F2 MIDTERM 2 EXAMS

ALL SUBJECTS

Dear Students, Attempt These Exams!

For Marking Schemes Call 0705525657

NAME_____CLASS_____ADMNO:_____

DATE_____SIGN_____

FORM 2 MID-TERM 2 EXAMS

BIOLOGY

TIME: 2 HOURS

INSTRUCTIONS TO THE CANDIDATES

a) Answer all questions in the spaces provided in the question paper.
b) Answer all questions in section A and two questions in section B.
c) Question 21 is compulsory

FOR EXAMINERS USE ONLY

SECTION	MAXIMUM SCORE	CANDIDATES SCORE
A	70	
B	30	
TOTAL SCORE	100	

SECTION A (60MARKS) ANSWER ALL QUESTION

1. State the importance of each of the following in living organisms
   a) Nutrition (1mk)

   ……..

   b) Excretion (1mk)

   ……..

2. State two functions of cell sap (2mks)

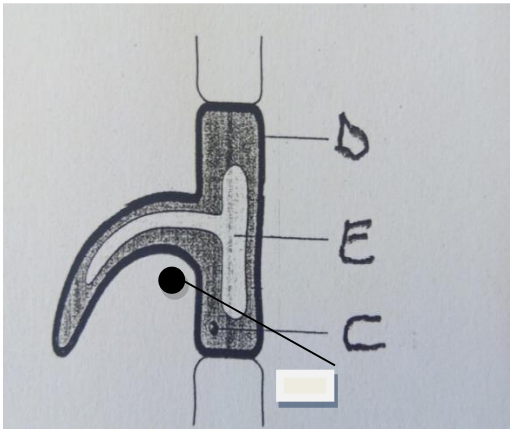
   ……

   ……

   ……

3. Which organelle would be abundant in: (2mks)
   a) Skeletal muscle cell ……..
   b) Palisade cell ……

4. The diagram below shows a specified plant cell



   i. Name the cell (1mk)

   ……

ii. Name the parts labelled D and E (2mks)

D ……..

E ……..

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

   a) Objective lens

……

   b) Diaphragm

……

6. Using a microscope, a student counted 55 cells across a field of view whose diameter was 6000μm. Calculate the average length of cells. Show your working. (2mks)

7(a) Distinguish between diffusion and osmosis (2mks)

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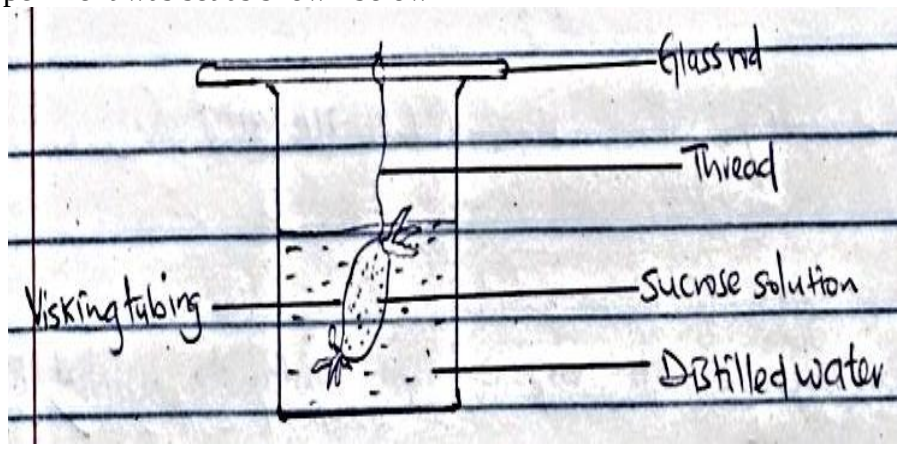
……

b)An experiment was set as shown below



The set up was left for 30 minutes.

(i) State the expected results (1mk)

……

(ii) Explain your answer in b(i) above (3mks)

……

……

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……

8.State four factors that increase the rate of diffusion (4mks)

……

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……

……

9.What is meant by the following terms?

(i) Crenated cell (1mk)

……

(ii) Flaccid cell (1mk)

……

10. Distinguish between heterotrophism and autotrophism (2mks)

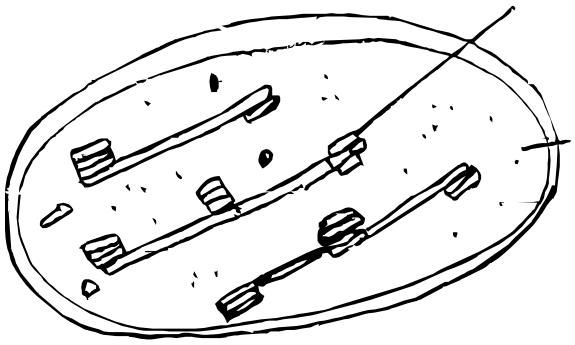
……

……

……

11. Study the diagram below

T



a) Name the process which takes place in the organelle (1mk)

……

b) Name the pigment in the structure labelled T and state its function (2mks)

Pigment……..

Function……

c) Name three cells of a leaf where the above structure is found (3mks)

……

……

……

12. State four external factors that affect the rate of photosynthesis (4mks)

……

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13. State three properties of monosaccharide (3mks)

……

……

……

14. Discuss four adaptations of the carnivores to their mode of feeding (4mks)

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……

15

a) What is the importance of mastication during digestion? (1mk)

……

……

b) State three roles of saliva during digestion (3mks)

……

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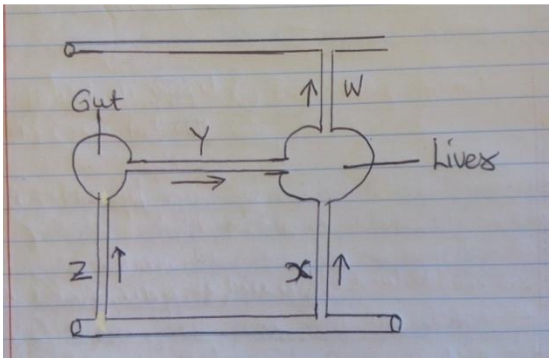
……

16. The diagram below shows part of a mammalian circulatory system



a. Name the blood vessels marked Y and Z (2mks)

Y ……

Z **……**

b. A student took a meal rich in proteins and carbohydrates. It was found that the glucose level in blood vessel W was lower than blood vessel Y. Explain (1mk)

……

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17.

a) What is active transport? (1mk)

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……

b) Give four roles of active transport (4mks)

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18. During a Biology practical lesson, the teacher provided students with the following apparatus; a porter, a scalpel, specimen bottle, a pair of forceps, sweep net and chloroform.

a) Give four precaution that a biology teacher gave the students before the practical when collection of specimen began (4mks)

……

……

……

……

……

b) What was the function of the following apparatus (4mks)

i. Pooter

……

ii. Sweep net

……

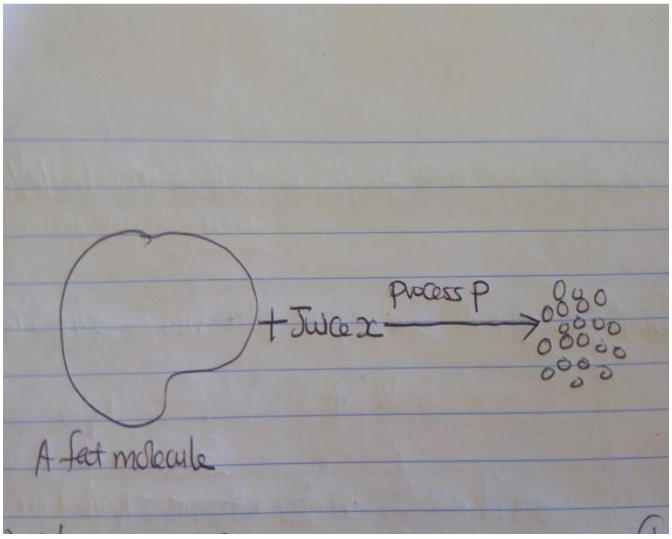
iii. Chloroform

……

iv. A pair of forceps

……

19. The following is an illustration of a certain process that occurs in mammals.



a) Name process P (1mk)

……

b) Name the juice involved in process P (1mk)

……

c) Give a reason why liver damage leads to impaired digestion of fats (1mk)

……

……

d) What would be likely effect on digestion if the small intestine of a human being is reduced in an operation (1mk)

……

……

20. Name two specialized tissue in mammals (2mks)

……

……

……

SECTION B: 40 marks

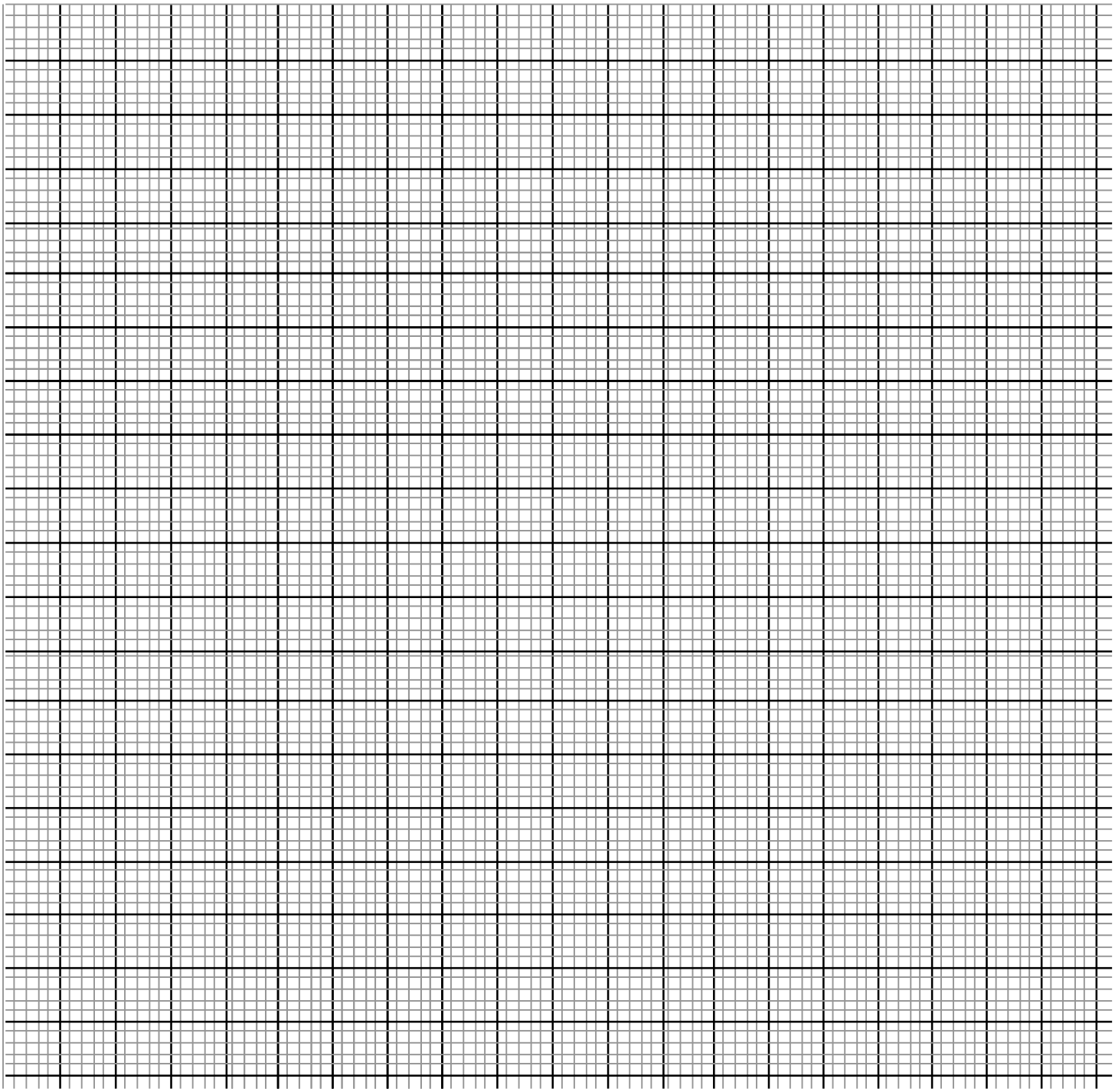
Question 21 is compulsory

Answer question 21 and either question 22 or 23

21.An experiment was carried out to investigate the effect of temperature on the rate of reaction catalyzed by an enzyme. The results are shown in the table below.

TEMPERATURE (^{O}C)	RATE OF REACTION IN MG OF PRODUCTS PER UNIT TIME
5	**0.2**
10	**0.5**
15	**0.8**
20	**1.1**
25	**1.5**
30	**2.1**
35	**3.0**
40	**3.7**
45	**3.4**
50	**2.8**
55	2.1
60	1.1

a. On the grid provided below draw a graph of rate of reaction against temperature. 6mks



b. When was the rate of reaction 2.6 mg of product per unit time? 2mks

……

……

c. Account for the shape of the graph between

(i) 5^{o}c and 40^{o}c 2mks

……

……

……

(ii) 45^{o}c and 60^{o}c 3mks

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……

……

d. Other than temperature name two ways in which the rate of reaction between 5^{o}c and 40^{o}c could be increased. 2mks

……

……

……

e.

(i) Name one digestive enzyme in the human body which works best in acidic condition. 1mk

……

(ii) How is the acidic condition for the enzyme named in (e) (i) above attained? 2mks

……

……

……

f. The acidic conditions (e) (ii) above are later neutralized.

i. Where does the neutralization take place? (1mk)

……

……

……

ii. Name the substance responsible for neutralization. (1mk)

……

22. Describe how water moves from the soil to the leaves of a tree (10mks)

23.

i. Explain how the mammalian intestines are adapted to perform their function (5 mks)
ii. Describe how environmental factors increase the rate of transpiration in terrestrial plants (5 mks)

FORM 2 MID-TERM 2 EXAMS

AGRICULTURE

TIME 2 HOURS

NAME_____CLASS_____ADM NO:_____

DATE_____SIGN_____

OFFICIAL USE ONLY

SECTION	QUESTION	MAX SCORE	CANDIDATE SCORE
A	1 – 16	40	
B	17 – 19	20	
C	20 – 22	40	
TOTAL		**100**	

SECTION A **40 MKS**

Answer all question in this section

1. State three ways through which agriculture contribute to industrial development. (3mks)

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2. Name three factors that influence shifting cultivation. (3mks)

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……

3. State two categories of parasites that affect livestock production. (2mks)

……

……

……

4. List two maintenance practices carried out the following farm tools. (6mks)

a) Wheel barrow

……

……

……

b) Milking pail

……

……

……

c) Wool shears

……

……

……

5. State two reasons why a farmer should prepare land before planting. (2mks)

……

……

……

6. Name three methods a farmer can use when doing tertiary cultivation. (3mks)

……

……

……

……

7. State two disadvantages of plastic pipes in water conveyance. (2mks)

……

……

……

8. State two importance of treating farm water before using it. (2mks)

……

……

……

9. List two methods of preparing compost manure. (2mks)

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……

……

10. State two characteristics of a dairy cattle breed. (2mks)

……

……

11. State two uses of farm records. (2mks)

……

……

……

12. What does the following initials represent in fertilizer description N.P.K. (3mks)

……

……

13. Differentiate between the following terms.

a) Straight fertilizer and compound fertilizer. (2mks)

……

……

……

……

14. A farmer was advised to apply 180 kg CAN/ha when top-dressing the maize crops. If the C.A.N. available in shops contain 21% N. Calculate the amount of nitrogen applied per hectare. (2mks)

15. State two advantage of using seeds as planting materials. (2mks)

……

……

……

……

16. Name two methods a farmer can use to break seed dormancy. (2mks)

……

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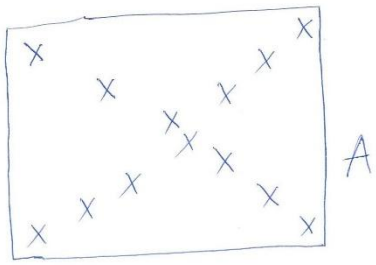
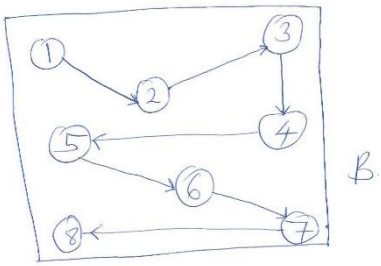
SECTION B **20 MKS**

Answer all questions in this section.

17a) Study the diagrams below and answer the questions that follow





a) Identify the soil sampling methods shown above. (2mks)

A ……

B ……

b) State three types of information written on a soil sample before it's taken to the laboratory for testing. (3mks)

……

……

……

……

c) State four areas where soil samples should not be collected for sampling. (4mks)

……

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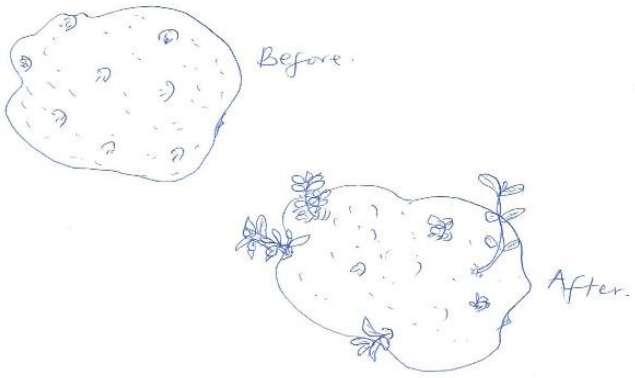
18. Study the diagram below and answer the questions



a) Name the practice above. (1mk)

……

b) State two advantages of the above practice on iris potatoes. (2mks)

……

……

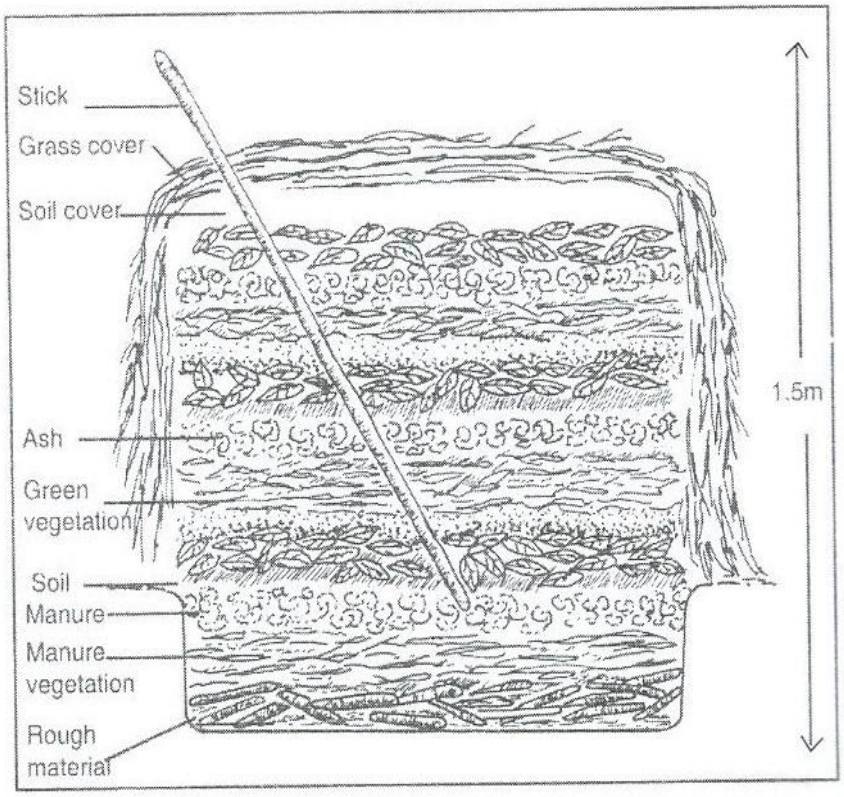
……

c) Name two methods used when planting crops. (2mks)

……

……

9. Study the diagram below and answer the questions that follow.



a) Identify manure preparation method above. (4mks)

i) Wood ash

ii) Rotten manure

iii) Stick

iv) Top soil

c) State one reason why manure heap should be turned at least every 3 to 4 weeks. (1mk)

……

SECTION C: 40 MKS

Answer any two questions in this section

20a) Explain five factors that determine the quality of farm yard manure. (10mks)

b) Discuss five importance of keeping livestock in Kenya today. (10mks)

21a) Explain five methods through which a soil loses its fertility. (10mks)

b) Describe five factors that affect the rooting of cuttings in vegetative propagation. (10mks)

22a) Explain five methods a farmer can use when applying fertilizer to crops. (10mks)

b) State and explain five reasons why farm tools should be maintained. (10mks)

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FORM 2 MID-TERM 2 EXAMS

BUSINESS STUDIES

TIME: 2 HOURS

Name_____**Class**_____**AdmNo**_____

Date_____**Sign**_____

For examiners use only.

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Candidate score															

Question	16	17	18	19	20	21	22	23	24	25
Candidate score										

TOTAL MARKS

1. Outline four sources of capital for a sole-proprietorship type of Business. (4mks)

a)

……

b)

……

c)……

….

d)

……

2. Classify the following trade as home trade or foreign trade.

Trade	Classification
a)Import trade	
b)Retail trade	
c) Export trade	
d) Wholesale trade	

3. State four disciplines that are studied in Business studies. (4mks)

a)

……

b)

……

c)……

….

d)

……

4. List four ways in which government creates a viable working environment for business people. (4mks)

a)

……

b)

……

c)……

….

d)

……

5. Highlight four external factors that may negatively influence the operation of a business.
(4mks)

a)

……

b)

……

c)……

….

d)

……

6. Outline four characteristics of secondary wants.
(4mks)

a)

……

b)

……

c)……

….

d)

……

7. Highlight four benefits of proper filling to a business organization.
(4mks)

a)

……

b)

……

c)……

….

d)

……

8. Highlight four factors that may lead to success of a business.
(4mks)

a)

……

b)

……

c)……

….

d)

……

9. Outline four advantages of division of labour.
(4mks)

a)

……

b)

……

c)……

….

d)

……

10. State four types of complaints that consumer organization may receive from consumers.
(4mks)

a)

……

b)

……

c)……

….

d)

……

11. State four circumstances under which co-operative society may be dissolved.
(4mks)

a)

……

b)

……

c)……

….

d)

……

12. List four forms of retail businesses that a school leaver may engage in.
(4mks)

a)

……

b)

……

c)……

….

d)

……

13. Highlight any four personal attributes that a personal secretary should possess.
(4mks)

a)

……

b)

……

c)……

….

d)

……

14. A business opportunity exist where there is a market gap. Outline four such market gaps.
(4mks)

a)

……

b)

……

c)……

….

d)

……

15. In the spaces provided below, indicate the type of utility created by each of the following business activities.

Commercial activity	Types Utility
a) Selling goods to customers	
b) Transporting goods.	
c) Store keeping	
d) Making chair	

16. Give four differences between goods and services. (4mks)

a)

……

b)

……

c)……

….

d)

……

17. State whether each of the following factors fall under micro-environment or macro-environment. (4mks)

a) Competitive environment.
b) Legal-political environment.
c) Business structure
d) Business culture.

18. Give four public utilities that the county government of Meru provides to its citizens.

(4mks)

a)

……

b)

……

c)……

….

d)

……

19. List four contents of memorandum of association.

(4mks)

a)

……

b)

……

c)……

….

d)

……

20. Outline four circumstances under which a trader would prefer to be paid in cash rather than other means of payments. (4mks)

a)

……

b)

……

c)……

….

d)

……

21. Outline four factors that should be considered before buying office equipment.

(4mk

s)

a)

……

b)

……

c)……

….

d)

……

22. Reasons why a business should prepare a business plan.

a)

……

b)

……

c)……

….

d)

……

23. For each of the following production activities indicate whether it is a direct or indirect type of Production.

Activity	Types of production
a) An individual washing his own clothes	

b) An individual supplying beef.	
c) An individual operating a kiosk	
d) An individual producing maize for his family's consumption	

24. State four roles of the Nairobi Stock Exchange Market as a market for securities. (4mks)

a)

……

b)

……

c)……

d)

……

25. Outline four characteristics of a supermarket. (4mks)

a)

……

b)

……

c)……

….

d)

……

FORM 2 MID-TERM 2 EXAMS

CHEMISTRY

2 HOURS

NAME_____CLASS_____ADMNO:_____

DATE_____SIGN_____

Instructions to candidates:

1. Answer **all** questions in both section A and B.
2. All working must be clearly shown and, in the spaces, provided.

FOR EXAMINER'S USE ONLY

Section	Maximum Score	Candidate's Score
A	40	
B	40	
Grand Score	**80**	

1[a] what is an atom? [1mk]

……

…..……

…….

[b]Distinguish between atomic number and mass number [1mk]

……

……

…….

2. Name two sub-atomic particles [2mks]

……

……

……

3. Element P has two isotopes P^{60}_{30} and P^{61}_{30} which occur in the ratio X:2. Given that its R.A.M is 60.4.
Calculate the value of X
[3mks]

4. A patient went to the hospital and was diagnosed to have cold flu. The patient was prescribed to take drugs 1 x 3

[i]How and what hours in interval will the drugs be taken
[2mks]

……

……

……

……

[ii]Supposing the patient took the drugs at 7.00a.m in the morning. What other hours of the day will the patient take the drugs

[2mks]

……

……

……

……

5. Identify a suitable method that would be used to separate mixture of the following substances
[a]Iodine and potassium chloride
[1mk]

……

……

……

[b]Water and ethanol
[1mk]

……

……

……

[c]Table salt dissolved in water
[1mk]

……

……

…..

6. Fill the table below

compound	Chemical formulae
[i]sodium chloride	
[ii]Iron{III}oxide	
[iii]	$Al\{OH\}_3$

7.Chemistry is a science subject that involves practicals that are done in the laboratory. Safety rules are given in order for the student to take precaution while in the laboratory
{i} State three such rules to be observed
[3mks]

……

……

……

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{ii} Most of the laboratory apparatus are made of glass. Give two reasons [2mks]

……

……

……

..……..

8.Njoki a form 2 student, was given a colourless liquid suspected to be water.

[a]Describe one chemical test she could use to identify the liquid. [2mks]

……

……

……

……

{b}Describe an experiment she could perform to ascertain its purity [2mks]

……

……

……

……

9.Two ions X^{2+} and Y^{2-} forms ions with ionic configurations 2.8.8 each

[a]Which of the ions is of an element in

[i]period 3

……

[ii]Group 2

……

[b]Given that element Y has a mass number of 32, draw the structure of its ions [2mks]

10. The form two students were given solutions P, Q and R in three different beakers. They put in red and blue litmus papers and recorded the results as shown below

Solution	P	Q	R
Effect on blue litmus paper	Turns red	Remains blue	Remains blue
Effects on red litmus paper	Remains red	Turns red	Turns blue

Which of the solutions was most likely to be;

[i]Distilled water [1mk]

……
…

[ii]of an oxide of sodium. Explain your answer
[2mks]

……

……

…..…

[iii]An oxide of sulphur. Explain your answer
[2mks]

……

……

……

……

11.[a]Differentiate between prescription drugs and over the counter drugs [2mks]

……

……

……

……

[b]Name two commonly abused drugs in Kenya [1mk]

……

……

……

[c]State two physiological effects of drug abuse to the human body
[2mks]

……

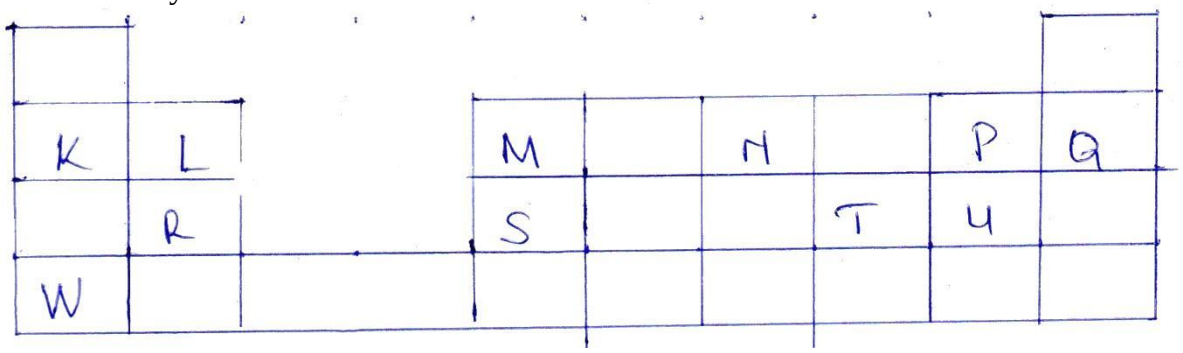
……

……

……

SECTION B

12.Study the grid below showing a section of the periodic table. The letters are not the actual chemical symbols of the elements



[a]State the letter that represents an element that

[i]Belongs to period 3
[2mks]

……

[ii]Belongs to group 2
[1mk]

……

[iii]Forms ions with a charge of +3
[1mk]

……

[iv]forms ions with a charge of +1
[1mk]

……

[v]Forms ions with a charge of -1
[1mk]

……

[b]What name is given the family to which elements K and W belong
[2mks]

……

……

……

[c]How does the following compare? Explain your answer

[i]Atomic radius P and U
[2mks]

……

……

……

……

……

[ii]Ionic and atomic radius of L
[2mks]

……

……

……

……

……

[iii]ionic and atomic radius of U
[2mks]

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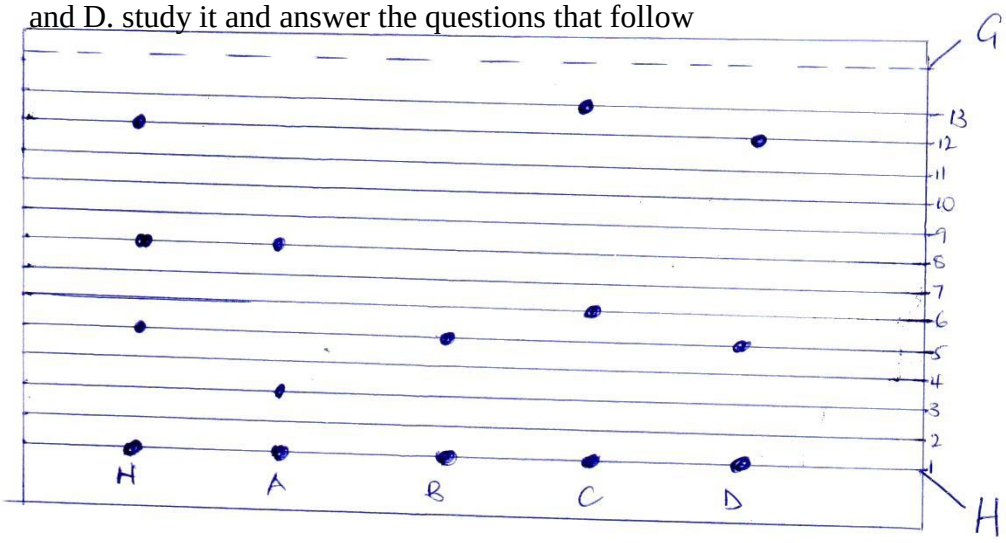
13.Form two students carried out paper chromatogram for mixture of K and substances A,B,C and D. study it and answer the questions that follow



[a]Label
[2mks]

[i]G……
….

[ii]H……
…

[b]What is the suitable solvent to use in this paper chromatogram
[1mk]

……
….

[c]Identify the substances present in mixture N
[3mks]

……

……
……

[d]Which of the pure substance was a compound of N
[1mk]

……
…

[e]State two factors that determine the speed by which a substance in a solution moves up the absorption paper
[2mks]

……

……

……
……

[f]State two application of paper chromatogram

[2mks]

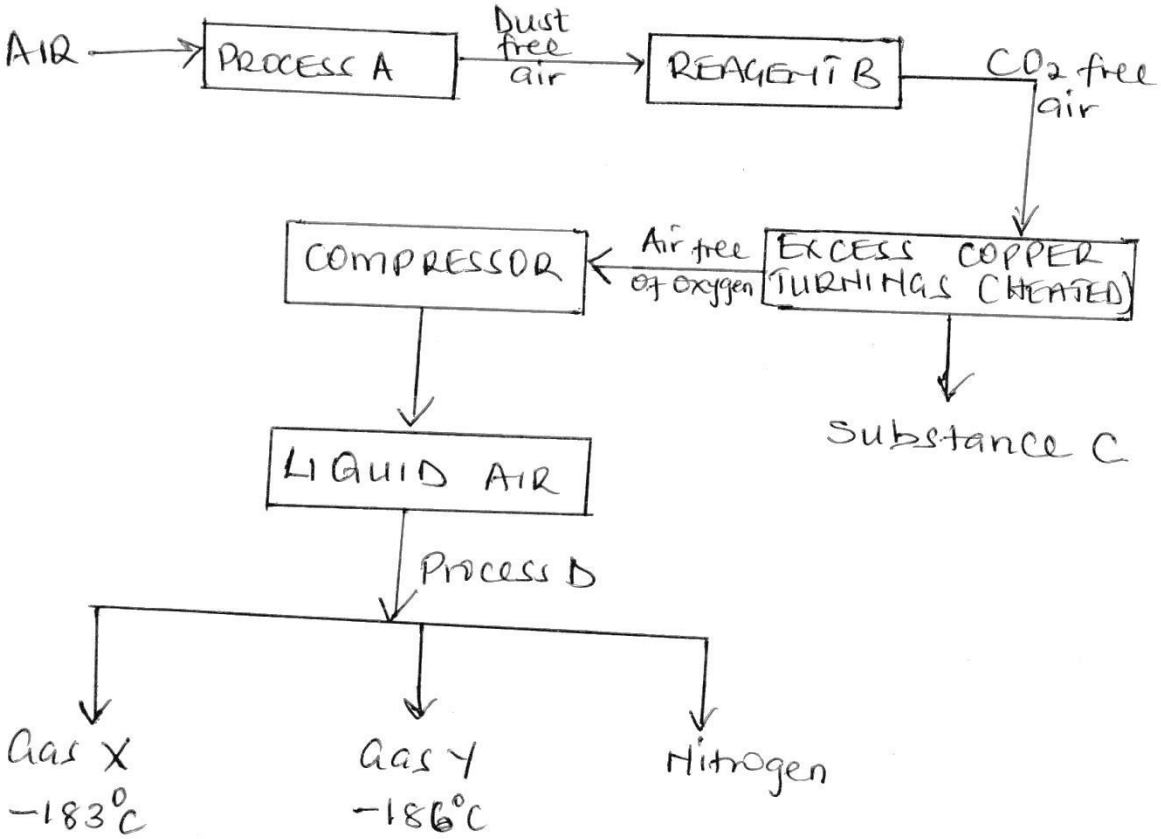
……

……

……

……

14.The chart below shows how the main components of air are separated. Study it and answer the questions that follow



[a]Identify

[i]Gas x ……

[1mk]

[ii]Gas y ……

[1mk]

[iii]The temperature at which Nitrogen is distilled out

…… [1mk]

[b]Name

i. Process A …….. [1mk]

ii. Reagent B …… [1mk]

iii. Substance C …… [1mk]

iv. Process D …… [1mk]

[c]What is the purpose of passing the air through compressor [1mk]

……

……

……

[d]Write the chemical equation of the reaction taking place when copper turnings are heated [1mk]

……

…

15.Study the table below and answer the questions that follow

ELEMENT	A	B	C	D	E	F	G
Atomic radius [nm]	0.156	0.136	0.125	0.110	0.110	0.104	0.099
Ionic radius[nm]	0.095	0.065	0.050			0.184	0.181
1^{st} ionization energy KJ/mol	492	743	790	791	1060	1063	1254
Melting point ^0C	97.8	650	660	1410	442	119	-101
Atomic number	11	12	13	14	15	16	17

[i]Explain why;

[a]A has a larger atomic radius than ionic radius
[1mk]

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[b]G has a smaller atomic radius than its ionic radius
[1mk]

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[c]Explain on the trend of melting point from A to C
[2mks]

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[d]Explain why D has the highest melting point [1mk]

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[e]Why is G having smallest atomic size [1mk]

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FORM 2 MID-TERM 2 EXAMS

CHRISTIAN RELIGIOUS EDUCATION

TIME 2 ½ HRS

NAME_____**CLASS**_____**ADMNO:** _____

DATE_____**SIGN**_____

Instructions to candidates:

1. ***This paper consists 6 questions***
2. ***Answer any 5 questions in the answer booklet provided.***

Questions	**1**	**2**	**3**	**4**	**5**	**6**
Marks						

1 a) Mention 6 plaques God sent to the Egyptians (6mks)

b) Describe how God prepared the Israelites for the making of the covenant at Mt. Sinai. Exodus 19 (8mks)

c) What do Christians learn about the nature of God from the exodus. (6mks)

2 a) Outline 6 duties of judges in Israel. (6mks)

b) List down the promises that God gave to King David through Prophet Nathan. (6mks)

c) Explain the 4 lessons that Christians learn from king Saul's failures. (8mks)

3 a) Write down 6 rules and regulations observed by expectant mothers in the traditional African society. (6mks)

b) Give reasons why children are important in the traditional African society. (7mks)

c) State 7 moral values that the youth are taught during initiation to adulthood in Traditional African society. (7mks)

4 a) List down 8 prophet Micah's prophecies about the messiah. (8mks)

b) What was the Jewish expectations of the messiah. (7mks)

c) State the role of the messiah according to prophet Isaiah. Isaiah 61:1-2 (5mks)

5 a) Give 6 reasons why Jesus accepted to be baptized yet he was sinless. (6mks)

b) Describe the temptations of Jesus in the wilderness. Lk 4: 1 -13 (8mks)

c) What lessons do Christians learn from the temptations of Jesus. (6mks)

6 a) Outline 6 characteristics of John the Baptist as given by angel Gabriel to Zechariah Lk 1 :13 – 18 (6mks)

b) Explain 4 differences between the annunciation of the birth of John and that of Jesus. (8mks)

c) How do Christians celebrate the birth of a newly born baby in the society today? (6mks)

HAPPY EASTER HOLIDAYS

FORM 2 MID-TERM 2 EXAMS

ENGLISH

TIME: 1 HOUR 30 MINUTES

NAME_____CLASS_____ADM NO:_____

DATE_____SIGN_____

ANSWER ALL THE QUESTIONS.

1. **Functional Writing _____ (20mks)**

a) Imagine that your brother just graduated from Egerton University and has requested you to design an invitation card that will be used to invite guests for his graduation party. Design the card.
(12mks)

b) Imagine that you are one of the invited guests but unfortunately you will not manage to attend the graduation party, write a letter declining the invitation.
(8mks)

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2. **Fill in the blank spaces with the most appropriate word. (10 mks)**

At home, Jennifer was getting uneasy. It was ……. late and yet Joseph had not returned home. ……..food was waiting for him……the fire. The fire was dwindling and she could not add more firewood……it lest there was not enough of it for the following morning. She ……..by the fire hoping that he …….come home the very next minute. In the end, she could not…….for him any longer. She went to bed. He would ……her up when he came. Sleep took her almost …….. . She did not wake up……..until morning.

3. **Identify the silent letters in the following words.** **(5mks)**
   a) Would –
   b) Debt
   c) Rhyme –
   d) Edge –
   e) Sketch –

ii) **in the following sentences state whether the word underlined has been used either as a verb or a noun.**
(3mks)

a) Kindly keep a <u>record</u> of all your books. …….

b) To always <u>conduct</u> yourself right is good. …….

c) After the heavy rains, the cattle keepers will get good <u>produce</u>. ……..

iii) Write the homophones of the following words. **(2mks)**

a) Quite –……..

b) Dairy -…….

FORM 2 MID-TERM 2 EXAMS

GEOGRAPHY

TIME: 2 HOURS 30 MINUTES

NAME_____CLASS_____ADM NO:____

DATE_____SIGN_____

SECTION A

1. a) What is the time at station Y 30°W when the time at point Z 20°E is 4.00 p. (2 mks)

_____

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_____

b) State three effects of the earth revolution. (3 mks)

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2. a) What are the effects on the shape of the earth by the following forces. (3 mks)

i) Centrifugal force

_____

ii) Centripetal force

_____

iii) Gravitation force

_____

b) Give the two reasons why the interior of the earth is still very hot. (2 mks)

_____

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_____

3. Stat three conditions for formation of dew. (3 mks)

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_____

4. State three characteristics of extrusive rocks. (3 mks)

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5. a) Give two reasons why it is necessary to study the plate tectonic theory. (2 mks)

_____

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b) Name two types of tectonic plate boundaries. (2 mks)

_____

_____

SECTION B

6. a) Name three types of maps studied in geography. (3 mks)

_____

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_____

b) State three ways of locating places on maps. (3 mks)

_____

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c) State three common types of marginal information found in the margin of a map sheet. (3mks)

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d) The following table shows rainfall and temperature of town X. Use the figures given to answer the questions that follow.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp (^{o}c)	23	24	26	28	29	28	26	26	26	30	28	25
Rainfall (mm)	3	0	3	1	18	500	720	408	300	70	15	0

Find:

i) The total annual rainfall. (2 mks)

_____

_____

_____

_____

ii) The wettest month. (1 mk)

_____

_____

iii) Annual range of temperature. (2 mks)

_____

_____

iv) Mean annual rainfall. (2 mks)

_____

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_____

v) The hottest month. (1 mk)

_____

e) Name two instruments which could have been used to collect data in the table above. (2 mks)

_____

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7. a) Apart from the rift valley, name three other relief features that were formed as a result of faulting. (3 mks)

_____

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_____

b) With the aid of well labelled diagrams describe how a rift valley is formed by tensional forces.

(8mks)

c) Students are planning to carry out a field study of a faulted landscape. State four reasons why it is important for them to carry out a pre-visit to the area of study. (4mks)

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8. a) i) Name three volcanic features found in the rift valley of Kenya. (3 mks)

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ii) State two negative effects of vulcanicity in Kenya. (2 mks)

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iii) Describe the characteristics of a composite volcano. (3 mks)

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b)i) Name two types of earthquake waves. (2 mks)

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ii) State five ways in which the earth's crust is affected by earthquake. (5 mks)

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9. a) What is a rock? (2 mks)

_____

_____

b) Classify the rocks listed in the table below. (5 mks)

Name of rock	**Class**
Marble	
Gneis	
Peridotite	
Sandstone	
Granite	

c) i) State two methods of estimating the age of rocks. (2 mks)

_____

_____

ii) State four factors that influence metamorphism in rocks. (4 mks)

_____

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d) State two characteristics of sedimentary rocks. (2 mks)

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10. a)i) Give two examples of non-metallic minerals. (2 mks)

_____

_____

ii) Name the minerals mined in each of the following places in East Africa. (3 mks)

I. Kereita in Limuru Kenya –

II. Geita in Tanzania –

III. Kilembe in Uganda –

b) Describe how shaft mining is carried out. (5 mks)

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c) Name three conditions necessary for the formation of petroleum. (3 mks)

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d) State two effects of mining on environment. (3 mks)

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FORM 2 MID-TERM 2 EXAMS

441/1 HOME SCIENCE THEORY

TIME: 2½ HOURS

NAME: _____ ADM NO: ____

CLASS: _____

DATE:_____

Section	Question	Maximum Score	Candidate's Score
A	1 - 18	40	
B	18	20	
C	19	20	
	20	20	
	21	20	
TOTAL		**100**	

SECTION A: Answer all the questions in this section.

1. State two reasons for keeping the pit latrine covered at the hole when not in use.
(2mrks)

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2. Give three reasons why kitchen refuse should be disposed off regularly.
(3mrks)

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3. Mention three sanitary practices necessary in life.
(3mrks)

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4. State three ways of caring for a washing machine.
(3mrks)

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5. State three factors which affect the efficiency of laundry detergent.
(3mrks)

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6. Give two reasons for use of bleaches in laundry.
(2mrks)

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7. Give two reasons for airing clothes and household articles after finishing.
(2mrks)

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8. Suggest three reasons for storing clothes and articles in storage facilities after ironing.
(3mrks)

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9. Giving reasons identify three fabrics which must be flat dried under the shade.
(3mrks)

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10. Give two reasons for removing stains before washing.
(2mrks)

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11. Identify two contagious diseases that affect our skin as a result of poor sanitation.
(2mrks)

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12. Explain three importance of environmental hygiene to a community.
(3mrks)

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13. State four precautions to observe when using a charcoal iron.
(4mrks)

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14. Explain other two methods of bleaching clothes other than using commercial bleaches.
(4mrks)

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15. Mention a condition that may be spread by sharing the following personal effects:

a) A comb.

(½ mrk)

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b) A toothbrush.

(½ mrk)

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SECTION B: (COMPULSORY). (20 marks)

16. You are preparing to go back to school after mid-term break.

(a) Explain how you would thoroughly clean your black canvas shoes which you will carry as you go back to school.
(10mrks)

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(b) Describe how to thorough clean a toothbrush.
(5mrks)

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(c) Describe how you would wash your white towel. (5mrk)

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SECTION C: Answer any two questions in this section.

(40marks)

17. (a) Give the functions of the following parts of a sewing machine. (10mrks)

(i) Spool pin
(ii) Balance wheel
(iii) Stop motion screw
(iv) Stitch length regulation
(v) Feed dog
(vi) Presser foot
(vii) Needle clamp
(viii) Tension disk
(ix) Take up lever
(x) Machine belt

(b) Identify the small sewing equipment with each of the following use:

(i) Used for measuring small width such as hem. (1mrk)

(ii) Used for marking pattern symbols.
(1mrk)
(iii) Used for hanging complete or nearly complete garments.
(1mrk)
(iv) Used for making holes and eyelets.
(1mrk)
(v) Used when fitting garments.
(1mrk)
(vi) For storing small needle work tools.
(1mrk)
(vii) For measuring long straight lines and for marking skirt length.
(1mrk)
(viii) Used to press work after every stage of construction.
(1mrk)

(c)Give two reasons for using a thimble when stitching.
(2mrks)

18. (a) State six practices that would help prevent loss of colour during laundry.
(6mrks)

(b) State six desirable qualities of a good clothes line.
(6mrks)

(c) State eight precautions to take to ensured water is safe from disease causing germs.
(8mrks)

19. (a) List six dangers on careless disposal of polythene bags.
(6mrks)

(b) Suggest six ways of preventing a knife from damage during its use and care.
(6mrks)

(c) State eight reasons why bar soap is commonly used in our houses.
(8mrks)

FORM 2 MID-TERM 2 EXAMS

KISWAHILI

KIDATO CHA PILI

MUDA: SAA 2

JINA……..DARASA……NAMBARI…….

TAREHE …….SAHIHI……

UFAHAMU (ALAMA 15)

Soma taarifa ifuatayo kisha ujibu maswali yanayofuatia.

Macho ya Abdul yalipigwa na mwali mkali wa jua la asubuhi. Ilikuwa ndiyo mara yake ya kwanza kuuona mwanga halisi wa ombwe lijiitalo dunia tangu alipohukumiwa kifungo gerezani. Punde tu komeo la mlango wa seli lilipofunguliwa, ilimlazimu Abdul ayafumbe macho kabla ya kuyafumbua tena taratibu ili yazoee mabadiliko yake.

Ilikuwa ndiyo siku ya Abdul ya kuachiliwa huru kutoka kwenye kifungo kirefu kilichoyapa macho yake mazoea ya giza la kaburi mle gerezeni. Macho yake yalipokwishaizoea ile hali na kumhakikishia kuwa kila alichokuwa akikiona si kizuka ila uhalisia, alipiga hatua. Akatoka nje ya mlango wa seli, kisha kwa kutoamini, akageuka nyuma kulitazama tena lile pango alimokuwa ametikwa katika muda huo wote. Akayafikicha macho kwa kutoamini huku machozi yakimdondoka asijue kama yalikuwa ya furaha au ya huzuni. Alipogeuka kuanza safari ya uhuru wake, macho yake yalikumbana na lango la gereza. Hapo, akasita kidogo, labda kuhakikisha kama kweli alikuwa huru. Bila shaka, hakuna askari wa gereza aliyemshikia bunduki au kumuamuru asimame. Walimtazama tu na kumpa tabasamu.

Taratibu, Abdul aliendelea kupiga hatua. Mhemko aliokuwa nao kutokana na hewa safi iliyompenya mapafuni uliufanya moyo wake upige kwa kasi. Ghafla, tabasamu ikapasua mashavuni pake. Akasita. Akaiinua pua yake iliyompa hakikisho kuwa uvundo na uozo wa seli haukuwa naye tena. Ingawa mwili wake ulijaa mabaka ya uchafu na matambara yaliyouficha uchi wake kuvunda, hilo halikumkera tena. Kwa hivyo, akatia tena tabasamu. Lake kuu lilikuwa shukrani kwa kuepuka yale madhila ya joto na rundo la wafungwa. Na kama hilo halikutosha, aligeuka tena ili sasa kuliangalia lile gereza. Bila kutarajia, alipiga magoti, akainua mikono kupiga dua, —Ewe Mungu, niepushe na balaa nyingine.

Safari ya Abdul kutoka katika majengo ya gereza ilikumbwa na mseto wa mawazo. Alipokuwa katika ujia uliomwelekeza katika barabara kuu, mambo mengi yalimpitikia mawazoni asipate jawabu. Hakujua kama wazazi wake walikuwa wangali hai, na kama walikuwa bado wanaishi katika nyumba ile ya kukodi kwa miaka hiyo kumi aliyokuwa jela. _Je, nikiwakosa, nitaenda wapi? Nitaanzia wapi kuwatafuta?‘ Mawazo hayo yaliifungua mifereji ya machozi, kisha ile ya makamasi. Balagha hiyo ilimfikisha katika kituo cha magari ya uchukuzi kwa ule aliouona kuwa muda wa kufumba na kufumbua. Aliyafuta machozi yake haraka kwa kiganja kisha akaziba tundu la pua, tayari kupenga kamasi. Hata hivyo, kabla hajafanya hivyo, nafsi yake ilimtahadharisha kuwa hatua hiyo ingekatiza uhuru aliopewa kwa kuchafua mazingira. Kwa hivyo akaghairi. Akavuta ncha ya shati lake na kuitumia kama hankachifu kutimiza azma yake.

Hapo kituoni, matatu iliyokuwa mbele ilikuwa na watu wachache. Abdi akaingia na kukaa upande wa kioo ambapo tafakuri nyingi zilimjia. Akakumbuka jinsi kesi yake ilivyoendeshwa kinyume kabisa na ukweli na hukumu kutolewa kinyume cha haki. Mimi Abdul, mtoto twaa tangu kuzaliwa kwangu hata mdudu sijawahi kumponda kwa udole wangu, ndiyo sasa nije kusingiziwa kuua mtu? Mungu wangu! Kwa nini dunia hii haina wema? Kwa nini wanaodaiwa kuwa wasomi hata wakapewa jukumu la kuwakilisha maslahi ya raia ndio wanaowadhulumu hao raia? Hivi, hata hukimu na tajiriba yake aliamua kufuatilia zile porojo za wanaojiita majasusi? Angeahirisha hukumu yake ili kufanya uchunguzi zaidi, bila shaka nisingepata mapigo na dhuluma hizo zote. Kwa kweli, hii ni dunia ya mwenye nguvu mpishe! Abdul alijisemea.

Maswali

(a) Kwa nini Abdul alifungwa? (alama 2)

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(b) Kwa kurejelea kifungu eleza mashaka katika asasi za kurekebisha tabia. (alama 4)

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(c) Ni kinyume kipi kinachoonekana katika kifungu hiki? (alama 2)

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(d) Ni mambo yapi yaliyomtia Abdul machugamachuga alipoachiliwa huru. (alama 2)

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(e) Abdul anaelekea kuwa na hulka gani? Fafanua kwa kurejelea kifungu. (alama 2)

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(f) Msamiati ufuatao una maana gani kwa mujibu wa kifungu hiki. (alama 2)

(i) Ombwe…….

(ii) Mhemko…….

MATUMIZI YA LUGHA **ALAMA 35**

a) Eleza tofauti kati ya sauti hizi. Alama 4

i) /y/ na /z/

……

……

ii) /t/ na /h/

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……

b) Andika katika ukubwa wingi. Alama 2

Ndovu amezaa ndama mkubwa sana.

……

c) Toa mfano wa neno lenye silabi ya konsonanti pekee alama 1

……

d) Akifisha alama 2

Tupa kifaa cha kunolea kisu na air conditioner huuzwa kwa bei ghali.

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e) Amrisha katika nafsi ya tatu wingi. Alama 2

Uandike insha ndefu.

……..

f) Badilisha sentensi hii katika usemi wa taarifa. Alama 2

“Itakubidi urauke alfajiri iwapo unataka kusafiri nami kesho,” mjomba alisema.

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g) Andika vinyume vya vitenzi katika sentensi ifuatayo. Alama 2

Chebet aliingia garini na kufunga kioo.

……

h) Viorodheshe vipashio vya lugha ukianza na cha juu Zaidi. Alama 2

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i) Ainisha mofimu katika: alama 3

Alinywewa maziwa

j) Tambua wakati na hali katika sentensi ifuatayo. Alama 3

Mhazigi atakuwa ameiunganisha mifupa iliyovunjika

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k) Unda nomino mbili kutokana na kitenzi ‘tahini’. Alama 2

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……

l) Neno hili limo katika ngeli gani? Alama 1

Kinda

……

m) Tumia nomino ya jamii badala ya maneno yaliyopigiwa mstari. Alama 1

Kundi la wachawi lilitiwa mbaroni jana.

……

n) Andika katika wingi alama 2

Mtoto wake alilelewa kwenye ukoo huu

……

o) Yakinisha alama 2

Wakulima wasipopalilia mahindi yao hawatapata mazao.

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p) Pambanua sentensi ifuatayo kwa kielelezo cha mstari alama 4

Mwanahamisi alilishona rinda lake vizuri.

q) Ainisha viambishi katika neno lifuatalo alama 3

Waliochezewa

ISIMUJAMII **ALAMA 10**

"…maandiko yanasema kwamba siku ya kiama tutapaa angani na mwenye uwezo."

a) Tambua sajili ya kauli iliyopo hapo juu. (alama 2)

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b) Kwa kutoa mifano mwafaka, taja sifa bainifu za sajili uliyoitambua hapo juu. (alama 8)

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FASIHI SIMULIZI **ALAMA 20**

a) Eleza sifa zozote tano za hadithi (alama 10)

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b) Eleza sifa za mtambaji bora wa ngano (alama 10)

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FORM 2 MID-TERM 2 EXAMS

INSHA

KIDATO CHA PILI

MUDA: DAKIKA 50

JINA……..DARASA……NAMBARI…….

TAREHE …….SAHIHI……

MAAGIZO

Insha yako isipungue maneno 300

Andika insha kuhusu jinsi ya kuhifadhi mazingira katika eneo gatuzi lenu. Alama 20

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FORM 2 MID-TERM 2 EXAMS

MATHEMATICS

TIME: 2 HOURS 30 MINUTES

Name: …….. Class: ……..….....

Date: …… Adm No: ……..

FOR EXAMINERS USE ONLY

SECTION I

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

SECTION II

Question	17	18	19	20	21	22	23	24	TOTAL
Marks									

GRAND TOTAL

SECTION I (50 MARKS)

Answer all the questions from this section

1. Work out the following, giving the answer as a mixed number in its simplest form

$$\frac{\frac{2}{5}\div\frac{1}{2}of\ \frac{4}{9}-1\frac{1}{10}}{\frac{1}{8}-\frac{1}{6}\times\frac{3}{8}}$$

(3marks)

2. When a certain number is divided by 30, 45, 54, there is always a remainder of 21. Find the least numbers.

(3marks)

3. Evaluate without using mathematical tables of a calculator,

$\frac{0.0084 \times 1.23 \times 3.5}{2.87 \times 0.056}$ expressing your answer as a single fraction.

(3marks)

4. Use logarithm to solve tables to evaluate (4 marks)

$\sqrt[3]{\frac{45.3 \times 0.00697}{0.534}}$

5. If each interior angle of a regular polygon is 150^0, how many sides does the polygon have?

(3 marks)

6. Solve for x in the equation

$32^{(x-3)} \div 8^{(x-4)} = 64 \div 2^x$ (3 marks)

7. Use reciprocal table to work out.

$$\frac{7}{0.5283} + \frac{0.5}{3.735}$$

(4marks)

8. Three pens and four exercise books cost sh. 87. Two pens and five exercise books cost sh.93. Find the cost of one pen and one exercise book.
(3marks)

9. A Kenyan Company received US dollars 100,000. The money was converted into Kenya Shillings in a bank which buys and sell foreign Currencies as shown below.

	Buying (kshs)	Selling (ksh)
1 US Dollar	77.25	77.44
1 sterling pound	119.93	120

a) Calculate the amount of money in ksh, the Company received.
(1mark)

b) The company charged the Kenya shillings calculated above into sterling pounds to buy Car in Britain. Calculate the cost of the car to the nearest sterling pounds.

(2marks)

10. A company saleslady sold goods worth sh. 1,600,000. From this sale she earned a commission of sh. 40,000.

a) Calculate the rate of Commission.
(1mark)

b) If she sold goods whose marked price was sh. 3 600,000 and allowed a discount of 2%, calculate the amount of commission she received.
(2marks)

11. A piece of metal has a volume of $20cm^3$ and a mass of 300g. Calculate the density of the metal in kg/m^3.
(3marks)

12. The area of a sector of a circle of diameter 126cm is 4158cm^2. Calculate the angle subtended at the centre of the circle. (Take pie =$\frac{22}{7}$)

(3marks)

13. Simplify completely by factorization. (3 marks)

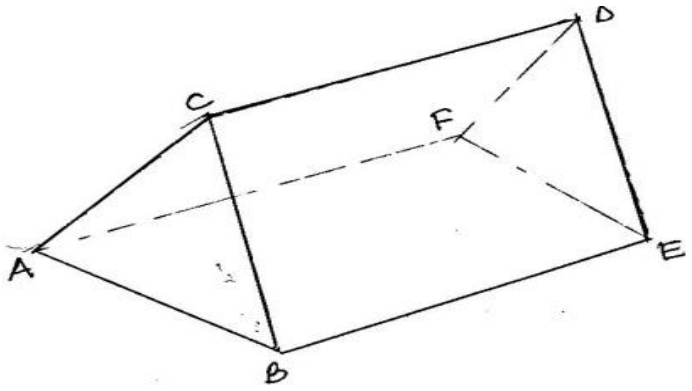
$$\frac{ax + bx + ya + yb}{ma + mb + na + nb}$$

14. Evaluate: $\frac{-12\div(-3)\times4-(-20)}{-6\times6\div3+(-6)}$ (3 marks)

15. Use the tables of cubes to evaluate: (3 marks)

$(3.461)^3 - \sqrt[3]{2809}$

16. The figure below is a prism whose cross-section is an equilateral triangle such that AB=BC=CA=3cm, BE=CD=AF=5cm



Draw the net of the prism

(3marks)

SECTION II (50 MARKS)

Answer five questions only from this section

17. A line L passes through point (-2,3) and (-1, 6) and is perpendicular to a line P at (-1, 6)

a) Find the equation of L.

(3marks)

b) Find the equation of P in the form ax + by = c.

(3marks)

c) Given that another line Q is parallel L and passes through point (1, 2), find the x and the y intercepts of line Q.

(2marks)

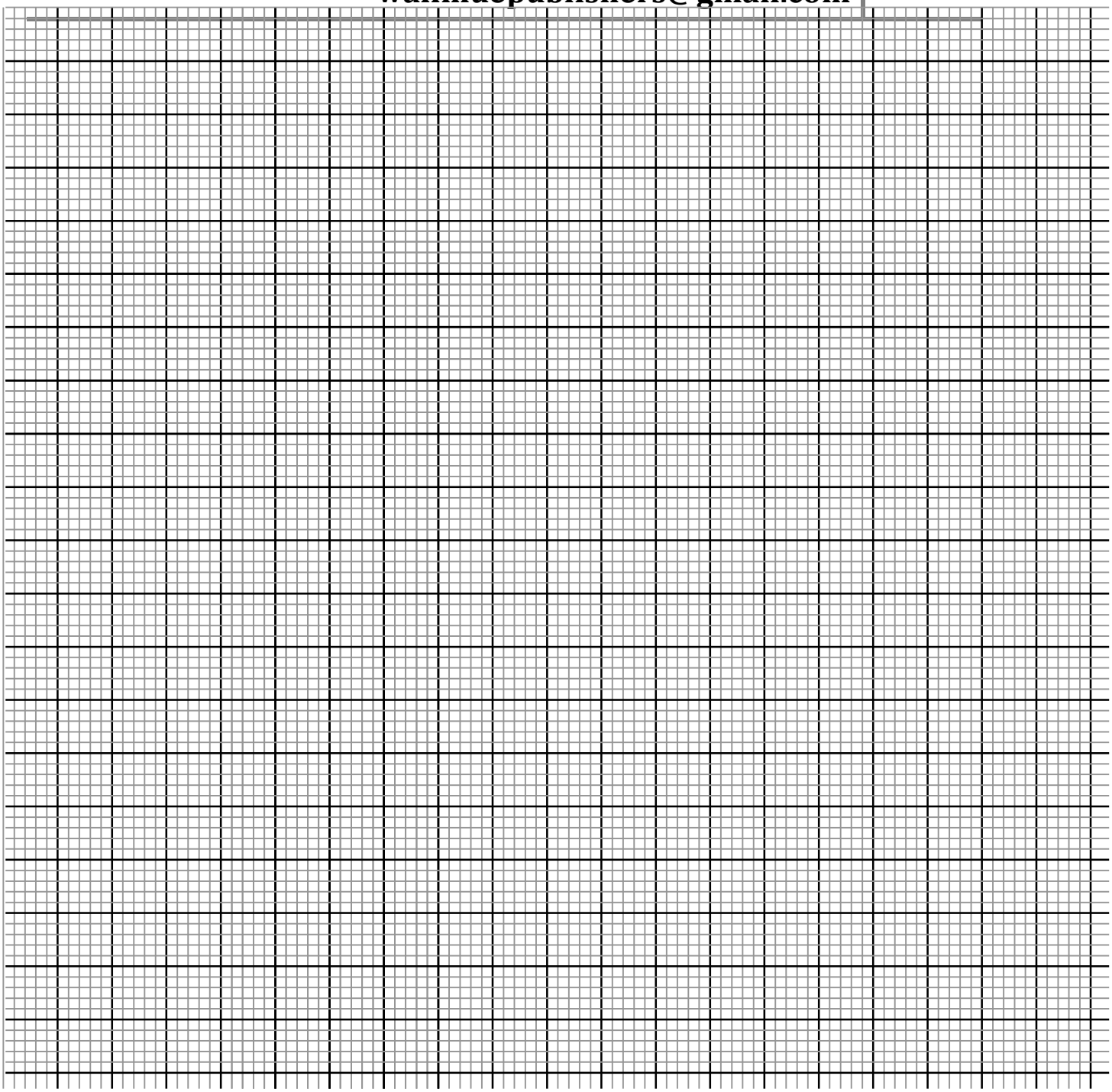
d) Find the point of intersection of lines P and Q.

(2marks)

18. Triangle PQR has vertices at P(2,3),Q(1,2) and R(4,1), while triangle $P^1Q^1R^1$ has vertices at $P^1(-2,3)$,$Q^1(-1,2)$, R^1 (-4,1).

(a) (i) Draw triangle PQR and $P^1Q^1R^1$ on the grid provided below

(2marks)



(ii) Describe fully a single transformation which maps triangle PQR onto triangle $P^1Q^1R^1$.

(1mark)

(b) (i) On the same plane, draw triangle $P^{11}Q^{11}R^{11}$ the image of PQR, under reflection

on line y + x = 0

(2marks)

(ii) Describe fully a single transformation which maps triangle $P^{11}Q^{11}R^{11}$ onto triangle

$P^1Q^1R^1$.

(1mark)

(c) Draw triangle $P^{111}Q^{111}R^{111}$such that it can be mapped onto triangle PQR by a positive quarter turn about the origin

(2marks)

(d) State all pairs of triangles that are oppositely congruent

(2marks)

19. A businessman sold a car at sh.900 000 after allowing his customer a 10% discount on the marked price of the car. In so doing he made a profit of 20%.

a) Calculate

(i) The marked price of the car. (3 marks)

(ii) The price at which the businessman had bought the car

(2marks)

b) If the businessman had sold the same car without giving a discount. Calculate the percentage profit he would have made.

(3 marks)

c) In the month of December the businessman sold 20 vehicles without giving a discount. Determine the total profit he received from the sale.
(2 marks)

20. Four towns A, B, C and D are such that town B is 180 km East of A. Town C is at a distance of 120km on a bearing of 300^0 from B. Town D is due West of C and North Of A.

(a) Using a scale of 1cm to represent 20km, make an accurate scale drawing to show the relative positions of the towns.
(4 marks)

(b) Find:

(i) Determine the bearing of C from A
(1mark)

(ii) Determine the distance of C from D (2 marks)

(iii) Determine the bearing of B from D (1 mark)

(iv) Determine the distance of A from D (2 marks)

21. The measurements (in metres) of a field were given in a field note book as follows:

Base line XY = 240m

	Y	
	150	50 to P
To Q 60	120	
	50	20 to M
	X	

(a) Using a scale of 1 cm to represent 20 m, draw an accurate map of the farm. (4 marks)

(b) **Find** the area of the field in hectares.

(4marks)

(c) If the farm is on sale at sh. 900 000 per hectare, find how much the farm costs. (2 marks)

22. Triangle ABC is such that AB = 7cm, angle ABC = 120^0 and angle BAC = 30^0.

(a) Using a ruler and a pair of compass only, construct triangle ABC. (3 marks)

(b) Measure the length of:

(i) Line BC (1 mark)

(ii) Line BC (1 mark)

(c) Drop a perpendicular from C to meet line AB extended at M. (2 marks)

(d) Measure the length of line CM (1 mark)

(e) Calculate the area of triangle ABC (2 marks)

23. A hollow metal pipe whose internal and external and internal diameters are 6.3cm and 2.8cm respectively is 3.5m long.

(a) Calculate the volume of the metal used to make the pipe. (4 marks)

(b) The pipe is melted down and recast into a solid cylinder of height 1.75m. Calculate the radius of the cylinder to two decimal places.

(4 marks)

(c) Given that the density of the metal above is 4.2g/cm^3, calculate the mass of the solid cylinder in kilograms. (2 marks)

24. Three business people Kamau, Gachui and Maina agreed to contribute Kshs. 1 210 000 to start a business. The ratio of Kamau's contribution to Gachui's contribution is 3 : 2 while that of Gachui to Maina is 1 : 3.

(a) Determine the ratio of Kamau's contribution to Maina's contribution. (2 marks)

(b) Determine the amount of money contributed by Kamau (2 marks)

(c) They agreed to share their profits as follows;
50% to be shared in the ratio of their contributions
40% to be retained for the running of the business
10% to be set aside for emergencies
If their total profit for the year 2014 was sh.704 000, determine the

(i) Amount of money retained for running the business. (2 marks)

(ii) The amount of money set aside for emergencies. (2 marks)

(iii) The amount of received by Gachui (2 marks)

FORM 2 MID-TERM 2 EXAMS

PHYSICS

2 HOURS

NAME_____CLASS_____ADM NO:_____

DATE_____SIGN_____

INSTRUCTIONS TO LEARNERS

1. This paper has two sections A and B. Answer all the questions in both sections.
2. Show your calculations in the spaces provided.
3. Take g = 10N/kg where needed to use it.

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1 - 12	25	
	13	7	
	14	4	
	15	6	
B	16	7	
	17	10	
	18	7	
	19	8	
	20	8	
	TOTAL SCORE	80	

SECTION A (25 MARKS)

1. State the basic law of magnetism (1 mk)

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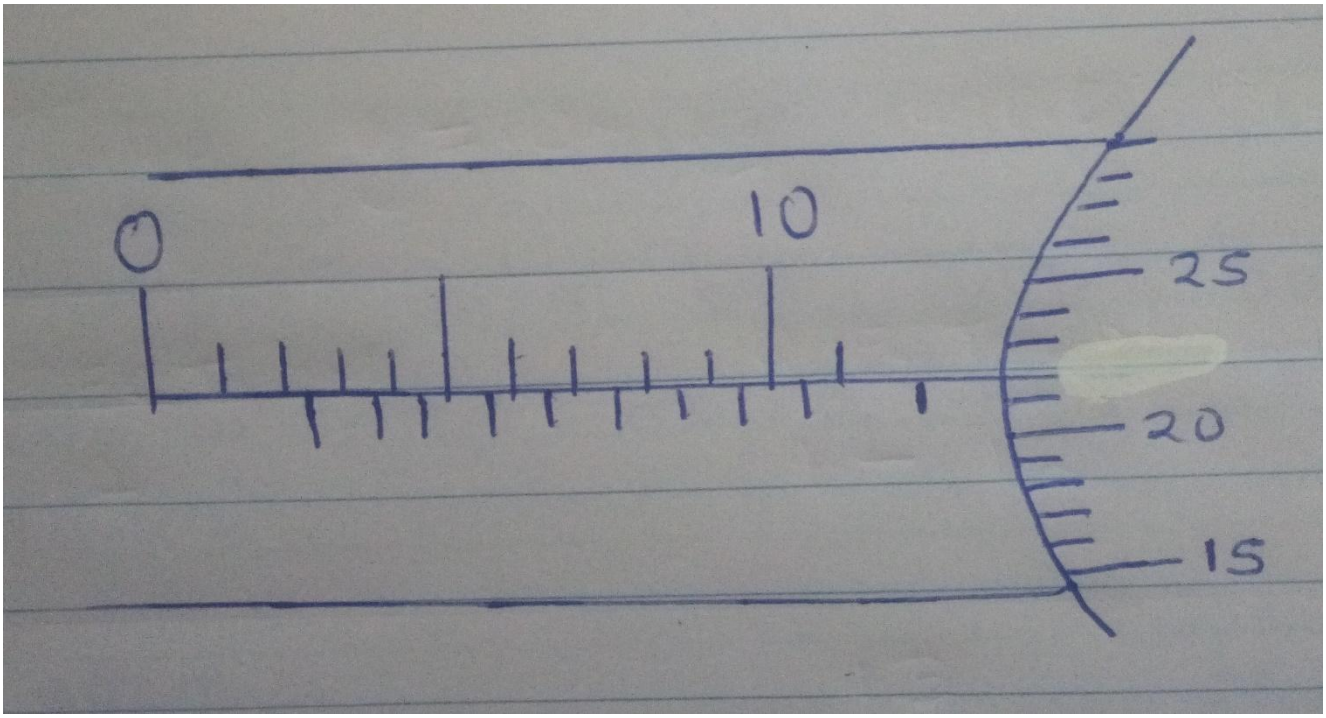
2. The figure below shows a micrometer screw gauge being used to measure the diameter of a ball

Bearing



The thimble scale has 50 divisions. What is the reading? (2 mks)

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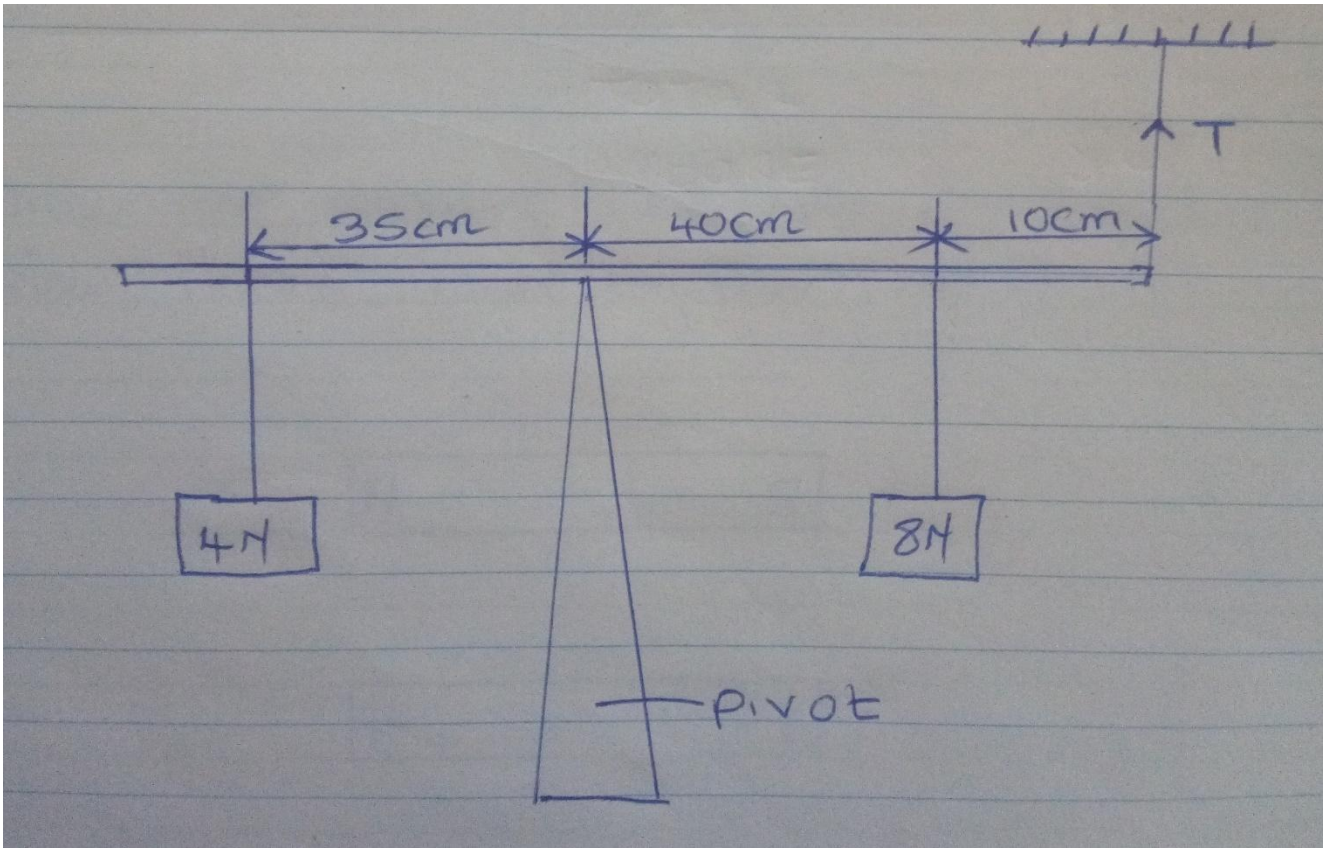
3. The figure below shows a uniform metal rod balanced at its centre by different force.



Determine the value of T (3mks)

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4. Give two reasons why when alighting from a moving bus a person has to spread out his legs.(2mks)

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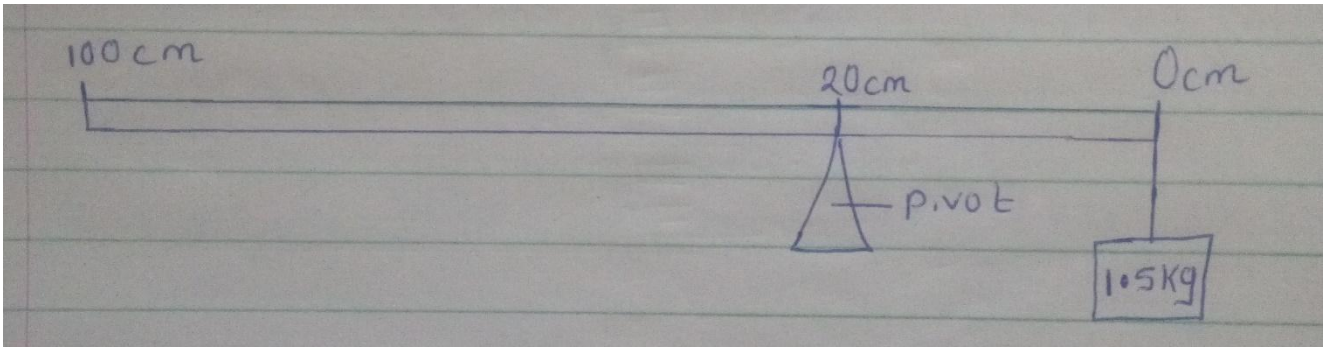
5. A uniform metal bar, 100 cm long balances at 20 cm mark when a mass of 1.5kg is attached at 0 cm mark.



Calculate the weight of the bar (g = 10 N/kg) (3mks)

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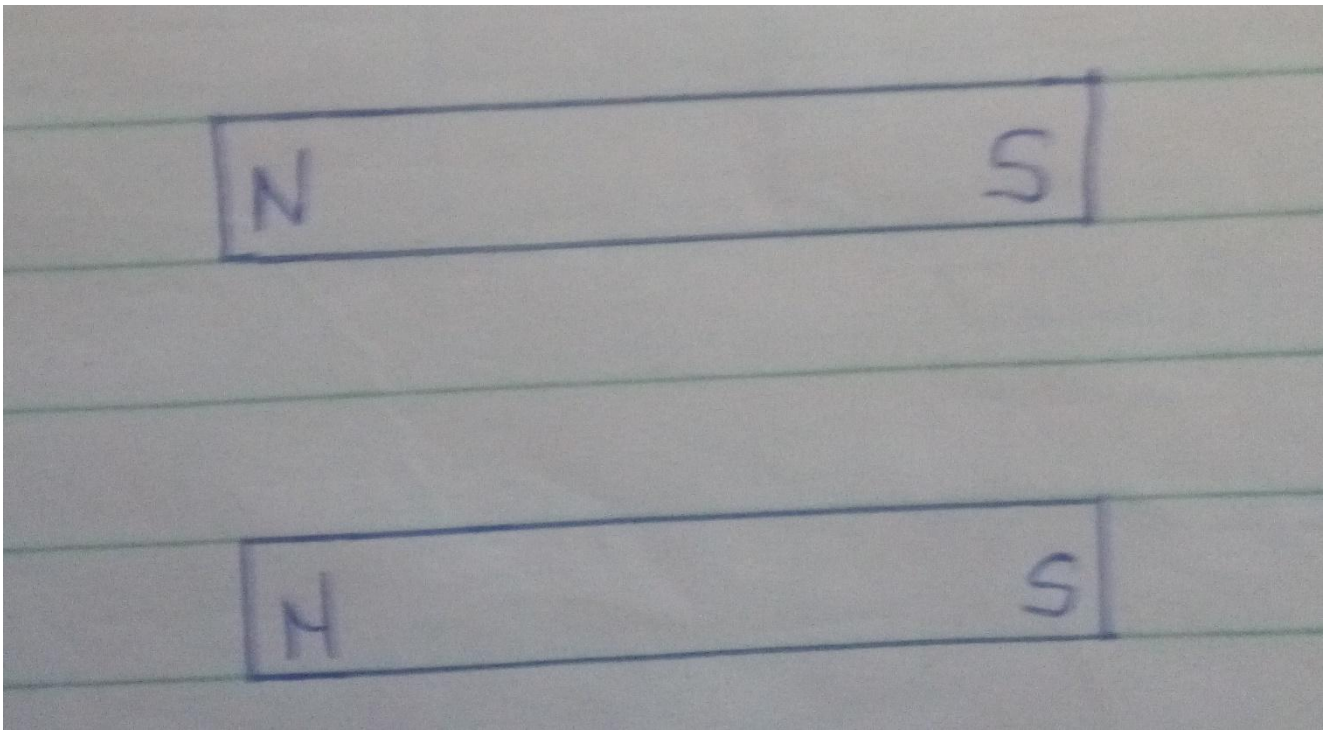
6. Draw the magnetic field pattern of the two magnets below placed close together.(2 mks)



7. Define polarization (1 mk)

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8. Give 2 uses of an electroscope. (2 mks)

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9. At what angle would two mirrors be inclined to form 17 images. (2 mks)

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10. What does formation of shadows show about light? (1 mk

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11. Explain why soft –board ceiling is better than concrete ceiling. (1 mk)

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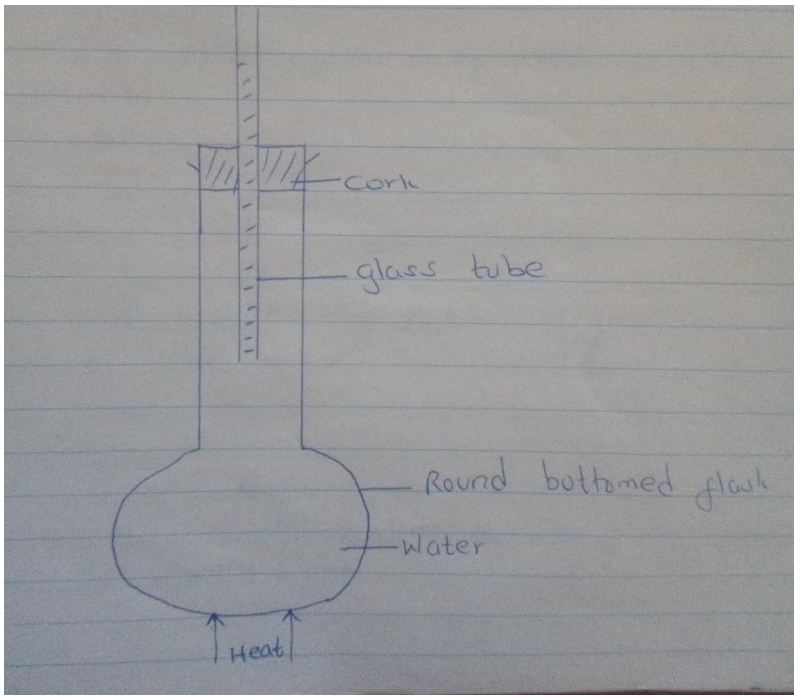
12. The figure below shows water in a flask



As it is heated, it is observed that the level of water in the glass tube falls slightly first then later starts

Rising.Explain (2 mks)

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SECTION B (55 MARKS)

13. A) State the kinetic theory of matter (1 mk)

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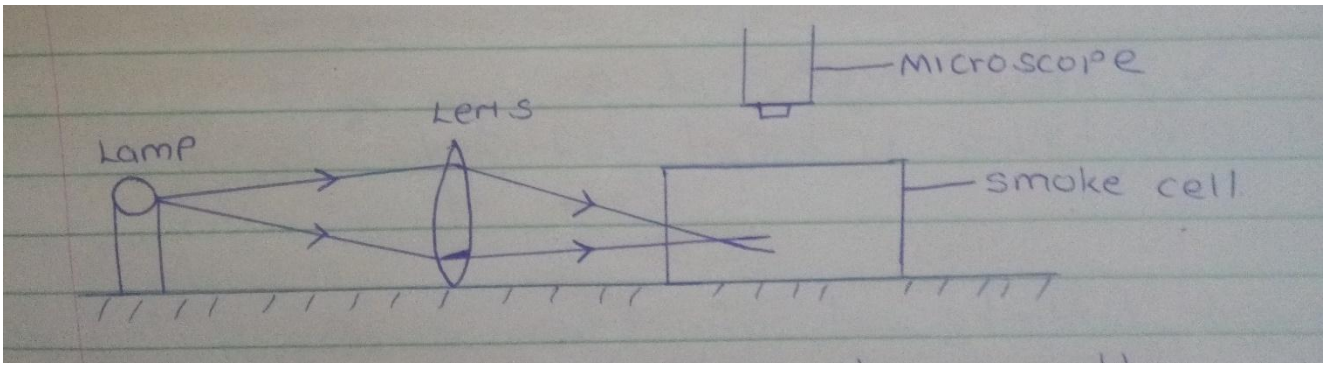
b) Brownian motion of smoke particles can be studied by using the apparatus shown in the figure below.

To observe the motion some smoke is closed in the smoke cell and then observed through the

Microscope.



Explain the role of each of these in the experiment.

i) Smoke particle (1 mk)

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ii) Lens (1 mk)

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iii) microscope (1 mk)

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c) State and explain the nature of the observed motion of the smoke particles.(2 mks)

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d) What will be observed on the motion of smoke particles if the temperature surrounding the smoke cell is raised. (1 mk)

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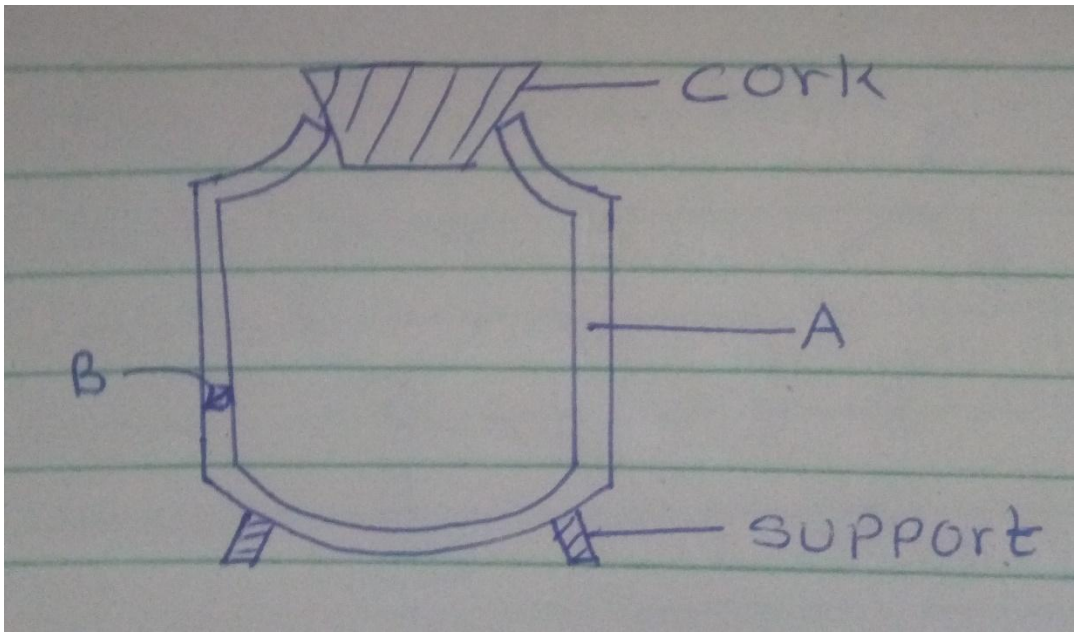
14. The figure below shows a cross section of a vacuum flask.



a) Name parts, labeled. (2 mks)

A.....

B.....

B) Boiling water is poured into two identical vacuum flasks A and B. Flasks A is partially filled while Flask

B is completely filled. Both are closed tightly. State with reasons the flask in which water is likely to have a higher temperature eight hours later. (2 mks)

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15. a) An uncharged metal rod brought close but not touvhing the cap of a charged electroscope causes a decrease in the divergence of the leaf. Explain. (2 mks)

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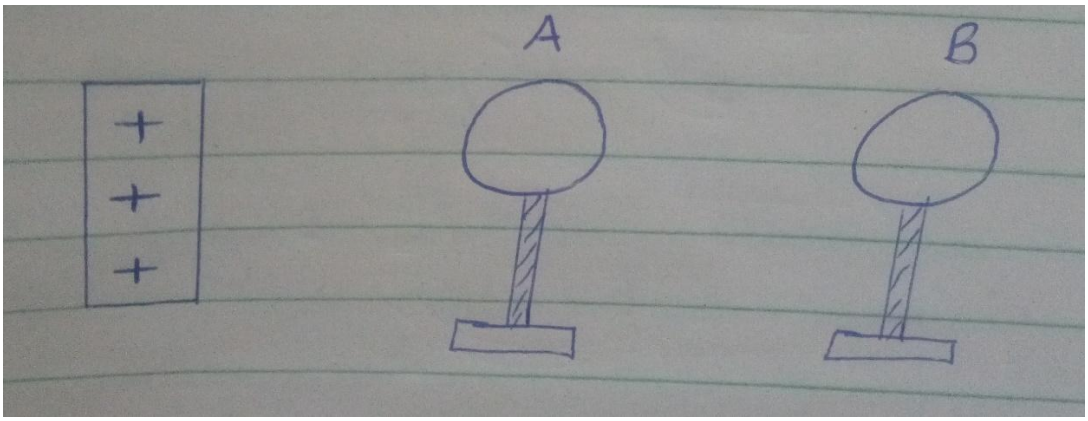
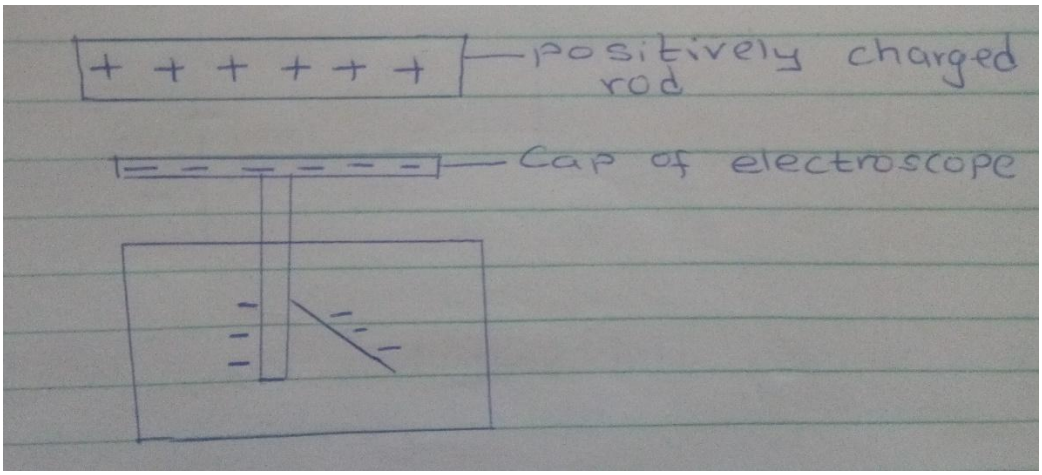
b) A positively charged rod is brought close to two spheres A and B, held by insulated handles as

shown below.



Indicate the charge on sphere A and B. (2 mks)

c) The figure below shows a highly positively charged rod being moved slowly downwards towards the cap of a negatively charged leaf electroscope. It is observed that the leaf initially falls then rises.



Explain this observation. (2 mks)

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16. a) State the right – hand grip rule. (1 mk)

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b) State and explain the functions of the keeper in storing magnets. (2 mks)

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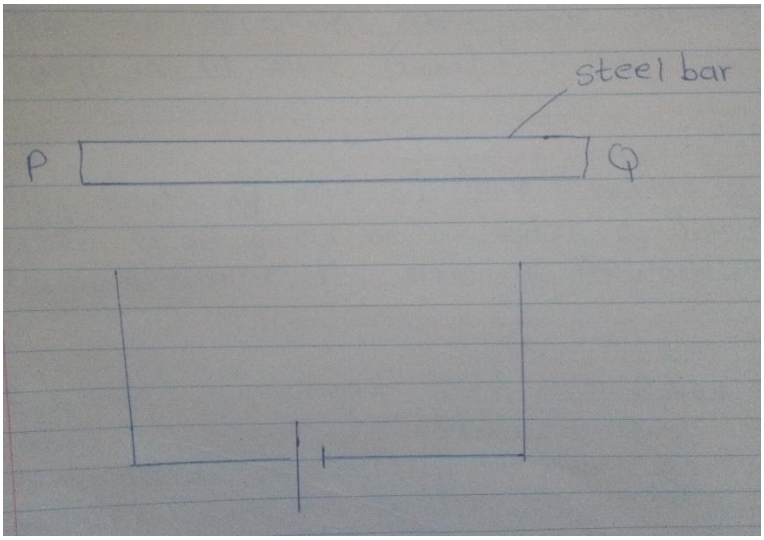
……c) The figure below shows a steel bar to be magnetized



Complete the circuit such that both poles P and Q acquire opposite polarity (North – South respectively) (2 mks)

d) Name 2 methods of magnetization of a magnetic material. (2 mks)

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17. a) A micrometer screw gauge which had an error of +0.02mm was used to measure the diameter

of a spherical marble. If the actual diameter was 3.67mm.

i) What was the reading indicated on the instrument. (2 mks)

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ii) Draw the micrometer screw gauge showing that reading in (i) above. (2 mks)

b) Fifty drops of olive oil have a volume of $1.0cm^3$. If a drop of oil forms an oil patch of diameter 20 cm, determine the size of the molecule. (3 mks)

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c) A burette was initially filled with a liquid of density 0.8g/cm^3 to 12ml. The liquid is allowed to run out for some time. If the volume of liquid removed from the burette has a mass of 14g. Determine the final reading on the burette. (3 mks)

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18. a) State the principal of moments (1 mk)

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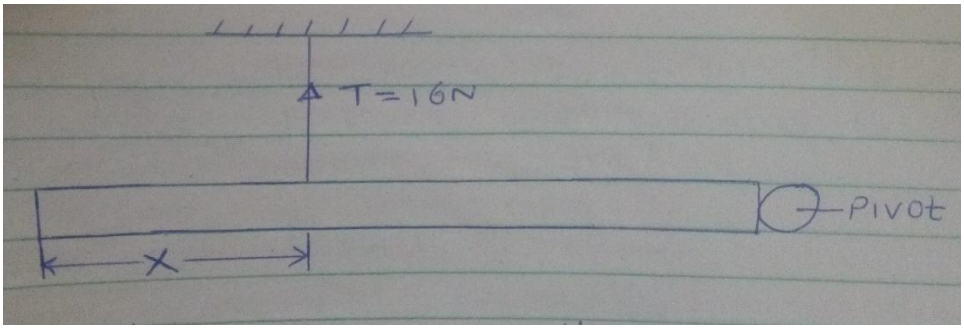
b) The figure below shows a uniform metre rule pivoted and supported as shown. If the mass of the rule is 2.4kg, Find the distance X.
(3 mks)

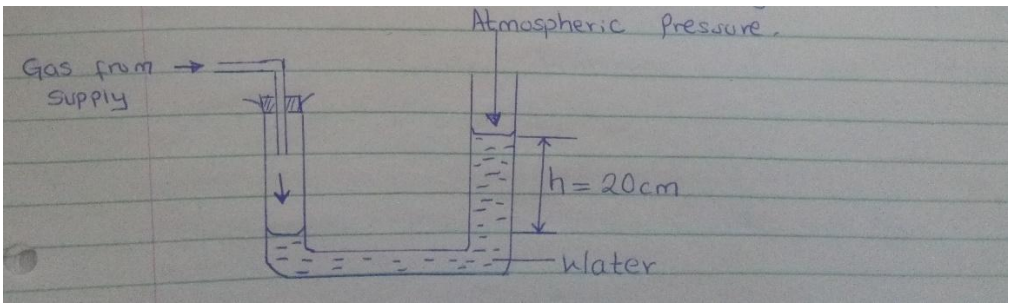


c) A solid weighs 18.5N on the surface of the moon.

The force of gravity on the moon is 1.7N/kg. Determine the mass of the solid.(3 mks)

19. Taking the density of water as 1000kg/m^3 and atmospheric pressure as 103,000 N/m^2,

Determine the pressure of the gas used. (3 mks)



b) State 2 factors that affect the pressure in liquids. (2 mks)

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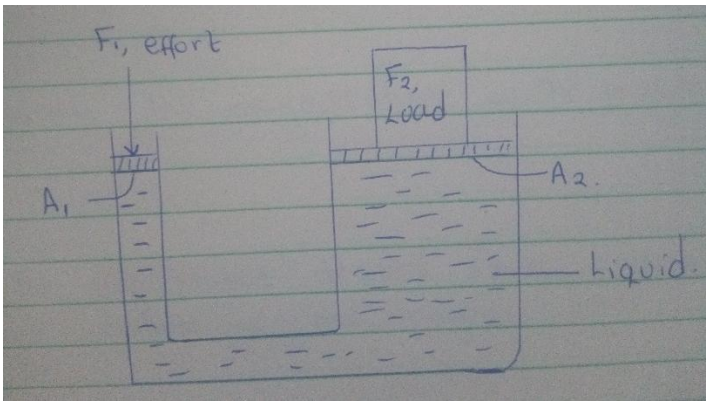
c) The figure below show a hydraulic lift If A, = 0.25m^2, A_2 = 10m^2 and F_1 is 100N. Determine F_2.

(3 mks)



20. a) Differentiate between luminous and non-luminous sources of light. (1 mk)

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b) Differentiate between transparent and translucent objects. (1 mk

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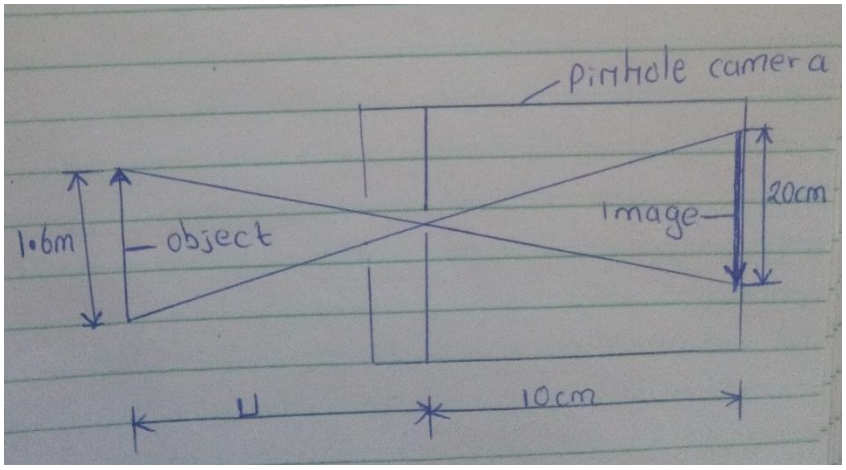
c) The figure below shows a pinhole camera.



i) At what minimum distance from pinhole must an object stand if a full length image is required.

(3 mks)

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ii) Determine the magnification of the image. (2 mks)

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iii) From the magnification obtained above comment on the nature of the image. (1 mk)

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FOR MARKING SCHEMES

CONTACT 0705525657