....

b) Suggest **four** ways of guarding against food poisoning (2mks)

.....

.....

.....

.....

2 Explain the following methods of purifying water

(a) **Sedimentation** (5mks)

.....

.....

.....

(b) **Filtration**

.....

.....

.....

3. State **four** advantages of having a refrigerator in the home (4mks)

.....

.....

.....

.....

4. Name **three** methods of heat transfer (1½ mks)

.....

.....

.....

5. State **five** reasons for cooking food. (5mks)

.....

.....

.....

.....

.....

6 (a) Name **two** main classification of methods of cooking (2mks)

.....

.....

(b) Explain each of these groups and give **two** example in each group. **(4mks)**

.....

.....

.....

.....

.....

7. State **two** advantages and **two** disadvantages of steaming as cooking methods. **(4mks)**

.....

.....

.....

.....

8. Explain two reasons for covering saucepans when cooking. **(2mks)**

.....

.....

.....

9. Define first Aid. **(2mks)**

.....

.....

10. Why is oil suitable for deep frying and not fat. **(2mks)**

.....

.....

.....

11. Identify **two** ways of storing dressmakers pins. **(1mks)**

.....

.....

12. Describe how to wash a neglected aluminium pan. (5mks)

.....

.....

.....

.....

.....

.....

13. State **three** factors which influence the choice of a cooking method (3mks)

.....

.....

.....

14. Define the term hygiene (1mk)

.....

.....

15 State **five** ways of preventing skin diseases. (5mks)

.....

.....

.....

.....

.....

16. Give **six** qualities that make aluminium popular (3mks)

.....

.....

.....

.....

.....

.....

17. State the difference between broom and brushes. (4mks)

.....

.....

.....

.....

18. Identify **three** task that are carried out during special cleaning of bed room. (3mks)

.....

.....

.....

.....

19. State **six** ways of ensuring that leather shoes last long. (3mks)

.....

.....

.....

.....

.....

.....

.....

20. State and explain the steps to take during management of nose bleeding (6mks)

.....

.....

.....

.....

.....

.....

.....

.....

21. State **four** functions of the skin (2mks)

.....

.....

.....

.....

22 List **two** measures to prevent athletes foot. (2mks)

.....

.....

.....

23. Highlight **three** causes of poor hygiene. (3mks)

.....

.....

.....

24. List **seven** items that are essential in a first Aid kit. (3½ mks)

.....

.....

.....

.....

25. Outline the steps you would follow when daily cleaning a kitchen. (10mks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

26. List any **six** materials to be used in improvising abrasives (3mks)

.....

.....

.....

.....

.....

.....

27. Suggest **three** ways in which medicine can be abused (3mks)

.....

.....

.....

.....

28. List **four** economical ways of disposing refuse (2mks)

.....

.....

.....

.....

.....

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES

BIOLOGY

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:

- Answers *all* questions in the spaces provided.

QUESTIONS

1. State the functions of the following parts of alight microscope: (2mks)

a) Objective lens

.....

b) Diaphragm

.....

2. State the functions of the following cell organelles:

a) Ribosomes (1mk)

.....

b) Lysosomes (1mk)

.....

3 a) Distinguish between diffusion and active transport. (2mks)

.....

.....

.....

b) State one role that is played by osmosis in:

i) Plants.

(1mk)

.....

ii) Animals

(1mk)

.....

4. Explain how the following factors determine the daily energy requirement in humans

a) Age -

(1mk)

.....

b) Occupation.

(1mk)

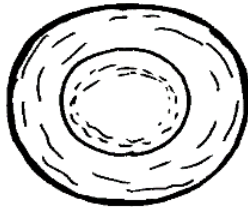
.....

c) Sex

(1mk)

.....

5. The diagram below a red blood cell that was subjected to a certain treatment.



At start



at the end of experiment

a) Account for shape of the cell at the end of the experiment.

(2mks)

.....
.....
.....

b) Draw a diagram to illustrate how a plant cell would appear if subjected to the same treatment.

(1mk)

6. Plant cells do not burst when immersed in distilled water. Explain (2mks)

.....
.....
.....

7. State **three** functions of Golgi apparatus. (3mks)

.....
.....
.....

8. Name the diseases caused by deficiency of

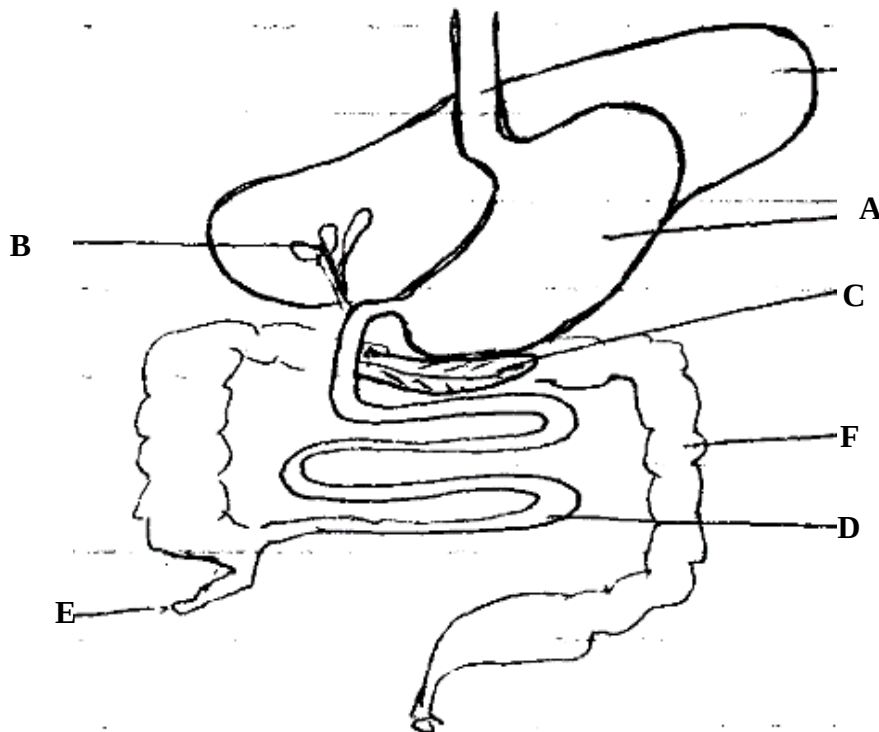
a) Iodine (1mk)

.....

b) Vitmain B₂ (1mk)

.....

9. The diagram below shows part of alimentary canal.



a) **What** substances are absorbed at part labeled F. (1mk)

.....

(b) State **two** functions of the substances stored in B (2mks)

.....

.....

c) Name the enzyme that digest proteins in structure labeled C. (1mk)

.....

d) State **two** adaptations of the structure D that causes the increase of surface area. (2mks)

.....

.....

.....

e) Name structure E (1mk)

.....

10. State **two** adaptations of leaves that maximize efficiency in trapping sunlight for Photosynthesis (2mks)

.....

.....

.....

11. Name **one** cell organelle found in the actively respiring tissues. (1mk)

.....

12. a) Define the term symbiosis. (1mk)

.....

.....

b) i) What are the final products of digestion of fats. (2mks)

.....

.....

ii) Under which conditions will the body use proteins as a source of energy. (2mks)

.....

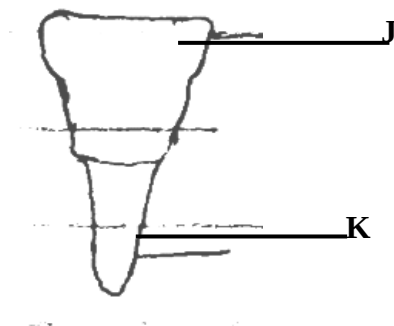
.....

.....

iii) Name one nutrient that does not require digestion before it is absorbed. (1mk)

.....

13. The diagram below represents the external structure of a mammalian tooth. Study it.



i) Name the parts labeled J and K (2mks)

J.....

K.....

ii) Identify the type of tooth shown. (1mk)

.....

iii) Give **two** reasons for your answer in (ii) above (2mks)

.....

.....

14. a) State two factors that denature enzymes (2mks)

.....
.....

b) Give two functions of the large intestines in human beings. (2mks)

.....
.....

15. State the role of the following parts of the mammalian intestine.

a) Goblet cells. (1mk)

.....
.....

b) Lacteals in the villi (1mk)

.....
.....

16. An animal has no incisor, no canines, 6 premolars and 6 molars in its upper jaw. In the lower jaw, there are 6 incisors, 2 canines, 6 premolars and 6 molars.

i) Write the dental formula of the animal. (1mk)

.....
.....

ii) Calculate the total number of teeth for the animal. (1mk)

.....
.....

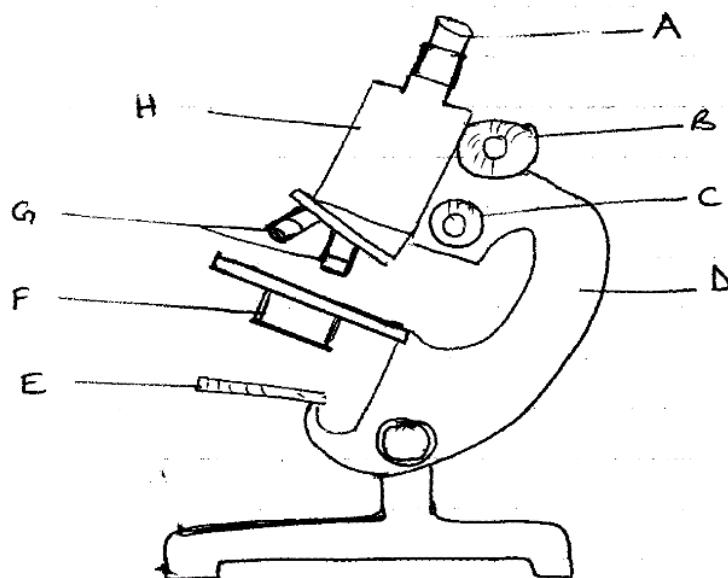
iii) What is the likely food of the animal? (1mk)

.....
.....

17. Distinguish between hypertonic and hypotonic solutions. (2mks)

.....
.....
.....

18. The following is a diagram of a light microscope.



a) Name the parts labeled A, B, C, D, E ,

(5mks)

- A.....
- B.....
- C.....
- D.....
- E.....

b) State the functions of parts labeled E and F

(2mks)

- E.....
- F.....

19. Name the organelle that:

a) Manufacture and transport lipids and steroids in a cell

(1mk)

.....

b) Contain enzymes that are capable of destroying old damaged cells.

(1mk)

.....

c) Control all the processes in a cell.

(1mk)

.....

d) Form Cilia and flagella in cells that have them

(1mk)

.....

20.State the branch of biology that deals with the study of : (2mks)

(i) Insects

.....

(ii) The relationship between organisms and their environment.

.....

21. Name the field of science that specializes in the study of cells. (1mk)

.....

22. State the use of the following apparatus.

i) Pooter. (1mk)

.....

ii) Sweep net (1mk)

.....

23. The scientific name for beans is *Phosedus vulgaris*.

a) What taxon does the term *phoseodus* represent. (1mk)

.....

b) State **two** rules that are followed when giving a scientific name to an organism (2mks)

.....

.....

.....

24.Compare the structure of plant and animal cells. (4mks)

.....

.....

.....

.....

.....

25. List **seven** life processes/characteristics that must take place in all living organisms. (7mks)

.....

.....

.....

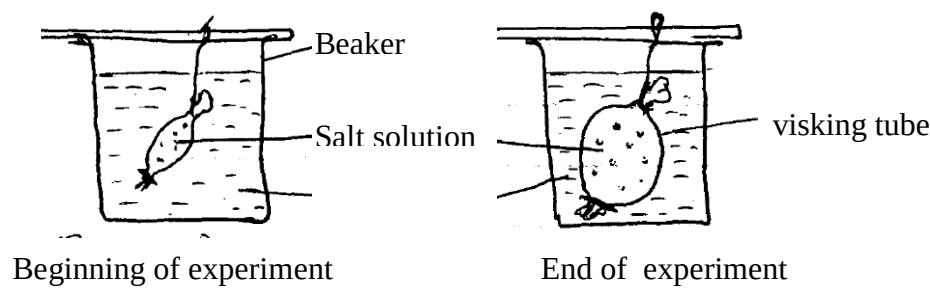
.....

.....

.....

.....

26. The figure below shows an experimental set up.



a) What process was being investigated. (1mk)

.....

b) Give reasons for the results obtained at the end of the experiment. (3mks)

.....

.....

.....

.....

27. List **seven** major taxonomic units of classification on living things. In descending order. (7mks)

.....

.....

.....

.....
.....
.....
.....
.....

28. Classify the following organisms into their kingdoms **(4mks)**

Organisms	Kingdom
a) Maize, Beans	
b) Mushrooms, Yeast	
c) Protoza, algae	
d) Bacteria	

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES

CHEMISTRY

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

233

CHEMISTRY

TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATES:-

- Answer **all** the questions in the spaces provided.
- Write **your name** and **admission number, school, date** in the spaces provided.
- Mathematical tables and electronic calculators may be used for calculation.
- All workings **must** be clearly shown where necessary

For examiner's use only:

Question	Maximum score	Candidate's score
1-25	80	

QUESTIONS

1. Ethanol and Pentane are miscible liquids. Explain how water can be used to separate a mixture of ethanol and pentane. (3mks)

.....

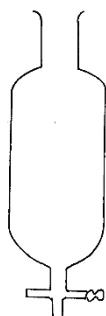
.....

.....

.....

2. (i) Name the piece of apparatus shown below; (1mk)

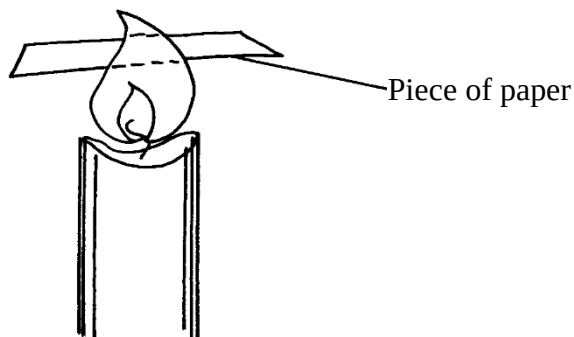
.....



- ii) What is the use of the apparatus? (1mk)

.....

3. The diagram below shows a diagram of a non-luminous flame. A piece of white paper is slipped into the region of the flame as shown in the diagram and quickly removed before it catches fire.



- (a) Draw and label the piece of paper to show how it is affected by the above flame . (2mks)

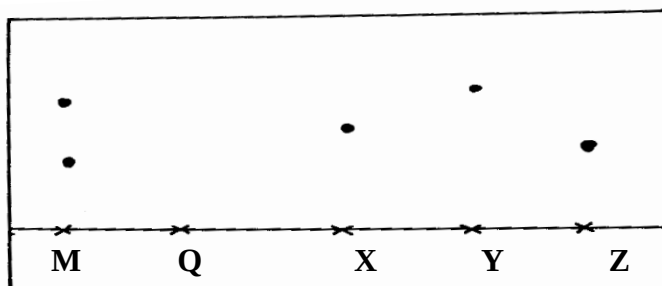
(b) Explain why a luminous flame of a Bunsen burner produces bright yellow light. (2mks)

.....

.....

.....

4. The paper chromatogram below shows the identification of unknown metal ions in mixture **M**.
The reference ions **X**, **Y**, and **Z** are also shown. The experiment was done in an ascending method.



X- vanadium (IV) ion (V^{4+})

Y – chromium (III) ion (Cr^{3+})

Z – copper (II) ion (Cu^{2+})

(a) Name the ions present in the mixture **M** (2mks)

.....

(b) Indicate the solvent front on the diagram (½mk)

(c) Mixture **Q** contains all the three ions. Show the chromatography of **Q** (1½mks)

.....

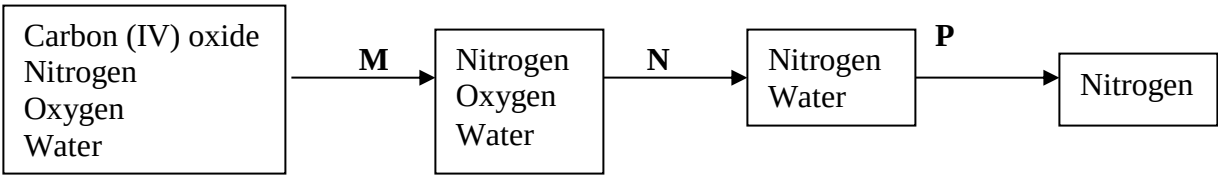
.....

.....

5. Complete the table below by selecting appropriate pH for each substance from pH values
1.0, 4.0, 7.0 and 10.0

Substance	pH value
Sodium carbonate	
Lemon juice	

6. The flow chart below represents how nitrogen gas can be isolated from air in the lab



Explain how the following processes are carried out;

(i) Process M (1mk)

.....
.....

(ii) Process N (1mk)

.....
.....

(iii) Process P (1mk)

.....
.....

7. When hydrogen gas is passed over heated Lead (II) oxide in a combustion tube, Lead (II) oxide is reduced.

(a) Write a word equation from the above reaction (1mk)

.....
.....

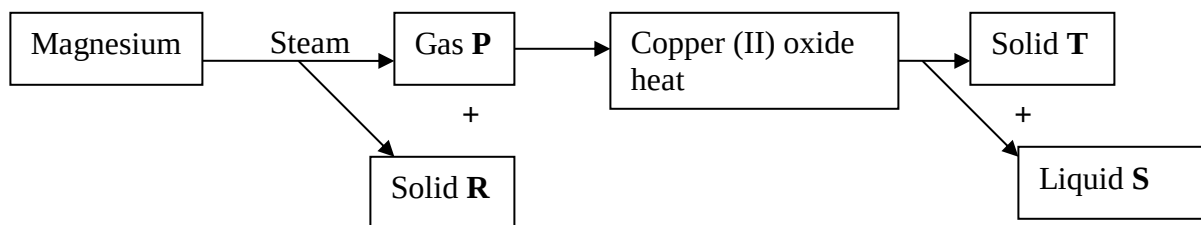
(b) What observations are made in the combustion tube when the reaction was complete (2mks)

.....
.....
.....

(c) Name another gas which can be used to reduce Lead (II) oxide (1mk)

.....

8. Use the chart below to answer the questions that follow;



Identify;

(4mks)

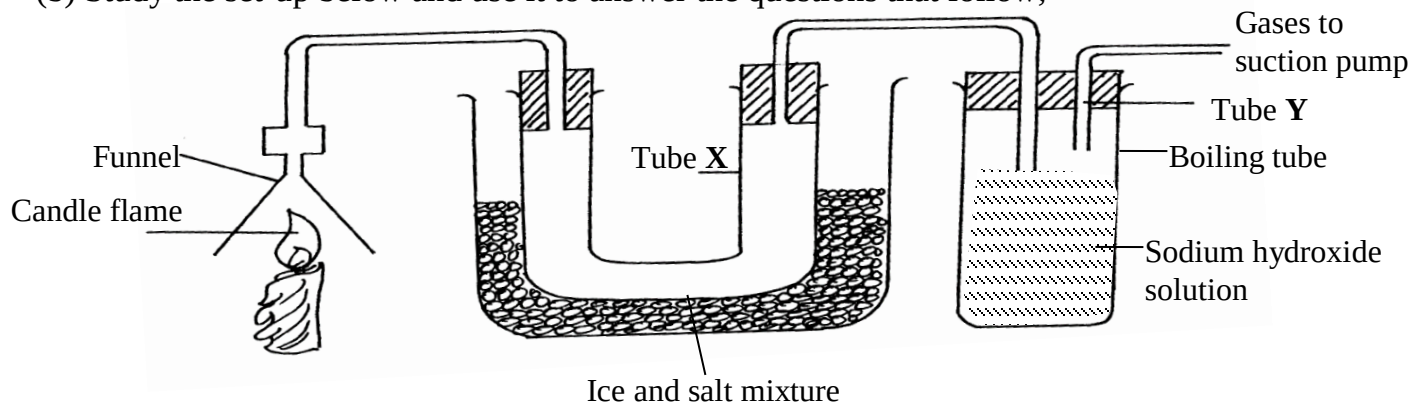
- (i) Gas **P**..... (iii) Solid **T**.....
(ii) Solid **R**..... (iv) Liquid **S**.....

9. (a) A candle wax is mainly a compound consisting of **two** elements. Name the two elements.

(2mks)

.....
.....

(b) Study the set-up below and use it to answer the questions that follow;



(i) State the observations made in tube **X** and boiling tube

(2mks)

.....
.....
.....

(ii) Name two gases that come out through tube **Y**

(2mks)

.....
.....

(iii) Give a word equation for the burning of the candle

(1mk)

.....

.....

(iv) What is the role of the sucking pump?

(1mk)

.....

.....

10. List **four** differences between luminous and non-luminous flames.

(4mks)

.....

.....

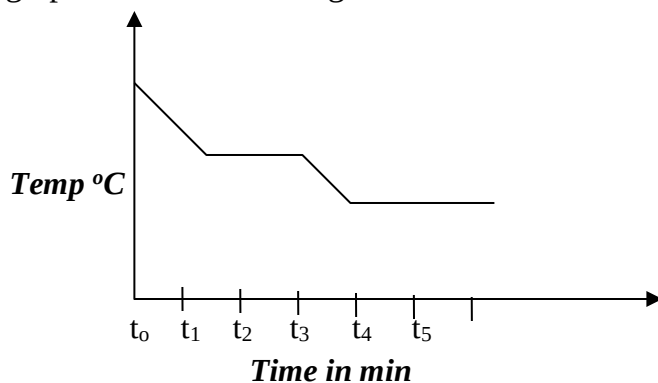
.....

.....

.....

.....

11. The graph below is a cooling curve of a substance from gaseous state to solid state;



Name;

(a) The process taking place between t_0 and t_1

(1mk)

.....

(b) The energy change that occurs between t_3 and t_5

(1mk)

.....

12. The pH values of some solutions are given below;

Substance	pH
P	9.0
Q	2.2
R	13.5
S	4.8

(a) Which substance is likely to be;

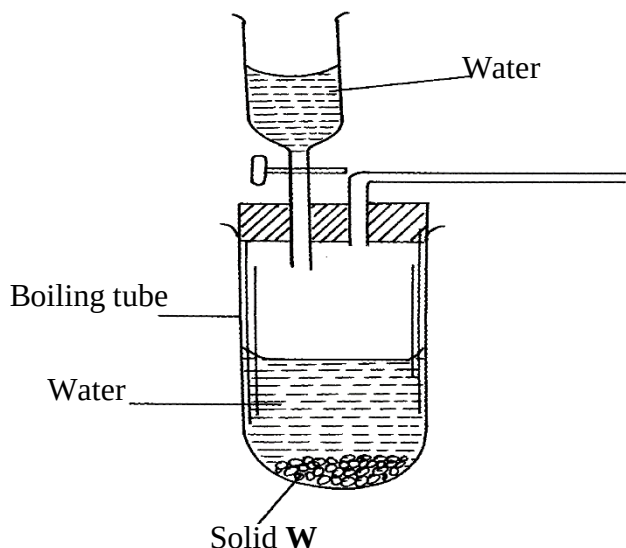
(i) Nitric (V) acid(1mk)

(ii) Tooth paste(1mk)

(b) **Solution R** is put in a beaker. Litmus solution is added, and then substance **Q** is added a little at a time until no further change is noted. Explain the observations made (2mks)

.....

13. (a) The diagram below shows, set-up by a student in an attempt to prepare and collect dry gas;



i) Complete the diagram to show how dry oxygen can be collected (3mks)

(ii) Identify solid **W**(1mk)

(ii) Write a word equation for the reaction taking place. (2mks)

.....

(b) A piece of phosphorous was burnt in excess air and the product obtained was solution with small amount of hot water to make a solution;

(i) Write a word equation for the burning of phosphorous in excess air. (2mks)

.....

.....

.....

(ii) The solution obtained in (b) above was found to have a pH of 2. Explain (3mks)

.....

.....

.....

.....

.....

(c) State **four** uses of oxygen (4mks)

.....

.....

.....

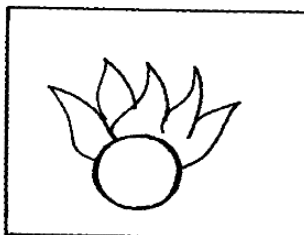
.....

(d) Give **two** physical properties of oxygen (2mks)

.....

.....

14. (a) What does the safety symbol below mean? (2mks)



(b) Give **two** advantages of carrying out experiments in apparatus made of glass. (2mks)

.....

.....

15. If you are given two samples of water one of which is pure and another which is impure, give **one** simple experiment that you would carry out in the laboratory to distinguish them. What results would you expect? (3mks)

.....

.....

.....

.....

.....

16. When magnesium is heated in air, the product formed is heavier than the original ribbon. On the other hand, when Potassium manganate (VII) is heated in air, the product formed is light. Explain the different observation (4mks)

.....

.....

.....

.....

.....

.....

17. (a) Write down the word equation for the reaction between calcium hydroxide and sulphuric acid (1mk)

.....

.....

(b) What is the general term used for the type of reaction you wrote in (a) above? (1mk)

.....

.....

(c) Of what importance would this reaction be to farmers in areas that have been polluted with acid rain? (2mks)

.....

.....

.....

18. Metal **S** removes oxygen combined with **P**. **Q** reacts with an oxide **R** but not with an oxide of **P**. **P** reacts with cold water but **R** does not;

(a) Which is the most reactive metal? (1mk)

.....

(b) Which is the least reactive metal? (1mk)

.....

(c) Arrange the metals in order of reactivity starting with the most reactive to the least reactive (1mk)

.....

19. Nekesa found a colourless liquid which she suspected to be water. On adding a few drops of the liquid to anhydrous (II) sulphate powder, the colour of the latter changed from white to blue. On boiling the liquid, she found it to boil at a range of 102-107°C.

(i) What is the boiling point of pure water at sea level? (1mk)

.....

(ii) Write a word equation to show the change that occurs when water is added to anhydrous Copper (II) sulphate. (1mk)

.....

.....

(iii) Why does the liquid boil over a range of temperature? (2mks)

.....

.....

.....

20. Copper (II) oxide + Hydrogen → Copper + Water

(a) Using arrows show where reduction and oxidation have taken place in the above equation. (2mks)

(b) Name ;(i) the reducing agent (1mk)

(ii) the oxidized species.....(1mk)

21.In temperate countries, salt is sprayed on roads to defrost and clear roads but the long term effect of this practice is costly to motorists.

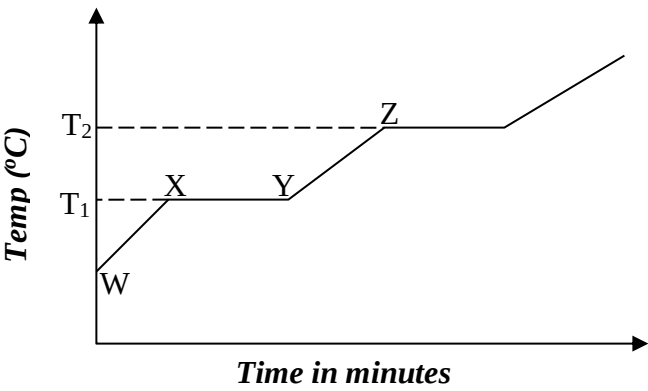
(a) Explain the role of salt in defrosting the ice (2mks)

.....
.....
.....

(b) Explain why the long term effect is costly to motorists (2mks)

.....
.....
.....

22. The graph below shows the changes which take place when a solid is heated;



(a) What happens to the molecules between W and X? (2mks)

.....
.....
.....

(b) What is the significance of temperatures T_1 and T_2 ? (2mks)

.....

.....

.....

(c) Explain why the temperature does not rise between X and Y. (2mks)

.....

.....

.....

(d) Is the substance represented pure or impure? Give a reason. (2mks)

.....

.....

23. Name **two** methods used to separate mixtures. (1mk)

.....

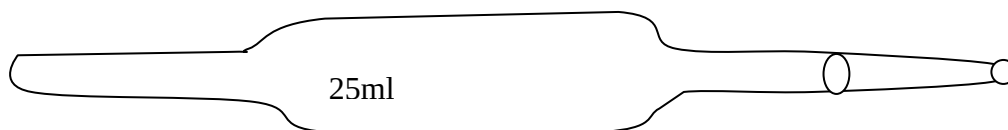
.....

24. Define the term **drug**. (1mk)

.....

.....

25. Identify the piece of apparatus below; (1mk)



.....

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES

PHYSICS

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:

- Write **your name, admission number, date** of examination and the **name** of your school in the spaces provided above.
- **Sign and write** the **date** of examination in the spaces provided above.
- This paper consists of sections: **A** and **B**.
- Answer **all** the questions in section **A** and **B** in the spaces provided.
- All working **must** be clearly shown in the spaces provided.
- Mathematical tables and electronic calculators may be used.

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 12	25	
B	13		
	14		
	15		
	16		
	17		
	18		
TOTAL SCORE		80	

QUESTIONS

1. Distinguish between a basic physical quantity and a derived physical quantity giving an example of each. (3mks)

Physical quantity	Derived physical quantity

2. State any **two** ways by which frictional force between two surfaces can be reduced. (2mks)

.....

.....

3. Explain why large mercury drops form a ball on a glass slide (2mks)

.....

.....

.....

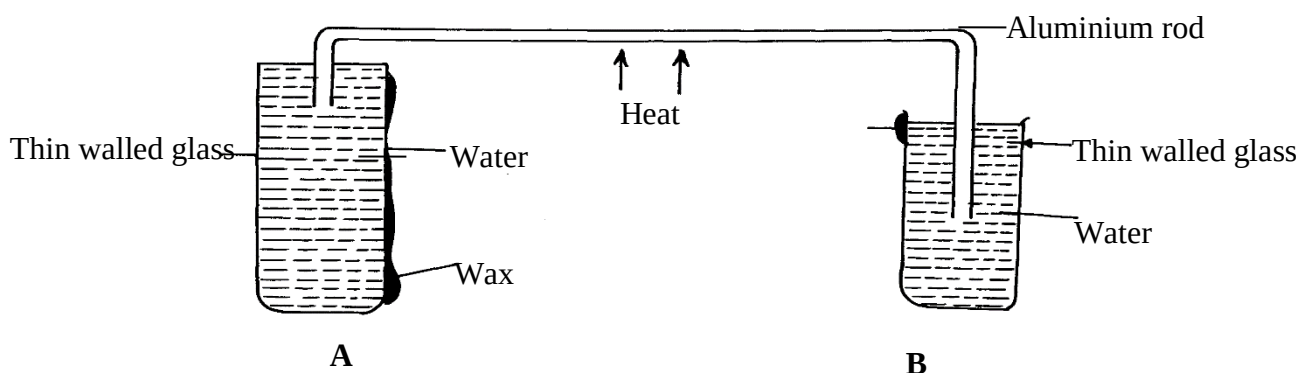
4. **Explain** why a man using a parachute falls through air slowly while a stone falls through air very fast. (2mks)

.....

.....

.....

5. State and explain what happens to waxes in **A** and **B** (5 mks)



.....

.....

.....

.....

.....

.....

6. Explain why nylon dress sticking on the body crackles when being removed. (2mks)

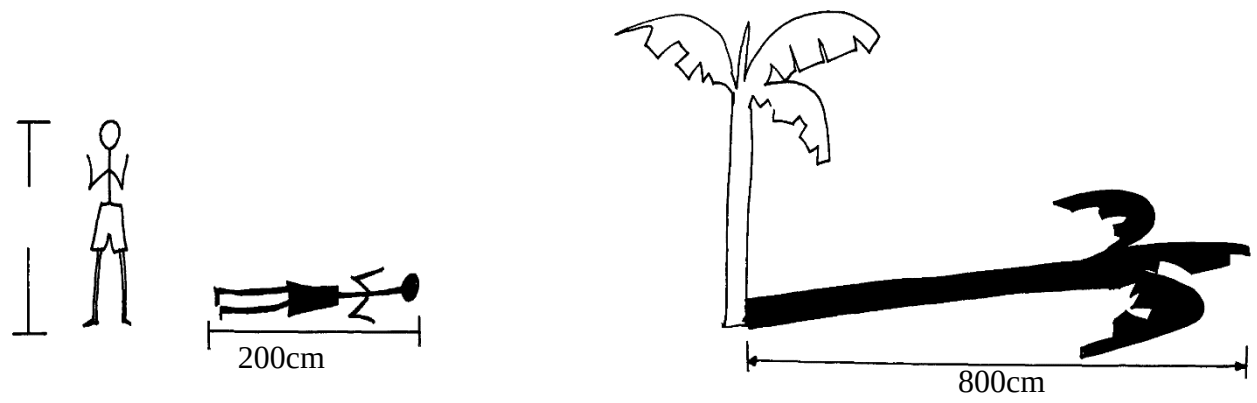
.....

.....

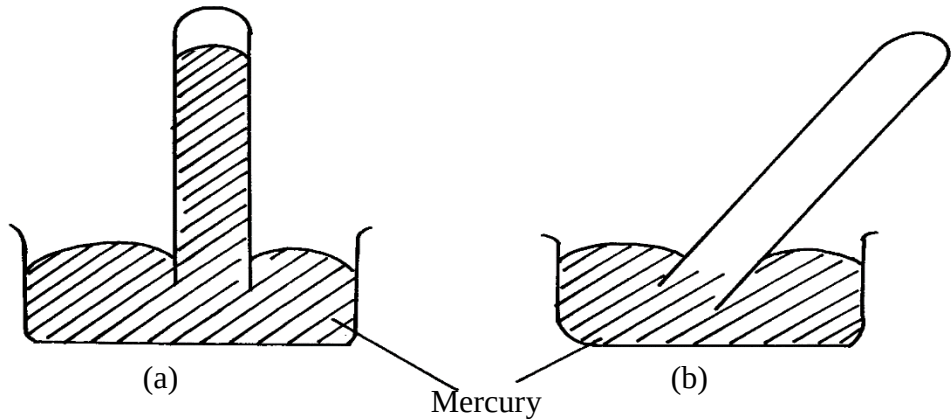
.....

7. Determine the maximum pressure a block of copper of density 8.9g/cm^3 measuring $5\text{cm} \times 3\text{cm} \times 2\text{cm}$ exerts on a horizontal surface given $g = 10\text{N/kg}$ (5mks)

8. A boy 150 cm tall forms a shadow of length 200cm. A tree nearby forms a shadow of length 800cm as shown in the figure. Calculate the height of the tree (3mks)



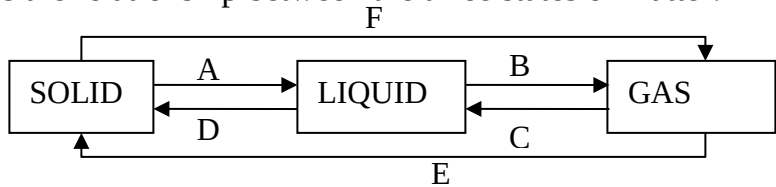
9. The figure below shows a simple mercury barometer when straight in **(a)** and when tilted in **(b)**. Mark the level of mercury in tilted tube. (1mk)



10. Complete the table to show the accident that can occur in a laboratory, cause and remedy. (4mks)

Accident	Cause	Remedy
(i)		
(ii)		

11. The figure shows the relationship between the three states of matter.



Name the processes **A, B, C, D, E,** and **F** (3mks)

- A**.....

C.....

E.....

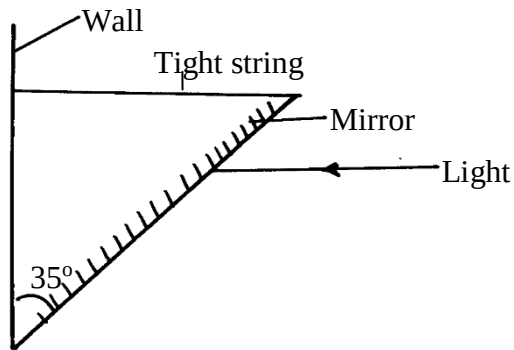
B.....

D.....

F.....

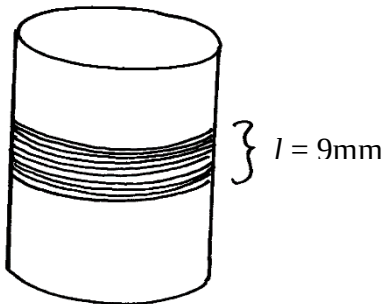
12. Determine the volume of a prism of height 6 cm base of 7 cm and length 4 cm. (2mks)

13. In a hair salon, a plane mirror is suspended by a string and makes an angle of 35° with the wall.



A ray of light strikes the mirror horizontally. Determine the angle between incident ray and reflected ray. (3mks)

14. A thread is wound on cylindrical object. The number of closely packed turns is 15 and the length l is 9mm. Calculate the thickness of the thread (2mks)

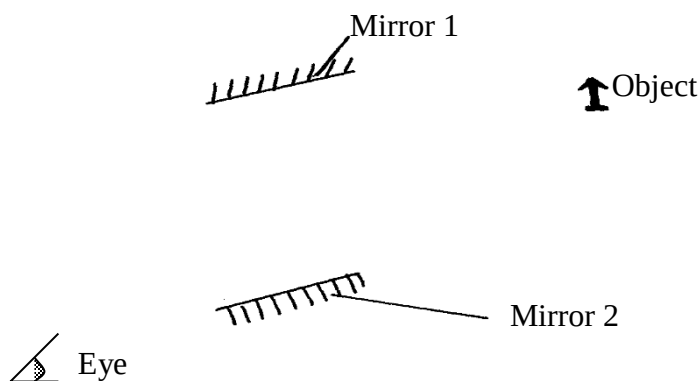


15. Determine the resultant force in the following case.

(2mks)



16. The figure shows part of an incomplete device.



Draw ray diagrams to show position of the image.

(2mks)

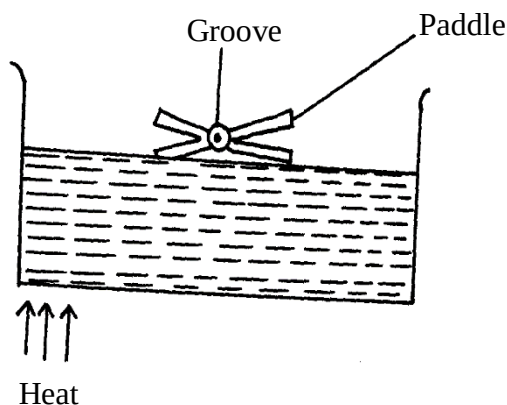
17. Explain why water tanks in houses are placed as high as possible

(1mk)

.....
.....

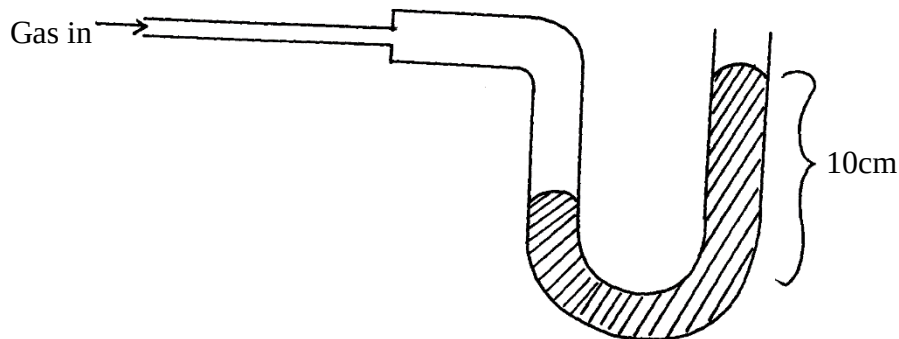
18. The paddle wheel in the figure below is made of alight material and is well oiled. State and explain how it will behave when the water is heated.

(2mks)



-
-
-
- 19.** A positively charged rod is brought near the cap of a lightly charged electroscope. The leaf first decreases in divergence but as the rod is brought nearer, it diverges. State the charge on the electroscope and explain the behaviour of the leaf. **(3mks)**

-
-
-
-
- 20.** A manometer containing water shows a difference in level of 10cm when connected to a laboratory gas. Calculate the pressure exerted by the gas supply
(atmospheric pressure = $100,000\text{N/m}^2$) **(4mks)**



- 21.** (a) Define current stating its S.I units. **(2mks)**

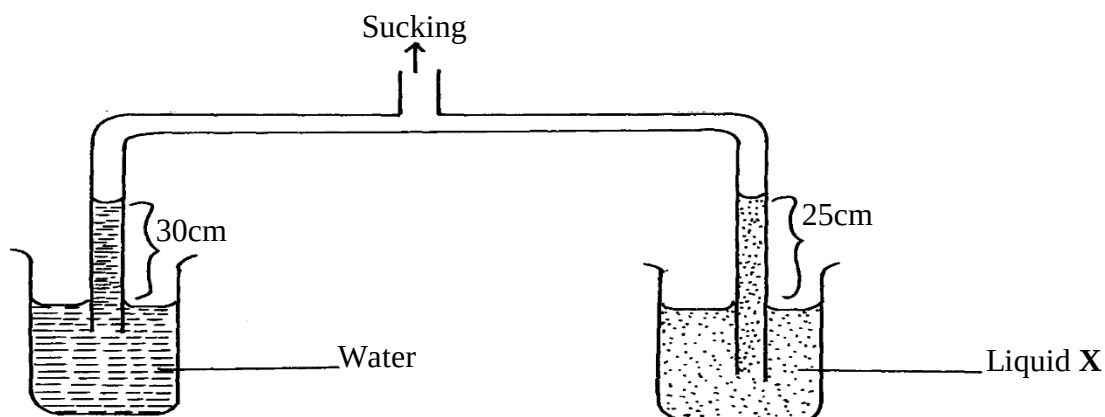
.....

.....

.....

- (b) A battery circulates charges round a circuit for 1.5 minutes. If the current is held at 2.5 Amperes, what quantity of charge passes through the wire? (3mks)

22. Here is Hare's apparatus;



- (i) Explain why the two liquid levels are different. (2mks)

.....

.....

.....

- (ii) Determine density of liquid X given that density of water is 1g/cm^3 . (3mks)

23. Seen in a microscope during a Brownian motion experiment are “bright specks”.

(i) What are these “bright specks?” (1mk)

.....

.....

(ii) State the behaviour of these “bright specks” (1mk)

.....

(iii) Explain the behaviour of these “bright specks”. (2mks)

.....

.....

.....

(iv) State two reasons why these “bright specks” are used. (2mks)

.....

.....

24. Eight dry cells can be arranged to produce a total e.m.f of 12V just like a car battery.

(a) Determine the e.m.f of an individual dry cell. (1mk)

.....

.....

(b) Why is it possible to start the car with the lead-acid battery, but not with the eight dry cells connected in series? (2mks)

.....

.....

.....

(c) Explain why it is dangerous to light a cigarette near a charging car battery. (1mk)

.....

.....

25.(a) Define density and state its S.I units. (2mks)

.....

.....

.....

(b) A density bottle weighs 80g when empty, 130g when full of oil and 150g when full of water. If the density of water is 1g/cm^3 , calculate the density of oil. (3mks)

(c) Water of volume 2m^3 and density 1g/cm^3 is mixed with milk of volume 1m^3 and density 1.4g/cm^3 . Calculate the density of the resulting mixture. (4mks)

26. (a) Define force and give its S.I units (2mks)

.....

.....

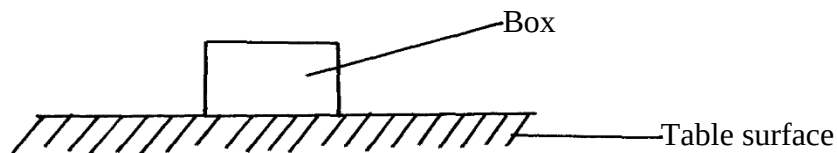
(b) State **two** effects of force on an object (2mks)

.....

.....

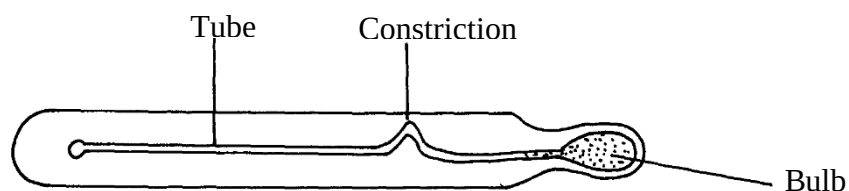
.....

(c) Name and show forces acting on a box placed on a table. (2mks)



.....
.....
.....

27. The figure is of a clinical thermometer.



Explain why;

(i) there is a constriction on the tube (1mk)

.....
.....

(ii) the bulb glass is thin (1mk)

.....
.....

(iii) the tube is thin (1mk)

.....
.....

28.(a) Define the term magnification as applied to the formation of images by a pin hole camera.

(1mk)

.....
.....

(b) A pin hole camera of length 15cm forms an image 3cm high of a man standing 9m in front of the camera. Determine the height of the man to the nearest centimeter. **(3mks)**

29. (a) Define area and state S.I units. **(2mks)**

.....

.....

.....

(b) Convert 9.0m^2 into cm^2 **(2mks)**

.....

.....

.....

(c) Explain why when salt of volume $u\text{cm}^3$ is mixed with water of volume $V\text{cm}^3$, the salt solution has a volume less than $(u+v)\text{cm}^3$, the two volumes combined. **(2mks)**

.....

.....

.....

FORM 1 MIDTERM 2 EXAMS

SMART-GRADE SERIES MATHEMATICS

TIME: 2 HOURS

NAME..... ADM NO;

CLASS..... DATE.....

INSTRUCTIONS TO CANDIDATES:

- Write your **name**, **admission number** and your school in the spaces provided above.
- This paper consists of **two** sections; **I** and **II**
- Answer **all** the questions in section **I** and any five questions in section **II** in the spaces provided.
- All working **must** be clearly shown in the spaces provided.
- Electronic calculators and KNEC mathematical tables may be used

FOR EXAMINERS' USE ONLY:

Section	Total marks
I	
II	
Grand total	

1. a) State the place value and total value of the underlined digit in **4 7 3 6 4 5** (2mk)
- b) Write the number in (a) above in words (2mks)

2. Evaluate $\frac{3}{4} + 1\frac{5}{7} \div \frac{4}{7}$ **of** $2\frac{1}{3}$ (4mks)

$(1\frac{3}{7} - \frac{5}{8}) \times \frac{2}{3}$

3. Cherono spent Sh. 207 to buy seven books and four pencils. While Kibet spent 165 to buy five books and five pencils of the same type. Find the cost of each item. (4mks)

4. Evaluate $- 8 \div 2 + 12 \times 9 - 4 \times 6$

(3mks)

$$56 \div 7 \times 2$$

5. Mutai leaves behind 50 hectares of land and sh. 120,000 savings in his will. The land was sold at sh. 80,000 per hectare. If his wife gets sh. 520,000 and the rest is divided equally among his four sons and two daughters, how much money does each child get?

(4mks)

6. Three tanks are capable of holding 60, 90 and 180 litres of water. Determine the capacity of the greatest vessel which can be used to fill each of them exactly.

(3mks)

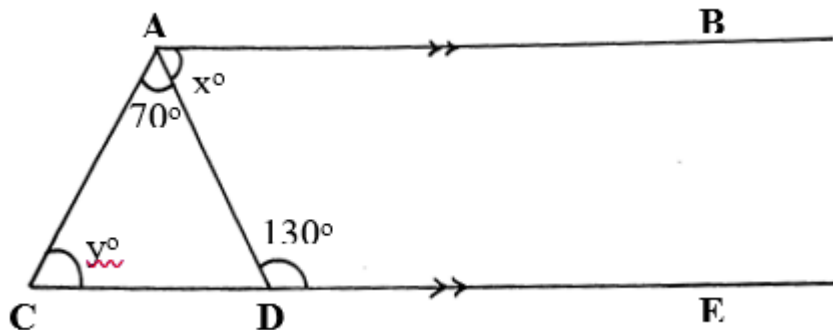
7. Two toilets are designed to flush automatically at intervals of 6 and 8 minutes. After how long will they next flush at the same time? (2mks)

8. Convert $0.\dot{1}5$ into $\frac{a}{b}$ (2mks)

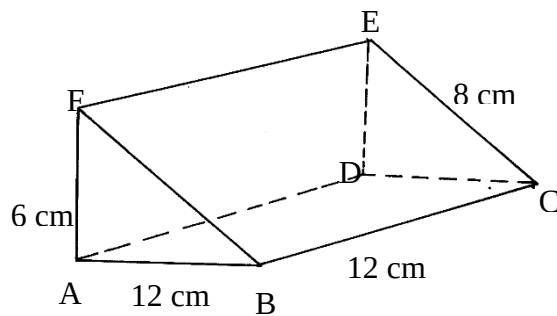
- 9 Solve the equation. (4mks)

$$\frac{x+1}{2} + \frac{2x+1}{3} = 9$$

10. Find the value of the angles marked x and y in the figure below.
Give reasons for your answer. (2mks)



11. The figure below shows a right angled triangular prism of uniform cross-section $AF = 6\text{ cm}$, $AB = BC = 12\text{ cm}$ and $CE = 8\text{ cm}$. Find the surface area of the prism. **(4mks)**



- 12 Find the value of the expression. **(3mks)**

$$3a - 2b + 2(a^2 - 3b)$$

$$4a - 2b$$

When $a = 2$, and $b = 3$.

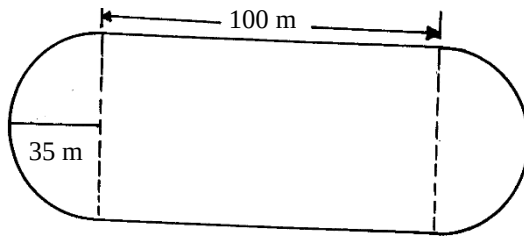
13. A, B, and C are three quantities such that $A : B = 3 : 2$ and $B : C = 4 : 5$

Find the ratio $A : B : C$

(2mks)

14. A running track of length 100m is the shape of a rectangle with two semicircular ends of radius 35m each as shown in the figure below. A long distance runner ran 25 times round the track. What distance did he cover in Kilometers?

(4mks)



15. A commercial bank buys and sells U.S dollars in Kenya Shillings at the rate below.

Buying

Sh. 74

Selling.

sh.79

A tourist at the end of his tour of Kenya was left with sh. 30,000 which he converted to U.S dollars.

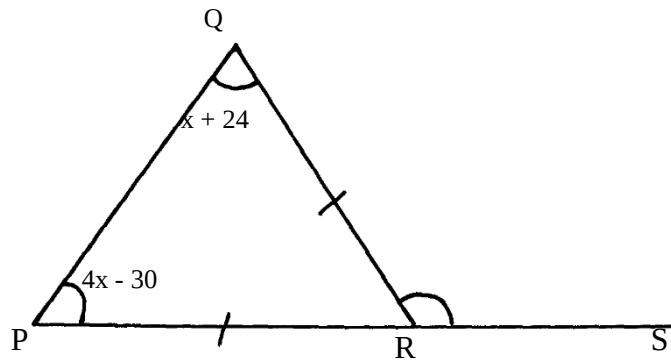
How many U.S dollars did he get?

(2mks)

16. In the figure below, $\angle RPQ = (4x - 30)^\circ$ $\angle PQR = (x + 24)^\circ$. Given that $PR = QR$,

Find $\angle QRS$

(3mks)



SECTION II (50MARKS)

Answer only five questions in this section the spaces provided.

- 17.** Using a ruler and a pair of compasses only;
- (a) Construct triangle PQR in which $PQ = 5\text{cm}$, $QR = 8\text{cm}$ and angle $QPR = 45^\circ$ **(4mks)**
 - (b) Measure line PR and angle PQR **(2mks)**
 - (c) i) Construct a perpendicular from Q to meet line PR at S and measure QS **(2mks)**
ii) Hence, find the area of triangle PQR **(2mks)**

18. (a) Express the following numbers as products of prime factors using power notation. **(4mks)**

(i) 5148

(ii) 6084

(b) Hence (i) evaluate $\frac{(5148)^2}{\sqrt{6084}}$

(4mks)

ii) Find H.C.F and L.C.M of 5148 and 6084.

(2mks)

Leaving your answers in (i) and (ii) in Prime factor form.

19. The height and the radius of a cylindrical water tank are 10m and 5m respectively.

(a) (i) Find the capacity of the tank in litres. (Take $\pi = 3.142$) **(3mks)**

(ii) Water was allowed into the empty tank at a constant rate of 29 litres per second at 2030hrs.

What time will the tank be completely full? Give your answer in 12hrs system **(4mks)**

b) An institution uses an average of 250,000 litres each a day. How many complete days will a full tank last the institution **(3mks)**

20 (a) The angle of elevation from a point A to the top of building 5m away is 45° . Another point B is 4m from A. By scale drawing determine.

(i) The angles of elevation from point B

(ii) The height of the building

(6mks)

(b) A man who is in elevator half way the building notices a lorry approaching the building at an angle of depression 20° . Use the scale drawing to determine how far the lorry is from the foot of the building

(4mks)

- 21 a)** A large scale farmer uses $\frac{1}{2}$ of his land to plant maize, $\frac{1}{5}$ for planting beans, $\frac{1}{3}$ of the remainder for grazing and the rest for horticultural farming. If he use 10 hectares for grazing, determine how much land he uses for horticultural farming. **(4mks)**
- (b)** Kirui left sh2,116,800 in his will to be shared between his wife daughter and son in the ratio 1:2:3. His wife decided to divide her share equally between her daughter and son. Find how much the son finally got. **(6mks)**

22) Rono bought a second hand car and later sold it through a sales agent who charged $7\frac{1}{2}\%$ commission on the price of the car, he received sh. 222,000 from the agent after the latter had deducted his commission. Rono incurred a loss of 25% on the price at which he had bought the car.

a) Calculate the price at which the agent sold the car. **(3mks)**

b) Find the price at which Rono had bought the car **(2mks)**

c) If, the amount Rono paid for the car was 26% less than the price of the new car, calculate the price of the new car. **(3mks)**

d) Express as a percentage the amount Rono received for his car to its price when new. **(2mks)**

23. The tables below represent linear relations between **x** and **y**. In each table some values of **y** against **x** are given and the corresponding point (x, y) also given.

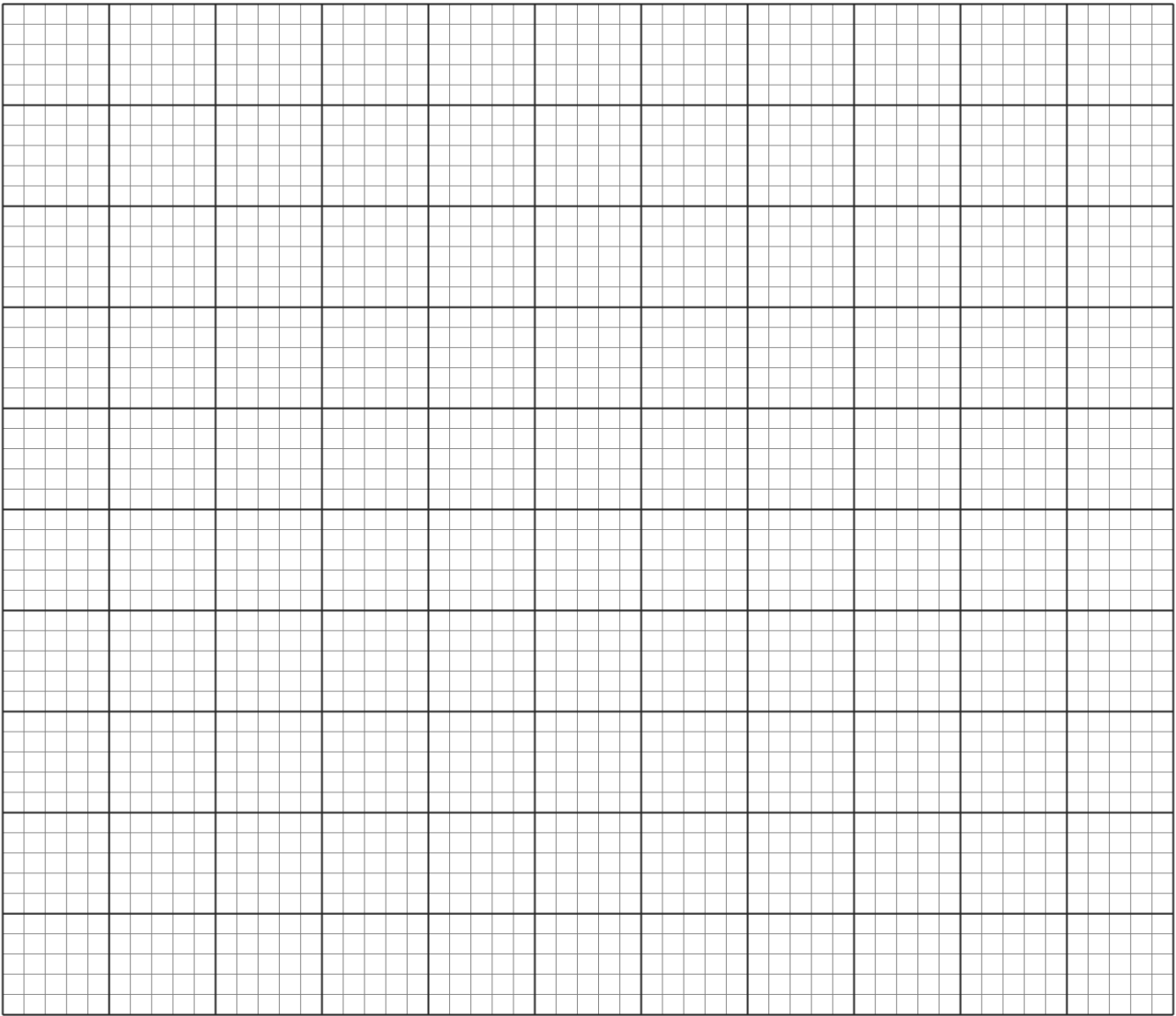
$$2x - y = 3$$

x	-4	-2	0	3	5	7	8
y=2x -3	-11				7		
Point	(-4,-11)				(5,7)		

$$3x - 2y = 4$$

x	-2	0	2	4	6	8	10
y= $\frac{3x-4}{2}$		-2					13
Point		(0,-2)					(10,13)

- a)** Copy and complete each table **(2mks)**
- b)** Using a suitable scale plot the points from each table on the same grid and hence draw the straight line representing each relation **5mks)**



c) Use your graph to solve the simultaneous equations

$$2x - y = 3$$

$$3x - 2y = 4$$

d) The line whose equation is $2x - y = 3$ cuts the x-axis and the y-axis at P and Q respectively.

From your graph state the coordinates of P and Q.

(2mks)

24. A bus left Nairobi on Thursday evening and traveled to Dar-es-salam according to the travel time table below and arrived there on Saturday morning.

Nairobi	Dep 2015 h
Namanga	Arr: 2325h
	dep: 0310h
Arusha	Arr: 0640h
	Dep: 0820h
Dodoma	Arr: 2100h
	Dep: 2255h
Dar – es – Salam	Arr: 1015h

a) Determine the total

i) Traveling time for the whole journey **(3mks)**

ii) Stoppage time in all stations **(3mks)**

iii) Time taken for the whole journey **(2mks)**

b) Given that the average speed of the bus for the whole journey is 60km/h, calculate the distance between Nairobi and Dar-es- salaam **(2mks)**

THE END

For Marking Schemes, Contact Mr Isaboke

0746-222-000/0742-999-000

Mwalimu Consultancy Ltd

FOR THE FOLLOWING;

- ✓ **ONLINE TUITION**
- ✓ **REVISION NOTES**
- ✓ **SCHEMES OF WORK**
- ✓ **SETBOOKS VIDEOS**
- ✓ **TERMLY EXAMS**
- ✓ **QUICK REVISION KITS**
- ✓ **KCSE TOPICALS**
- ✓ **KCSE PREMOCKS**
- ✓ **TOP SCHOOLS PREMOCKS**
- ✓ **JOINT PREMOCKS**
- ✓ **KCSE MOCKS**
- ✓ **TOP SCHOOLS MOCKS**
- ✓ **JOINT MOCKS**
- ✓ **KCSE POSTMOCKS**
- ✓ **TOP SCHOOLS PREDICTIONS**
- ✓ **KCSE PREDICTIONS**
- ✓ **KCSE REVEALED SETS**

Call/Text/WhatsApp

0746-222-000

0742-999-000

mwalimuconsultancy@gmail.com

***This is a Copyright Property of Mwalimu
Consultancy***

Powered By Mr Isaboke