FORM 2 END TERM 2 SERIES 1 EXAMS

'an investment of knowledge pays'

For marking schemes,prefer calling Mdm Mariam:0746711892

Other available resources are;

- well summarised primary and secondary notes
- F1-F4 termly exams
- primary exams
- KCSE past papers
- KCPE past papers
- Mocks
- lesson plans
- schemes of work

Note:Exam questions are always free of charge

Marking scheme are not free

NAME……..…….. **CLASS**…….……

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FORM 2 END TERM 2 SERIES 1 EXAMS

AGRICULTURE EXAM
END OF TERM 2
FORM TWO
TIME:

Answer ALL Questions.

1. State **four** systems of farming. **(2mks)**

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2. **State two** effects of HIV/AIDS on agricultural production. (**2mks)**

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3. **List four** physical agents of weathering. **(2mks)**

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4. **List four** factors influencing soil formation. **(2mks)**

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5. Name **two** types of water pumps. **(2mks)**

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6. **Mention two** tertiary operations carried out during land preparation. **(1mk)**

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7. **Outline four** characteristics of a fertile soil. **(2mks)**

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8. **Give two** characteristics of plant used for preparing green manure. **(2mks)**

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9. **Differentiate** between a root stock and a scion as used in grafting. **(2mks)**

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10. Name **two** forms in which nitrogen is absorbed by plants. **(2mks)**

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11. State **two** deficiency symptoms of Nitrogen. **(2mks)**

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12. List **four** examples of phosphatic fertilizers. **(2mks)**

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13. A farmer was asked to apply fertilizers as follow: 200 kg/ha of DSP (40% P_2O_5), 150kg/ha of sulphate of ammonia 20% Nitrogen and 150kg/ha of Muriate of Potash 60% K_2O)

a) How much P_2O_5 did the farmer apply per ha. **(2mks)**

b) How much K_2O did the farmer apply per ha. **(2mks)**

c) How much nitrogen did the farmer apply per/ha. **(2mks)**

14. State two methods of pH testing. **(2mks)**

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15. Outline four disadvantages of mulching in crop production. **(2mks)**

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16. List **3** factors that determine the time of harvesting farm produce. **(3mks)**

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17. State **four** post harvesting practices. **(2mks)**

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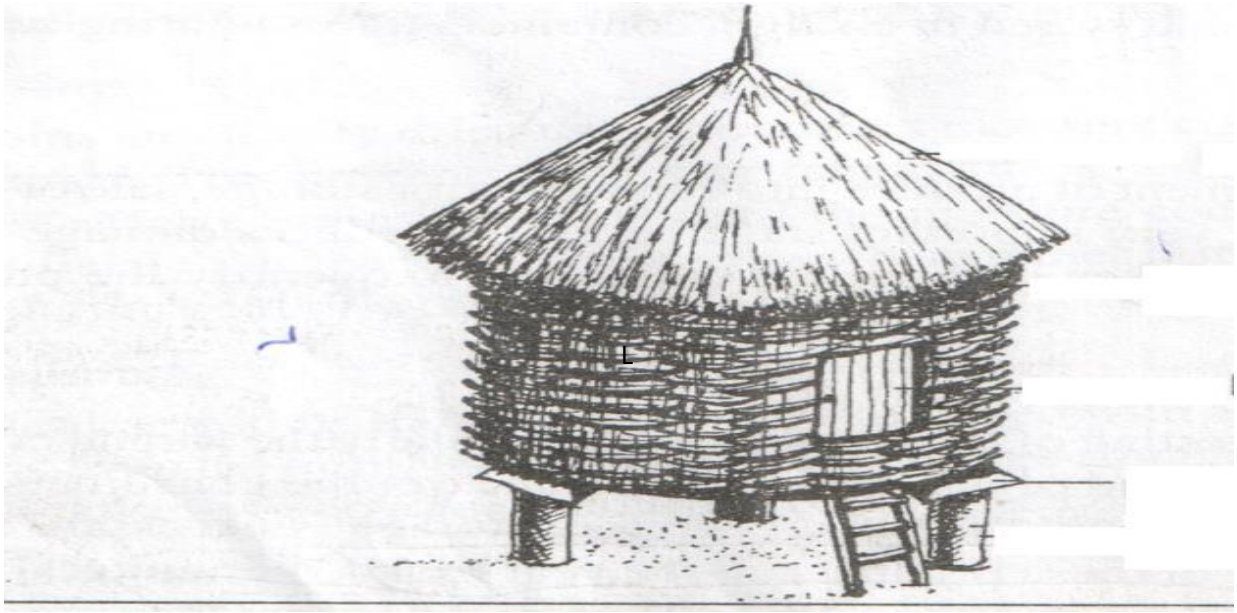
18. The diagram below shows a type of storage facility. Use it to answer question that follow.



a) Name the structure. **(1mk)**

……

b) Name part **L** and state its function. **(2mks)**

……

c) Name the roofing material the structure is made of: **(1mk)**

……

d) List **three** limitations of the above structure. **(3mks)**

……

……

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……

e) Give **two** preparations that the farmer should make on the above structure before the crop produce is brought in. **(2mks)**

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19. Give **four** categories of vegetables. **(2mks)**

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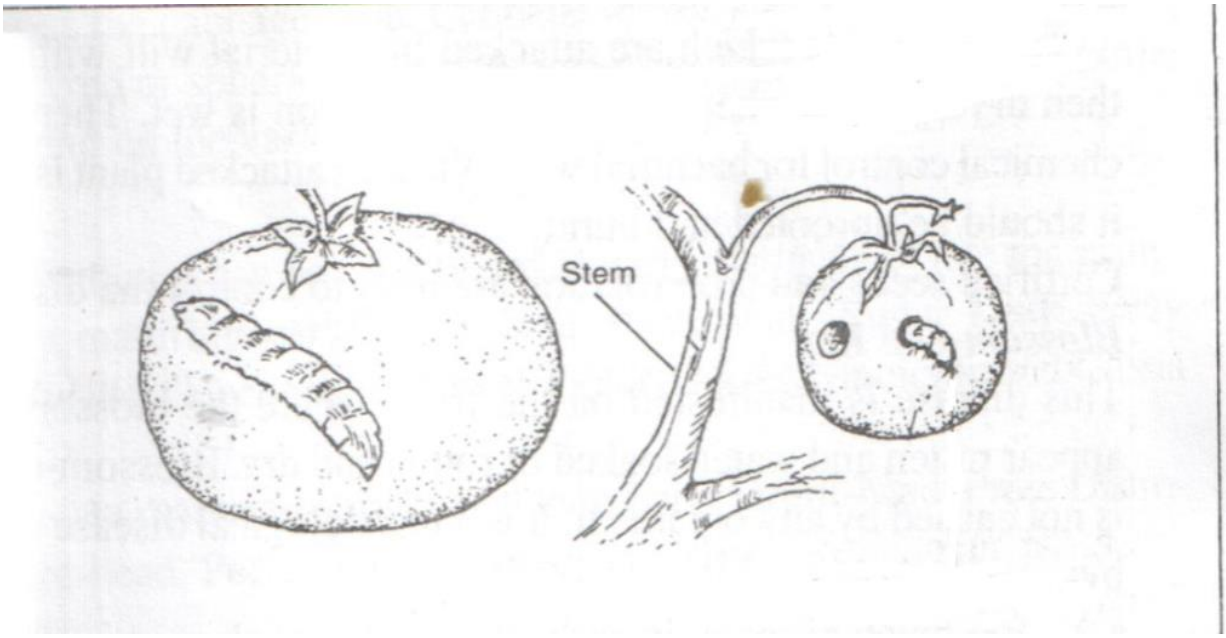
20. The diagram below represents a pest that attacks tomatoes.



i) Identify the pest. **(1mk)**

……

ii) State **two** control measures of the above pest.
(2mks)

……
……

21.(a) Differentiate between health and disease as used in livestock health.
(2mks)

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(b) **State four** factors that predispose livestock to diseases. **(4mks)**

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(c) **Outline 3** routine management practices of disease control. **(3mks)**

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(d) State **three** activities in livestock health that necessitate handling of animals.
(3mks)

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22.(a) List **two** harmful effects of tsetsefly infestation to livestock. **(2mks)**

……

……

(b) Name:

i) Intermediate host for tapeworm. **(1mk)**

……

ii) Intermediate host for liverfluke. **(1mk)**

……

(c) Give **two** examples of one host tick. **(2mks)**

……

……

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FORM 2 END TERM 2 SERIES 2 EXAMS

BIOLOGY

FORM 2

1. (i) What is respiration? **(1mk**)

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……

(ii) State any **two** importance of respiration. **(2mks)**

……

……

2. (**a) (i) Name** the blood vessel that supplies the cardiac muscles with its requirements**.(1mk)**

……

……

(ii) State the corgenical defect of the above blood vessel resulting from prolonged large intake of cholesterol in the blood. **(1mk)**

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……

(b) What is the importance of the thicker muscular wall of the left ventricle of a mammalian heart**? (2mks)**

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……

3. (a) (i) Name the respiratory surface in insects. (1mk)

……

(ii) State any **one** feature that adapts the structured named in a (i) above to its functions**. (1mk)**

……

iii) Why are the fish gills highly vascularized? **(1mk)**

……

……

4. a) (i) what would happen if a person secreted less A.D.H? **(1mk)**

……

……

(ii) Name the condition described in a(i) above. **(1mk)**

……

(b)What is the role of the loop of Henle in homeostasis? (**1mk)**

……

5. (a) Name the products of anaerobic respiration in plants. **(1mk)**

……

(b) Give any **two** economic importance of the products named in (a) above. **(2mks)**

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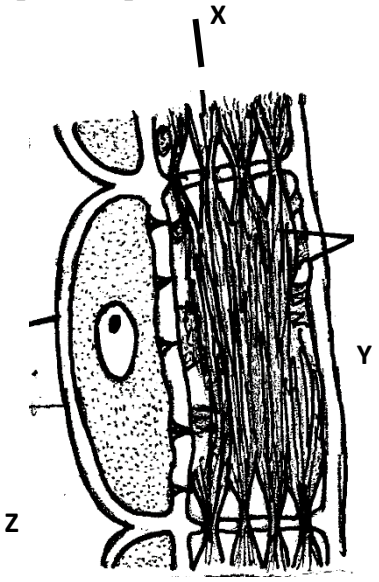
6. The diagram below illustrates part of phloem tissue.



(a) Name the parts labeled. **(2mks**)

X……

Y……..

(b)State the function of the part labeled **Z** **(1mk)**

……

7. Name the monosaccharides that make up the disaccharides below

(a) Sucrose **(1mk)**

……

(b) Lactose **(1mk)**

……

(c) Maltose **(1mk)**

……

8. State **one** use of the following excretory products of plants **(2mks)**

(i) Latex

……

(ii) Colchicine

……

9. (a) Define respiratory quotient **(1mk)**

……

……

(b) Given the equation below, calculate the respiratory quotient (RQ) **(2mks)**

$C_6H_{12}O_6+6O_2 \longrightarrow 6H_2O+6CO_2+2880kJ$

10. State the importance of the following

(i) Reversed stomatal rhythm to desert plants **(1mk)**

……

(ii) Closing of stomata on a hot dry sunny day **(1mk)**

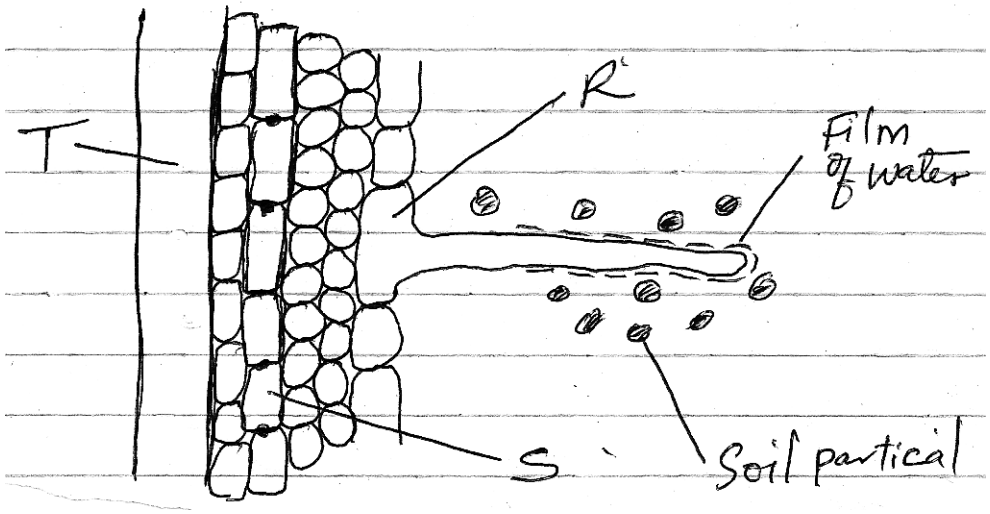
……

(iii) How does wind affect transpiration rate? **(1mk)**

……

……

11. The diagram below represents the pathway of water from soil into the plant.



i. Name the structures labeled T and S.

T:……(1mk)

S:……(1mk)

ii. State **<u>two</u>** ways in which the structure labeled R is adapted to its functions. **(2mks)**

……

……

12. A student added equal amounts of blood to equal volumes of salt of different concentrations. She observed and counted the red blood cells at the beginning of the experiment and at end of the experiment. The results were as shown:-

Set up	Concentration of salt	Begining	After 30 mins
A	0.1 mol	500	500
B	0.01 mol	500	250

Account for the results in:

a) Set up A **(2mks)**

……

……

b) Set up B **(2mks)**

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……

13. Below is a dental formula of certain organisms. Use it to answer the questions that follow.

$I\ ^{0}/_{3}$, $C\ ^{0}/_{1}$, $PM\ ^{3}/_{2}$, $M\ ^{3}/_{3}$

(i) Calculate the total number of teeth in the mouth of the organisms. **(2mks**)

(ii) Name the organisms. **(1mk)**

……

(iii) Identify the mode of nutrition of the organisms. **(1mk)**

……

(a) Give a reason why glucose does not normally appear in urine even though it is filtered in mammalian Bowman's capsule. **(2mks)**

……

……

(b) Which hormones are involved in the salt-water balance in human body? **(2mks**)

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……

14. **a)** State **<u>two</u>** functions of the blood other than transport. **(2mks)**

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……..

(b) Name **<u>one</u>** defect of the circulatory system in humans. **(1mk)**

……

15. (a) State **<u>two</u>** ways in which human body is naturally protected against harmful bacteria. **(2mks)**

……

……

(b) State **<u>one</u>** way in which the composition of blood in the pulmonary artery and that of pulmonary vein differ. **(1mk)**

……

16. Describe the path taken by Carbon (IV) Oxide released from the tissues of a cockroach into the atmosphere. **(2mks)**

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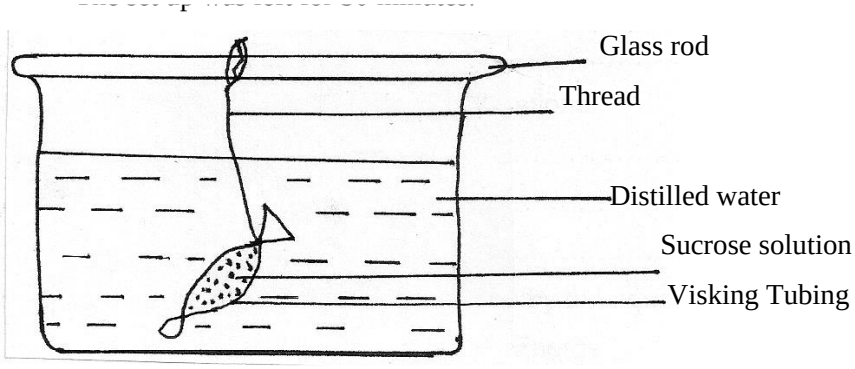
……

17. Form One student set up an experiment shown below to investigate a certain physiological process. The set up was left for 30 minutes.



a)Name the process under study. **(1mk)**

……

b) State the expected results after 30 minutes. **(1mk)**

……

c) Explain your answer in (b) above. **(3mks)**

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……

18. Explain why it is important to stain specimen to be observed under a light microscope. **(2mks)**

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19. What is wilting? **(2mks)**

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20. State the significance of the following steps while testing for disaccharides in food sample.

(a) Addition of dilute hydrochloric acid

……

……

b) Addition of sodium bicarbonate.

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……

21. a) (i) Name the fluid produced by sebaceous gland. **(1mk)**

……

(ii) State **two** function of the fluid named in 5 a) (i) above. **(2mks)**

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b) Explain malpighian layer of the skin is adapted to perform its function. **(1mk)**

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22. Outline **three** functions of colon. **(3mks**)

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23. Explain four reasons why the study of biology is important **(4mks)**

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

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NAME…….. CLASS…….……..

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FORM 2 END TERM 2 SERIES 1 EXAMS

BUSINESS STUDIES
FORM 2
TIME: 1 ½ HOURS

Instructions.

Answer all the questions in the spaces provided.

1.State **Four** reasons why it is difficult to satisfy human wants. (**4mks)**

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2.State any **Five** clauses contained in the memorandum of association. **(5mks**)

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3.State the nature of the following production activities (**4mks)**

Activity	Nature
(a)Flour milling	
(b)Bread baking	
(c)Cloth making	

(d)Cotton ginning	

4.State **Four** situations that indicate existence of a business opportunity. **(4mks)**

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5.Highlight any **Four** roles that are played by ethics in businesses. **(4mks)**

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6.Identify **Four** roles that equipments play in an office. **(4mks)**

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7.Outline **Four** circumstances under which a partnership may be dissolved. **(4mks)**

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8.State **Three** ways in which government may regulate business activities. **(3mks)**

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9.**Outline** the sources of capital for co-operatives. **(4mks**)

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10. Highlight **Five** factors to be considered when selecting office equipment. **(5mks)**

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11.**Highlight** the contents of articles of association. **(4mks)**

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12.Give **Four** essential elements of transport. **(4mks)**

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13.Highlight **Five** importance of transport to business. **(5mks)**

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14. Highlight **Four** reasons for studying business studies in Kenya. **(4mks)**

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15.Name **Four** accounting documents that are used in home trade.

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16. Identify **Four** elements of effective communications. **(4mks)**

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17.Identify **Four** common means of verbal communication. **(4mks)**

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FORM 2 END TERM 2 SERIES 1 EXAMS

CHEMISTRY
FORM 2
TIME: 2 HOURS

INSTRUCTIONS TO STUDENTS

1. *Answer all questions in this question paper.*
2. *All your answers must be written in the spaces provided in this question paper.*

Question	Maximum score	Candidates score
1-15	**70**	

1. Define the following terms:

a) Atomic Number **(1mk)**

……

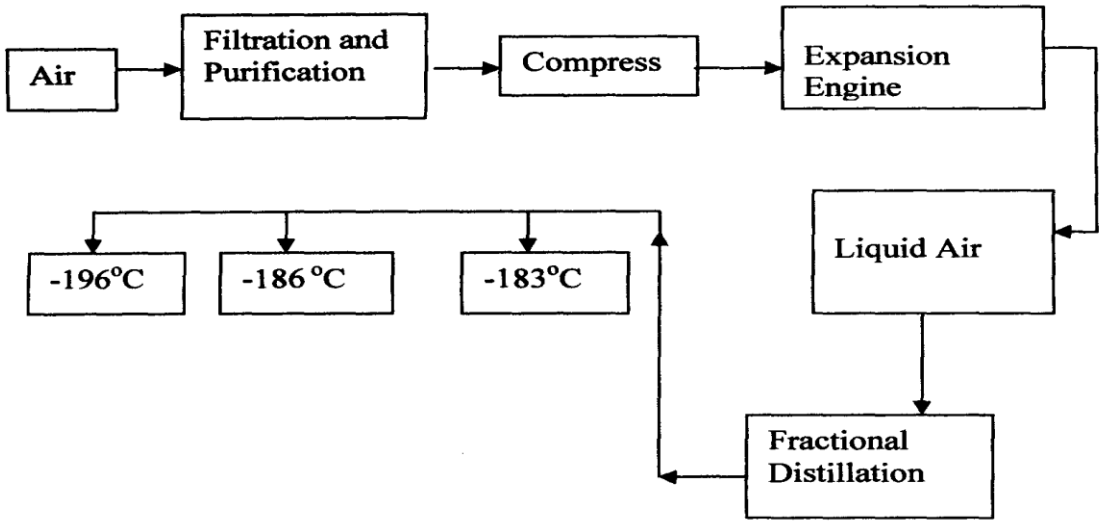
b) Mass Number **(1mk)**

……

c) The Isotopes **(1mk)**

……

2. Oxygen is obtained on large scale by the fractional distillation of air as shown on the flow chart below.



a) Explain why air is considered as a mixture **(1mk)**

……

b) Identify the substance that is removed at the filtration stage **(1mk)**

……

c) Explain why Carbon (IV) oxide and water are removed before liquefaction of air. **(1mk)**

……

d) Identify the component that is collected at -186°C **(1mk)**

……

3. Study the table below and answer the questions that follow:-

Substance		A	B	C	D	E	F
Melting Point (°C)		801	113 OR 119	-39	5	-101	1356
Boiling point (°C)		1410	445	457	54	-36	2860
Electrical Conductivity	Solid	Poor	Poor	Good	Poor	Poor	Poor
	liquid	Good	Poor	Good	Poor	Poor	Poor

Identify with reasons the substances that:

(i) Have a metallic structure **(2mks)**

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……
……

(ii) Have a molecular structure **(2mks)**

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……
……

(iii) Substances A and C conduct electric current in the liquid state. State how the two substances differ as conductors of electric current **(2mks)**

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……

4. Atoms of element X exists as $^{14}_{6}X$ and $^{12}_{6}X$

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

……

(b) Use dot (·) and cross (x) diagrams to illustrate the atomic structure of $^{14}_{6}X$ **(2mks)**

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5. Give two reasons why most laboratory apparatus are made of glass. **(2mk)**

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6 . Define the following terms:

I. A saturated solution. **(1mk)**

……

II. Crystallization. **(1mk)**

……

a) Describe how copper (II) sulphate crystals can be obtained from copper (II) sulphate solution. **(3mks)**

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b) Study the table below and use it to answer the questions that follows. Letters are not the actual symbols of the elements

Ion	Electronic configuration
L^-	2,8,8
M^{2+}	2,8
N^{3+}	2,8,8

(a) Which elements belong to the same period of the periodic table**?** **(1 mark)**

……

(b) Which elements belong to the same period of the periodic table**?** **(1 mark)**

……

(c) What is the formula of the compound formed by L and N.? **(1 mark)**

……

(d) Compare the atomic and ionic radii of element L. **(1 mark)**

……

c) Write the chemical fomular of the following compounds. **(3mks)**

a. Sodium sulphate

……

b. Magnesium hydroxide

……

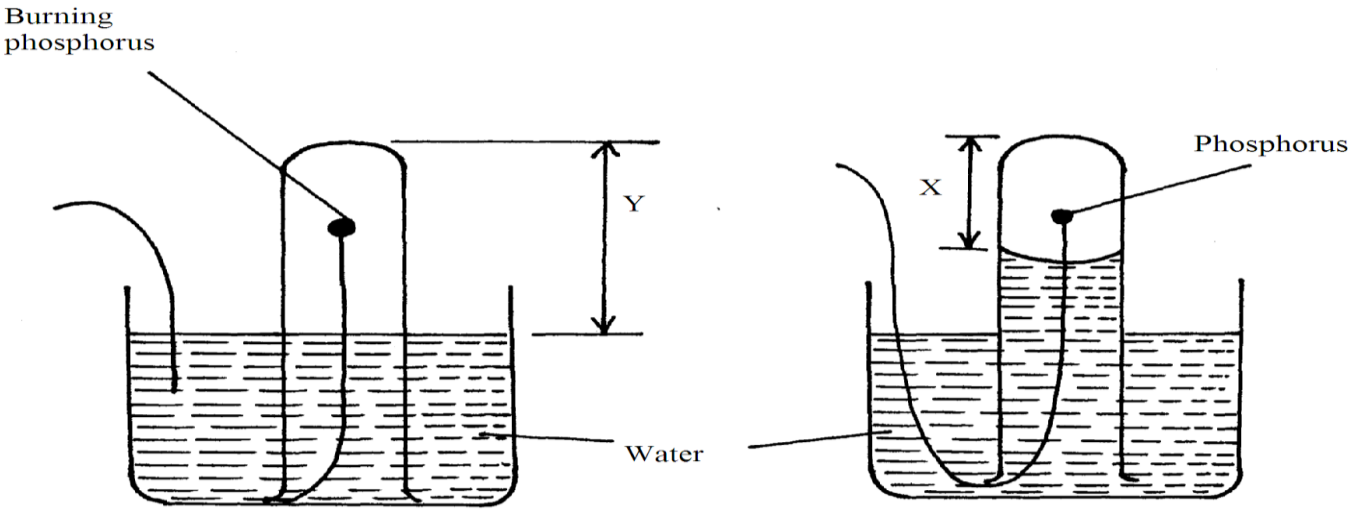
c. Calcium nitrate.

……

d) State the reasons why carbon (iv) oxide is used by ice cream venders instead of ordinary ice. **(2mks)**

……
……

e) A student set-up the apparatus below in order to determine the percentage by volume of oxygen in air.



AT BEGINING

AT END

a) Why did water rise when the reaction had stopped? **(2mks)**

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……

b) The student wrote the expression for the percentage by volume of oxygen in air as

$$\frac{y-x}{y} x100\%$$

Why was the volume of oxygen calculated using the above expression incorrect?

(1mk)

……

……

c) What should have been done after the reaction had stopped in order to get a correct volume.

(1mk)

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……

f) Explain how you would obtain solid lead carbonate from a mixture of lead carbonate and sodium chloride.

(3mks)

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13. Aluminium metal is a good conductor and is used for overhead cables. State any other **two** properties that make aluminium suitable for this use.

(2mks)

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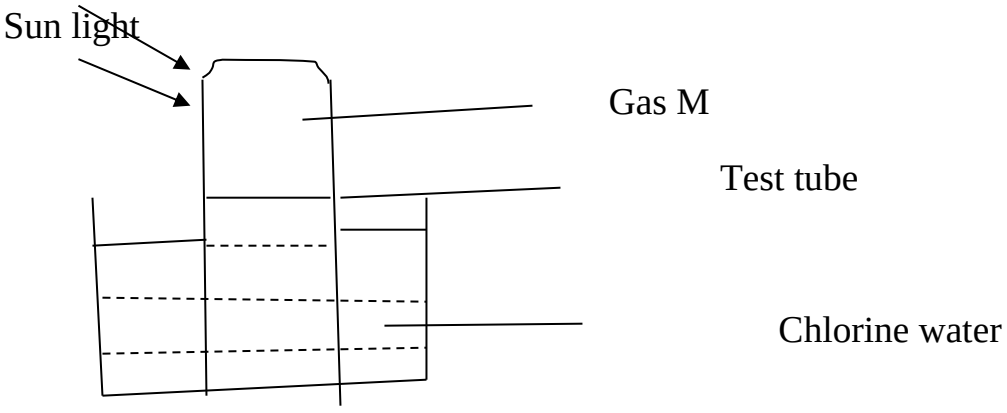
14. In an experiment, a test tube of chlorine gas was inverted in water as shown in the diagram. It was then left to stand in sunlight for one day.



At the end of experiment (after one day)

After one day, a gas **M** was found to have collected in the test tube as shown above.

(i). identify gas **M.** **(1mk)**

……

(ii). Suggest whether the PH of the solution in the beaker would increase or decrease after one day. Give an explanation. **(2mks)**

……
……

(iii). Thecolour of chlorine water was observed to have changed from pale yellow to colourless after one day. Explain**.** **(2mks)**

……
……

(iv) Write an equation to support your answer in (iii) above**.** **(1mk)**

(v). State and explain the observation made when a moist blue litmus paper was placed at the mouth of the test tube containing chlorine gas. **(3mks)**

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……
……
……

(vi). Write an equation to show how the process in (v) above occurs. **(1mk)**

(vii). Give two uses of chlorine gas. **(2mks)**

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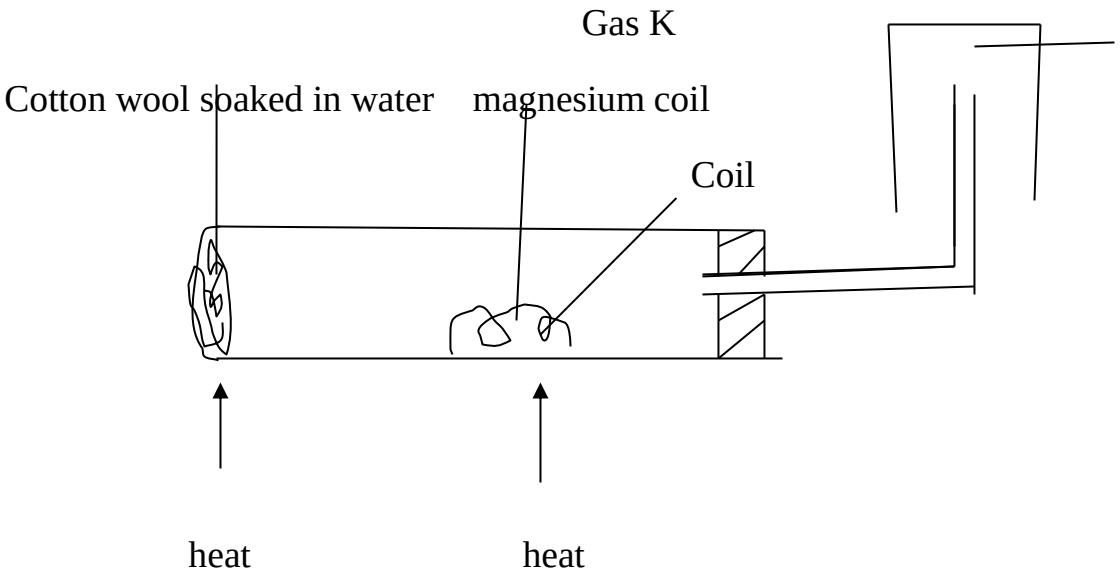
15. A student set up the experiment below to collect gas K. the glass wool was heated before heating the magnesium coil.



(a). Explain why it was necessary to heat the moist cotton wool before heating the magnesium. (**2mks)**

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……

(b). Identify gas **K.** **(1mk)**

……

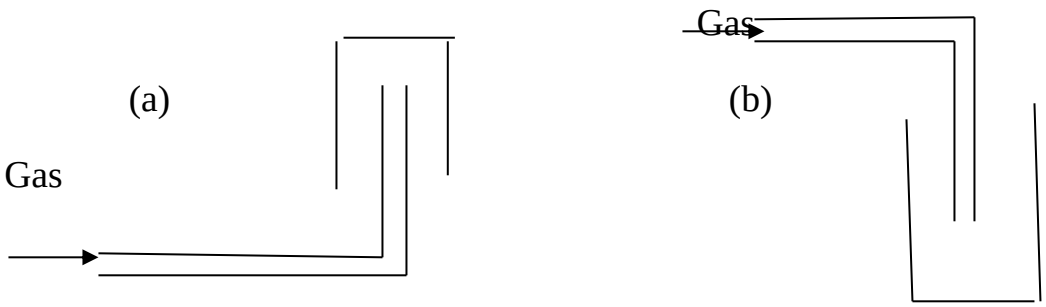
(c).what property of gas **K** makes it possible to be collected by the method shown? **(1mk)**

……

(d). Write a chemical equation for the reaction that produced gas K. **(1mk**)

……

16.The diagram represents two methods of gas collection in the laboratory.



(i). Name the methods of gas collection above. **(2mks)**

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……

(ii). Which method is suitable for collecting dry carbon (IV) oxide gas? Give a reason **(2mks)**

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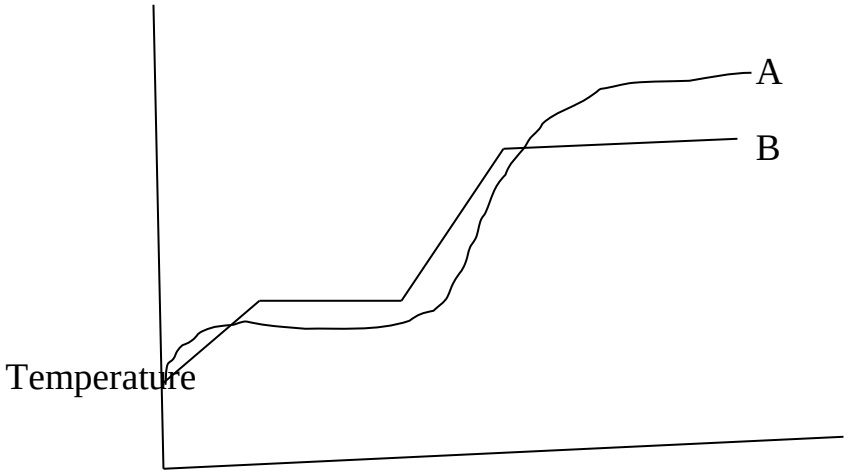
17. The curves bellow represent the variation of temperature with time when pure and impure samples of a solid were heated separately.



(a). Which curve represents the variation in temperature for pure solid? Explain. **(2mks)**

……
……

(b) State the effect of an impurity on the melting and boiling points of a pure substance**.(2mks)**

……
……

18. Cars in Mombasa are found to rust faster than cars in Nairobi. Explain. **(2 mks)**

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……

(iii). State **one** disadvantage of rusting**.** **(1mk)**

……

19. The PH of a soil sample in a given area was found to be 5.5. An Agricultural officer the addition of lime (calcium oxide). State the function of lime in the soil**.** **(1mk)**

……

20. By use of dot (.) and cross (x) diagram show bounding in magnesium chloride ($mgCl_2$)
(2mks)

……

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FORM 2 END TERM 2 SERIES 1 EXAMS

COMPUTER STUDIES
FORM TWO
TIME: $2^1/_2$ HOURS

INSTRUCTIONS TO CANDIDATES

(a) Answer all questions in spaces provided

1. The cost of a computer is one of the key factor to consider when buying one. State the factors that determine the price of a computer **(3mks)**

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2. State any three advantages that flat screen displays have over the conventional cathode Ray Tube displays. **(3mks)**

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3. State any three characteristics of the Random Access memory **(3mks)**

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4. Name any two types of optical scanners **(1mk)**

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5. What are the two main functions performed by UPS **(2mks)**

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6. State the purpose of registers in a computer system **(1mk)**

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7. A company has decided to computerize their operations. They have decided to purchase packages instead of developing their own programs. Give three advantages and two disadvantages of this approach **(5mks)**

Advantages

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Disadvantages

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8. A school has bought a computer system. The hardware items supplied include:
A 800MHZ processor, 640MB of RAM, a sound card, speaker, a monitor, a keyboard, a 12GB hard disk, a floppy disk drive, a CD-Read/write drive, a mouse a modem, an inkjet printer and a joystick. The software supplied include: an operating system, A BASIC interpreter and the following packages: spreadsheets, graphics, word processor, art, database and games.

a) List three input devices from the given specification **(3mks)**

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b) Explain the meaning of the following;

i. 800MHZ **(1mk)**

……

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ii. 640 MB **(1mk)**

……

……

iii. 12 GB (**1mk)**

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……

c) Some of the students in the school use the computer to do the homework.
Name the packages used to:

I. Do calculations and drawing graphs **(1mk)**

……

II. Write an essay **(1mk)**

……

III. Make poster **(1mk)**

……

d) Students enjoy playing noisy computer games

(ii) Which **two** hardware items needed are to produce sound? **(2mks)**

……

……

……

(iii) Which input device is only used for playing games **(1mk)**

……

……

9. a) What is thesaurus? **(2mks)**

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……..

b) Distinguish between auto complete and auto correct feature? **(2mks)**

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……
……..

c) State and explain any two text alignment features **(4mks)**

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d) List two sources of graphics that can be used in Ms Word **(2mks)**

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10. State three examples of electronic word processors **(3mks)**

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11. Outline any three main features that make word processors popular programs. **(3mks)**

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12. Give three example of special-purpose computers **(3mks)**

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13. Give three comparisons of the traditional method of typing a document on a Typewriter against using a word processor **(6mks)**

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14. List and describe four elements of computer system **(4mks)**

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15.a) Define proofreading **(2mks)**

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b) Give four ways of proof reading a document in MS word **(4mks)**

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16.i) What is a warranty? **(2mks)**

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ii) State four qualities of a good warranty cover **(4mks)**

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17. Differentiate between the following.

(i) Disk formatting and partitioning **(2mks)**

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(ii) Compressing and defragmentation a disk **(2mks)**

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18. Explain why a computer room must;

i) Have good ergonomics **(2mks)**

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ii) Be well ventilated **(2mks)**

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iii) Have none-water based fire-extinguisher **(2mks)**

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19.a) Explain three types of computer disks (CD_s) **(3mks)**

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b) Cherotich bought aDVD-double layer to back up her files from a laptop. Given that the capacity of the DVD is 8.5GB, calculate the number of CDs-Rs, she would have bought if the double layer was not available **(4mks)**

c) Explain the meaning of WORM in reference to optical storage **(2mks)**

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20.a) Mugabe tried to retrieve a file from the computer but did not appear as expected. State three possible causes for this. **(3mks)**

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b) With an aid of a diagram, explain the different between an analogue signal and a digital signal **(4mks)**

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c) Give three reasons why a mobile phone is regarded as a computer **(2mks)**

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NAME……..…….. **CLASS**…….……

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FORM 2 END TERM 2 SERIES 1 EXAMS

CRE
FORM 2
TIME: 2 HOURS

INSTRUCTIONS.
Answer all questions in the spaces provided.

1. What are the divisions of the Books in the Bible? **(7mks)**

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2. **Describe** how God tested Abraham's faith in Genesis (22:1-19). **(8mks)**

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3. Give **five** life skills used by Elijah to fight false religion in Israel. **(5mks)**

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4. Explain the Jewish expectations concerning the Messiah. **(5mks)**

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5. **Describe** the incident in which Jesus healed Jairus daughter.(Luke8:40-56) **(7mks)**

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6. State **five** reasons why Jesus used parables. **(5mks**)

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7. From the story of naboths vineyard state five commandments which king Ahab and queen jezebel broke. **(5mks)**

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8. **Narrate** the parable of the widow and unjust judge Luke 18:1-8. **(6mks)**

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9. With reference to Luke 1:8 20, **describe** the annunciation of the birth of john the Baptist. (**7mks)**

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10. Describe the incident when Jesus was tempted in the wilderness(Luke 4:1-13). **(5mks)**

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11. State **four** ways in which Christians demonstrate their faith in God. **(4mks)**

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NAME…….…….. CLASS…….……

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FORM 2 END TERM 2 SERIES 1 EXAMS

ENGLISH
FORM 2
TIME: 2 HOURS

Answer all the questions in the spaces provided.

SECTION A: FUNCTIONAL WRITING (10 MKS)

Schools are almost closing. Your friend Genevieve lives in Kitui. She has invited you to visit and stay at their home for one week.
(a) Write a packing list that you would use when preparing for the visit.

SECTION B: COMPREHENSION (20 MARKS)

Read the passage below and answer the questions that follow.

THE VILLAGE DEGREE

She was coming from the river when she noticed her primary school headteacher's bicycle leaning against the tree in front of her parent's house. Instinctively, she decided to stealthily go round the house and hide in the kitchen. She didn't want her teacher to see her in her torn and patched work dress. But the mention of Alliance Girls High School made her forget about her attire. She rushed into the house, water jerry can still on her back.

She became the heroine of the family, the village, the location and even the district. Her name appeared in the newspapers. She was the best in Kenya Certificate of Primary Education in the county and her name was on the lips of everybody. The whole family crowded around the teacher to read for them this great letter.

Even those who could not read wanted just to touch it. The letter spoke of hope and freedom from poverty and as many of the women seemed to think, free from dependence on men in their celebration. Many older women repeated in different versions their belief that with education you my daughter won't have to be a slave for a man. You will be your own master. Though Mwongeli did not understand much about what the older women meant, she was excited as they were over her apparently open path to freedom.

So Mwongeli had joined Alliance thrilled by the prospects of freedom. There she met the best brains in the country and they were all celebrating freedom from slavery. But to her surprise, the presence of visiting boys' school seemed to generate such excitement that she wondered from men.

As for Mwongeli, her mother had told her not to mix men and education. In obedience, she kept the two apart and sure enough, after four more years, yet another letter came to her and there was cause for women folk in her village to celebrate `again. The daughter had been admitted to study for a degree in Electrical engineering at the university of Nairobi, the only woman in the class of twenty. Yes, she was no longer Mwongeli ….. she was already a village engineer. In fact, the name Mwongeli even it its form 'Ngeli" was lost. Now the focus was a degree. She was now Engineer Mwongeli'

Aren't you going to open the letter? Atieno asked, startling Mwongeli out of her reverie. 'It's not urgent' Mwongeli replied in a flat tone. 'I was just thinking how I can do this quietly ….. you remember how the whole village hired a van to come and celebrate my masters scholarship offer? I'm usually glad to see them happy and excited but I find I have no privacy. I'd like to handle this one differently. I'll need to read the letter when I have had a rest and I'll tell you what I decide.

And with that Mwongeli put her letter in the handbag and sat down to enjoy a cup of tea and chart with her friend.

QUESTIONS:

(a) According the passage, why did Mwongeli want to hide in the kitchen? **(2 mks)**

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(b) Why did Mwongeli's name appear in the newspaper? **(2 mks)**

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(c) What had made Mwongeli's teachers visit her home? **(2 mks)**

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(d) Explain the irony in paragraph three of the passage? **(3 mks)**

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(e) Which letter is being referred to in paragraph three of the passage? **(1 mk)**

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(f) How many Engineering students were in Mwongeli's class? **(1 mk)**

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(g) According to the passage, what shows that children belong to the community? **(2 mks)**

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(h) What advice did Mwongeli's mother give her that enabled her to go through Alliance High school? **(2 mks)**

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(i) Apart from doing well in school, what else in the passage shows that Mwongeli was a hardworking girl? **(2 mks)**

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(j) Give the meaning of the following words as used in the passage. **(3 mks)**

(i) Stealthily –

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(ii) Attire –

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(iii) Reverie –

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SECTION C: CLOZE TEST (10 MARKS)

Fill in the blank spaces with the most appropriate word

I used to enjoy reading horror stories until I realized (1)_____ much they affected me. I had to study late in the (2) _____ to prepare for my examination. I used to be alone (3) _____the hall when everyone else was (4) _____. Very slight noise frightened me. I imagined that there was (5) _____ behind me while I was memorizing the Math's formulae. Every(6) _____ the curtains fluttered in the

wind, my heart would skip a (7) _____. When my neighbours dog barked, I broke (8) _____ in goose bumps because dogs (9) _____assumed to be able to see spirits that are invisible to the human (10) _____

SECTION D: ORAL SKILLS (15MARKS)

POETRY

(a) Read the poem below and answer the questions that follow.

INFANT SORROW

My mother groaned, my mother wept;
Into dangerous world I leapt;
Helpless, naked, piping loud,
Like a friend hid in a cloud.

Struggling in my father's head
Struggling against my
Swaddling-bands
Bound and weary I thought best
To suck upon my mother's breast.

QUESTIONS:

(i) Describe the rhyme scheme of the above poem. **(2 mks)**

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(ii) Mention two non-verbal cues you would use to enhance a recitation of the poem**. (4 mks)**

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(iii) Which words would you stress in line five of the poem and why? **(2 mks)**

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(b) The principal of your school visits your class during a class meeting. As the class prefect, You are sited at the front of the class. You note that some students are not listening.

State three observations that are evidence enough that they are not listening.(3 mks)

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(d) For each of the following words, write a word that is pronounced the same as: **(4 mks)**

(i) Queue –

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(ii) Male –

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(iii) Him –

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(v) Rain –

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SECTION E: GRAMMAR (15 MARKS)

(a) Rewrite each of the following sentences with the appropriate form of the word in brackets **(4 mks)**

(i) The _____ between Makuyu and Kameno had been the greatest challenge for the people (enemy).

(ii) There has never been such an _____ in our school (occur).

(iii) The chronic _____ will eventually lead to her poor performance (absent).

(iv) Mr. Makori works in the vehicle _____ department(maintain).

(b)Fill in the blank spaces with the plural form of the nouns in the brackets.(3 marks)

(i) The three _____ were arrested by the police. (passer-by)

(ii) How many _____ does the computer have? (word-processor)

(iii) The _____ are very powerful in the armed forces (commander-in-chief)

(d) Arrange the adjectives given in the brackets in the right order and use them to fill in the blank spaces. **(3 mks)**

(i) They found the _____ car parked outside the office (white, metallic, small)

(ii) They talked to the _____ watchman.(Old, ugly, Congolese)

(iii) I will buy her a _____ table (wooden, coffee, beautiful)

(e) <u>Use the correct preposition to complete the sentences.</u> (3 mks)

(i) In accordance _____ the new constitution, men and women are equal partners in marriage.

(ii) We need to sit _____ the shade.

(iii) Do not sit _____ the glass table, it will break.

(f) <u>Fill in each blank space with the correct collective noun.</u> (2 mks)

(i) The whole maize crop was destroyed by a _____ of locusts.

(ii) A _____ of pilgrims make a trip to Mecca each year so as to acquire the title 'Alhaji'

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FORM 2 END TERM 2 SERIES 1 EXAMS

GEOGRAPHY
FORM II,
TIME: 2 HOURS

Answer all the questions in the spaces provided

1. List **three** types of field work. **(3mks)**

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2. Give **four** methods of data presentation. **(4mks)**

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3. State **four** negative effects of mining on the environment? **(4mks)**

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4. State **four** economic importance of minerals in Kenya. **(4mks)**

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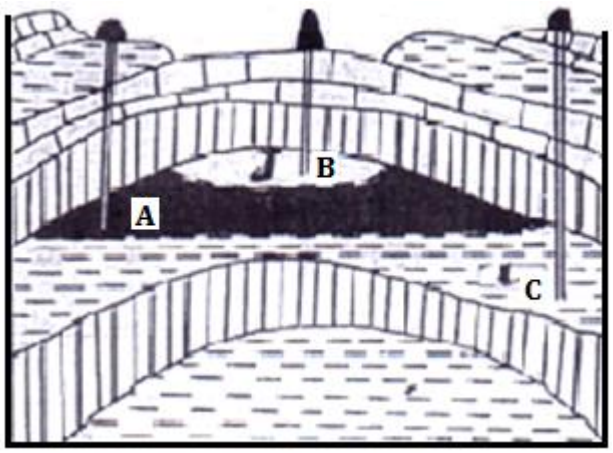
5. The diagram below show the occurrence of a fossil fuel



Name the substances in the area labeled A, B and C. **(4mks)**

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6. The table below shows petroleum production in thousand barrels per day for countries in the Middle East in April 2006 use it to answer questions.

COUNTRY	PRODUCTION IN '000' BARRELS
Iran	3800
Kuwait	2550
Qatar	800
Saudi Arabia	9600
U.A.E	2500
Iraq	1900

a) What in the difference in introduction between the highest and the lowest producer. **(1mk)**

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b) What is the total amount of petroleum produced in April 2006 in the region**?** **(2mks)**

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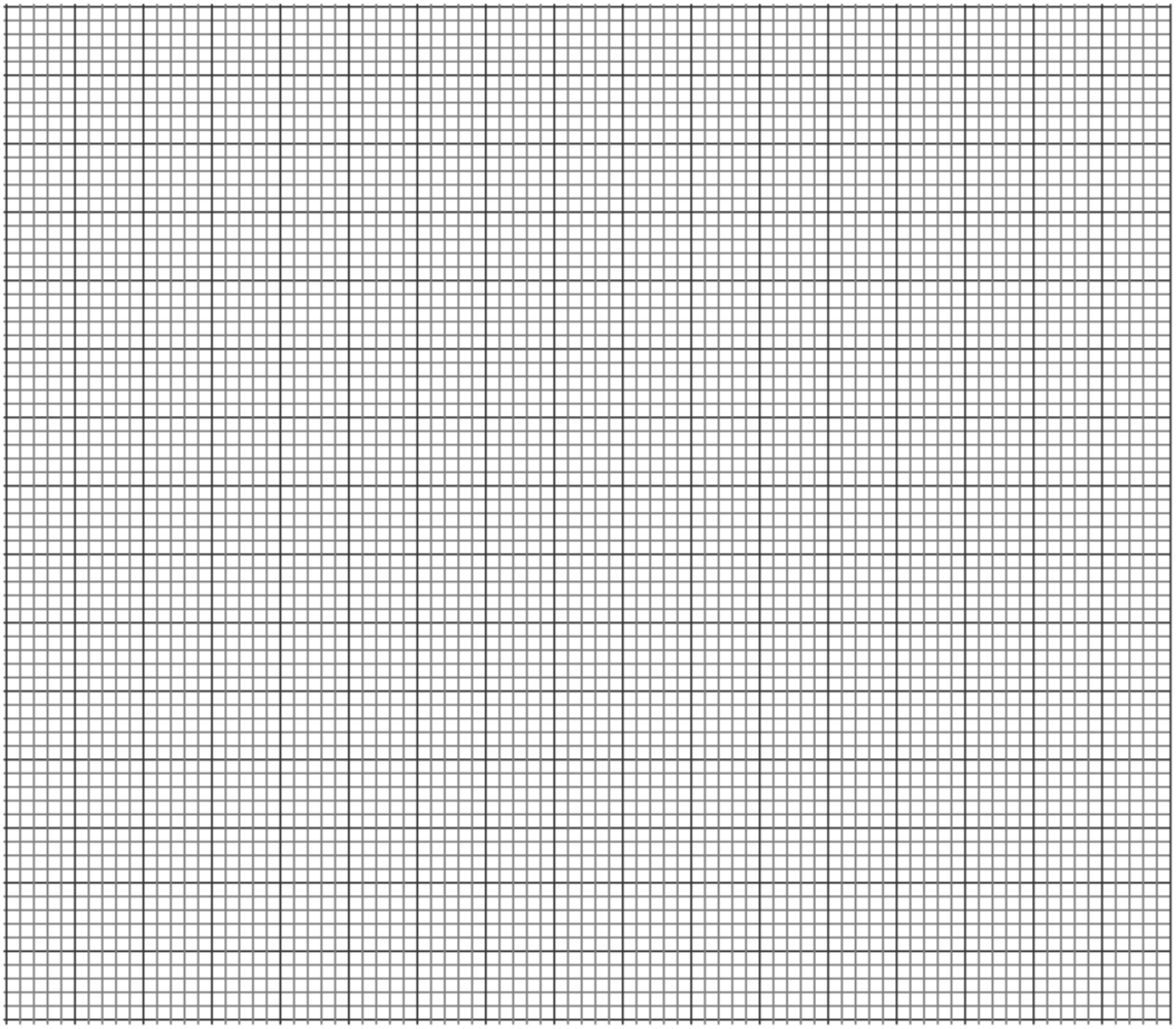
c) What is the mean of petroleum produced in the April 2006 in the region? **(3mks)**

d) Draw a simple bar graph to represent the data in the table above. Use a scale of 1cm represents 1,000,000 barrels. Use the graph paper provided. (7mks)



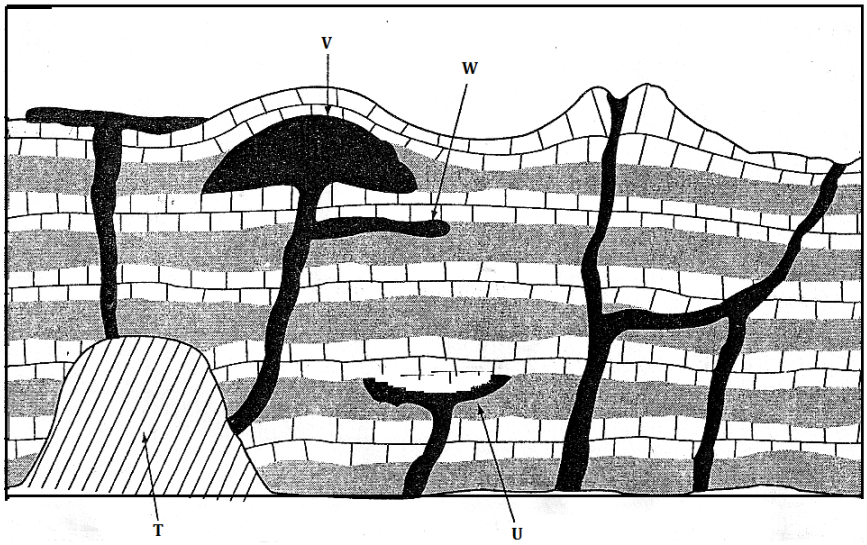
7. Draw a diagram to show a simple field and on it mark and name;

i) An anticline

ii) A limb

iii) Syncline. **(4 marks)**

8. The diagram above represents features as vulcanicity. Use it to answer the question that follows;



a) Name the features labeled T, U, V and W **(4mks)**

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b) Differentiate between magma and lava. **(2mks)**

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9. Name t**wo** fold mountain in Africa. **(2mks)**

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10. What is a photograph? **(2mks)**

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11. State **three** characteristics of ground general view photographs. **(3mks)**

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12. What is climate? **(2mks)**

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13. Give **four** factors influence climate. **(4mks)**

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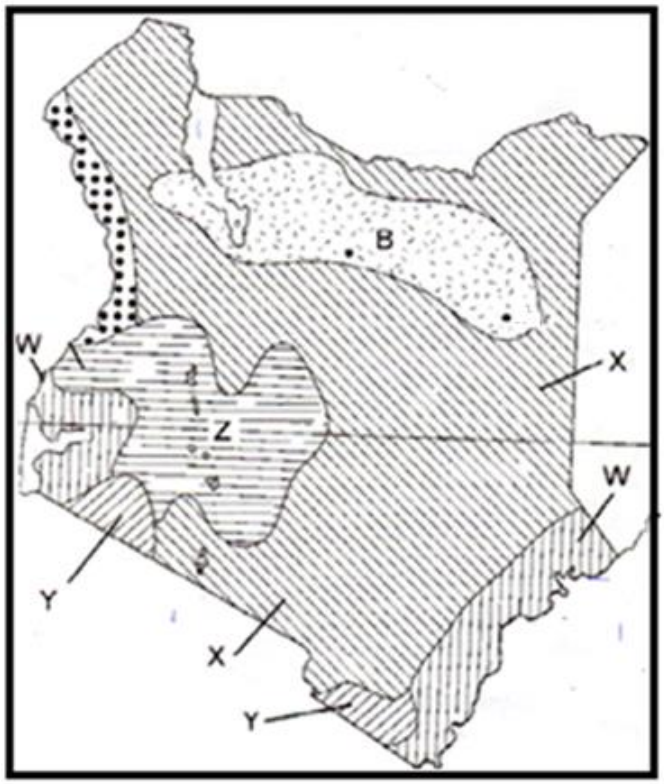
14. The diagram below shows the climatic regions of Kenya.



a) Identify the climatic regions marked W, X, Y and Z. **(4mks)**

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b) Describe the characteristics of climate region marked B. **(5mks)**

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15. **(a)Differentiate** between natural vegetation and secondary vegetation. **(2mks)**

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(b)Outline four factors that influence the distribution and type of natural vegetation in Kenya. **(4mks)**

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NAME……..…….. CLASS…….……

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FORM 2 END TERM 2 SERIES 2 EXAMS

FORM 2

HOME SCIENCE (THEORY)

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

(i) Write your name and index number in the spaces provided above.
(ii) Sign and write the date of examination in the spaces provided above.
(iii) This paper consists of **three** sections; **A, B** and **C.**
(iv) Answer all the questions in section **A** and **B** and any two questions from section **C** in the spaces provided.
(v) Answers to all questions must be written in this booklet.

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum score	Candidate's score
A			
B			
C			

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

1. State **three** areas to study in homescience. **(3 marks)**

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2. Name **two** layers of the skin. **(2 marks)**

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3. Name **two** classification of household refuse. **(2 marks)**

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4. Define term drainage. **(1 mark)**

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5. Suggest **three** reasons for drainage. **(2 marks)**

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6. State **two** disadvantages of poor sanitation. **(2 marks)**

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7. What are communicable diseases? **(1 mark)**

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8. State **two** important reasons for pressing work during construction. **(2 marks)**

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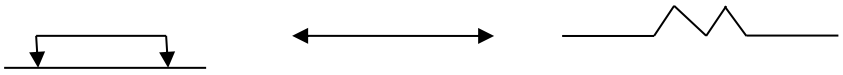
9. Identify the following symbols in garment pattern piece. **(3 marks)**



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10. State **two** reasons why wool is not suitable for making aprons. **(2 marks)**

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11. State **three** importance of learning consumer education. **(3 marks)**

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12. Suggest the meaning of the following:

a) Goods **(1 mark)**

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b)Services **(2 marks)**

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13. State **two** types of conspicuous seams. **(2 marks)**

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14. What is **food** fortification? **(1 mark)**

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15. State **one** way of conserving nutrients during storage. **(2 marks)**

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16. Suggest **two** advantages of using an electric cooker. **(2 marks)**

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17.Differentiate between rickets and ostomalecia **(2 marks)**

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18. What are bunions? **(1 mark)**

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19. Suggest **two** method of finishing a plain seam. **(2 marks)**

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20. Suggest **two** ways of improving cloths storage facilities. **(2 marks)**

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SECTION B: COMPULSORY SECTION MUST ANWER ALL
(20MKS)

21. Your grandmother has invited you to her house to stay overnight. You are helping her wash her woolen sweater.

(iii) Explain **six** steps one should avoid when laundering and drying a woolen article.
(6marks)

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(iv) **Explain** step by step how to launder her white cotton towel. **(8 marks)**

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(v) Explain how to clean her sitting room, **(6 marks)**

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SECTION C: CHOOSE AND ANSWER ONLY TWO QUESTIONS IN THE SECTION

22.

a. List **four** items which can be recycled at our homes. **(4 marks)**
b. Identify **five** activities carried out in management of amoebic dysentery. **(5 marks)**
c. Explain **three** disadvantages of open drainage in an area. **(6 marks)**
d. List **four** laundry processes. **(2 marks)**

23.

a) Discuss **three** treatments why may be done to clothes and article during the rising stage.

(6 marks)

b) List **four** fabrics which cannot be disinfected by boiling. **(4 marks)**

c) Discuss three rules for darning. **(6marks)**

d) Draw the following washing symbols

d) Don't dry in the sun **(1 mark)**

e) Hang on the line to dry **(1 mark)**

f) Do not tumble dry **(1 mark)**

g) Use cool iron **(1 mark)**

24.

a) Explain **three** causes of malnutrition **(6 marks)**

b) List **four** sources information for the consumers. **(4 marks)**

c) Discuss **three** important factors of enriching a teenage girl diet with iron giving food **(6 marks)**

d) List **four** reasons for wearing shoes **(4 marks)**

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FORM 2 END TERM 2 SERIES 1 EXAMS

KISWAHILI

KIDATO CHA PILI

UFAHAMU: (ALAMA 15)

<u>Soma kifungu kifuatacho kisha ujibu maswali</u>:

Takwimu zilizothibitishwa zaonyesha kuwa kila sekunde nane mtu mmoja hufa duniani kutokana na utumiaji wa tumbako. Kwa siku basi, watu 10,800 hufa. Wengi wa wavuta sigara huanza katika umri kati ya miaka kumi na mitatu hadi kumi na tisa. Takwimu zaonyesha kuwa mtu akivuta sigara kwa zaidi ya miaka ishirini huupunguza umri wake kwa kati ya miaka 20 hadi 25 zaidi ya ambaye hajawahi kuvuta. Hii ni kwa kuwa tumbako ina zaidi ya kemikali 4,000 zinazodhuru afya.

Mojawapo ya madhara makuu zaidi yanayosababishwa na sigara ni saratani. Kunayo saratani ya ngozi – vidonda visivyopona huchubuka ngozini na baada ya muda hugeuka na kuwa kansa. Iri ya mapafu hutokea vifuko vya hewa vinapopasuka na hivyo kutatiza uvutaji wa oksijeni na utoaji wa kabondayoksaidi. Moshi pia husababisha madhara kwa njia ya kupitisha hewa, yaani umio, ambapo njia hii yaweza hata kuzibika hivyo kulazimu tundu kutobolewa kooni ili mgonjwa aweze kupumua. Kabla ya kufika kooni na mapafuni, moshi hupitia mdomoni. Saratani ya mdomo na ulimi basi hupatikana zaidi miongoni mwa wavuta sigara. Pia kidonda chochote, kwa mfano baada ya kung'olewa jino, huwa vigumu kupona kwa mvutaji sigara.

Kwa wanawake, kuna hatari ya kupatwa na iri ya fuko la uzazi. Madhara kwenye njia nzima ya uzazi huifanya iwe vigumu kwa wanawake wavuta sigara kuhimili. Ni rahisi pia kuzaa njiti. Mtoto wa mvutaji huzaliwa akiwa mwepesi zaidi ya kawaida. Hii husababishwa na kabonimonoksaidi kutoka kwa sigara inayomdhuru mtoto tumboni. Saratani hii husababisha

hata kifo cha mtoto aliye tumboni. Wengine wazaliwapo huwa na hatari ya kupatwa na saratani zaidi ya waliozaliwa na akina mama wasiovuta sigara.

Aina zaidi za saratani zinazowakumba wavuta sigara ni kama vile saratani ya pua, ya tumbo, ya figo, ya kibofu cha mkojo, ya kongosho, ya njia ya kinyesi na hata saratani ya matiti inayowaathiri zaidi wanawake.

Shida za sigara sio saratani pekee; sigara husababisha shida za macho na masikio kwa kiasi kikubwa. Mboni ya jicho yaweza kufunikwa na utando, hali inayoweza kusababisha hata upofu. Macho yaweza kuwashwa na moshi mkali wa sigara au mishipa ya macho iathirike na kemikali zinazofika kwayo kupitia kwa mishipa mapafu yanapoathirika. Masikio nayo huathiriwa na uchafu wa tumbako unaoganda kwenye mishipa hadi sehemu za ndani za masikio. Damu hupunguza mwendo ufaao masikioni hivyo yanaugua. Moshi na kemikali za tumbako pia hujeruhi sehemu za ndani na athari hii yaweza kuenea hadi ubongoni na kusababisha utando unaofunika ubongo. Hali hizi zaweza kusababisha uziwi.

Mifupa na meno huathirika pia. Mifupa huwa myepesi, hukosa nguvu na kuwa rahisi kuvunjika. Mvuta sigara akivunjika mfupa huchukua muda wa asilimia themanini (80%) kupona zaidi ya mtu asiyevuta. Meno nayo hutatizika katika ukuaji wake kutokana na kugandwa na moshi wenye kemikali. Hali hii husababisha harufu mbaya, uchafu pamoja na kuoza kwa meno.

Ngozi ya mvuta sigara hukaushwa na kemikali kwa sahabu uwezo wake wa kujirekebisha na kujilainisha hupunguzwa pakubwa. Hali hii husababisha ukavu unaoonekana pamoja na makunyanzi yanayomfanya mvuta sigara aonekane mzee zaidi ya umri wake. Vidole navyo vilevile hugandwa na kutu ya sigara, nazo kucha na vidole hugeuka rangi vikawa vya manjano, hudhurungi au maji ya kunde. Vidole pia hukaushwa na moto na kemikali ya sigara. Nywele za mvuta sigara pia huathirika kwa kuwa kemikali huipunguza kinga ya mwili hivyo mizizi ya nywele kukosa nguvu. Nywele za mvuta sigara zaweza kung'oka mapema.

Sigara husababisha magonjwa ya moyo na vidonda vya tumbo. Kwa moyo, sigara husababisha shinikizo la damu na hatimaye mshtuko wa moyo waweza kutokea na kusababisha hata kifo. Kwa tumbo, sigara hupunguza uwezo wa kinga zake wa kuikinga dhidi ya asidi zinazosaga chakula. Pia hupunguza uwezo wa mwili wa kujikinga dhidi ya vidonda vya tumboni. Vidonda vya tumbo vya mvuta sigara huwa vigumu kupona na, ni rahisi kutokea tena baada ya kupona.

Kwa mwanamume, mpigo wa damu kwenye sehemu za uzazi huathiriwa. Hali hii ikizidi husababisha hata upungufu wa nguvu ya mbegu kwenye shahawa. Hata ugumba waweza kutokea. Pia watoto wa mwanamke mvuta sigara waweza kuzaliwa wakiwa na kasoro. Mimba zingine zilizotungwa na wanawake wavuta sigara pia hutunguka. Na si hayo tu; madhara ya sigara ni mengi zaidi.

Maswali

a) Yape makala haya kichwa. **(alama 2)**

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b) Mbali na athari kwa uzazi kwa wanawake na wanaume na sura/umbo la binadamu, taja madhara mengine ya uvutaji sigara kwa binadamu**.** **(alama3)**

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c) Kwa kurejelea kifungu onyesha kwamba sigara kwa wanawake hasa ni hatari mno.
(alama 4)

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(d) Je, ni kweli kuwa vifo vingi hutokea kwa sababu ya uvutaji sigara? Toa sababu. **(alama 2)**

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(e) Eleza namna ambavyo uvutaji sigara huathiri sura ya mhusika. **(alama 3)**

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(f) Eleza maana ya msamiati ufuatao kama ulivyotumiwa kwenye taarifa. **(alama 1)**

Gandwa

……..

MATUMIZI YA LUGHA. AL 35

1. Eleza maana ya ishali zifuatazo. **(al 2)**

(i) Mofimu

……

(ii) Viambishi

……

2. Andika kwa wingi sentensi hii; **(al 1)**

(i) Goti la mtoto liliumia

……

3. Bainisha nomino hizi ni za aina gani. **(al 1)**

a. Mzee

……

b. Oduori

……

4. Tumia vivumishi vya sifa katika mabano kukamilisha sentensi zifuatazo. **(al 2)**

a. Mtoto yule ni ———————————— (nene)

b. Kiberiti si kifaa ———————————— kubeba. (zito)

5. Kamilisha sentensi zifuatazo kwa kuchaza viambishi vya upatanisho vya —ingine. **(al 2)**

a) Mahali ——————————————kulikobaki ni kwao.

b) Mwizi huyo ——————————————hakupigwa risasi.

6. Ziandike upya sentensi zifuatazo ukitumia ‘O’rejeshi**.** **(al 2)**

(i) Meno ambayo yanamuuma yatatiwa dawa.

……

(ii) Kioo ambacho kilinunuliwa ni kipya.

……

7. Tambulisha vitenzi visaidizi katika sentensi hizi**.** **(al 2)**

(a) Hajaenda kusoma

……

(b) Niliwahi kumweleza.

……

8. Sahihisha sentensi zifuatazo kimapokeo**.** **(al 2)**

(a) Zizi tuna sisi la ng’ombe kwetu.

……

(b) Kiza cha abunuwasi kwenye kisa kinazikitisha.

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9. Andika sentensi zifuatazo kwa wingi**.** **(al 2)**

(i) Nitaenda alasiri kumwangalia alikoenda.

……

(ii) Atamwinda mnyama huyo kisirisiri.

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10. Tumia kihusishi kifaacho katika sentensi zifuatazo. **(al 3)**

I. Amechuma matunda ——————rafiki yake

II. Walikimbia ——————swara.

III. Tutafanya kazi ——————wenzetu.

11. Tunga sentensi ukitumia vihisishi ukionyesha hisia zifuatazo. **(al 2)**

(a) Furaha.

……

(b) Dharau.

……

12. Andika kinyume cha vitenzi vifuatavyo**. (al 2)**

(i) Tandika

……

(ii) Unga

……

13. Kamilisha methali zifuatazo. **(al 2)**

(i) Kawia**……**

(ii) Chovya chovya **……..**

(iii) Isipowasha**……..**

(iv) Cha kuzama**…….**

14. Kanusha sentensi zifuatazo**.** **(al 2)**

(i) Nilimwona akicheza

……

(ii) Ningalienda kwake ningalimpata.

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15. Tambua kikundi Nomino na kikundi Tenzi katika sentensi zifuatazo. **(al 2)**

(i) Mwanafunzi amevaa sare safi mno

……

(ii) Sakafu ile inateleza sana

……

16. Andika sentensi ifuatayo katika usemi wa taarifa. **(al 2)**

"Njoo hapa" Asksri alimwita Juma.

……

17. Unda nomino mbili kutokana na kitenzi safari**.** **(al 2)**

……

18. Andika kitenzi kifuatacho katika kauli ya kutendeswa. **(al 1)**

Panga

……

FASIHI SIMULIZI AL 10

1. (a) Eleza maana ya methali **(al 2)**

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(b) Fafanua sifa nne za methali **(al 8)**

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ISIMU JAMII AL 10

1. (a) Eleza maana ya sajili ya bungeni**.** **(al 2)**

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(c) Taja sifa nane za sajili ya bungeni. **(al 8)**

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NAME…….…….. CLASS…….……

ADM NO……SIGNATURE……

DATE……

FORM 2 END TERM 2 SERIES 1 EXAMS

TERM 2

FORM 2 MATHEMATICS EXAM

TIME: 2½ HRS.

INSTRUCTION TO STUDENTS:

(i) *Write your **name**, **admission number** and **class** in the spaces provided above.*
(ii) *Write the **date** of examination in spaces provided.*
(iii) *This paper consists of **two** Sections; Section **I** and Section **II**.*
(iv) *Answer **ALL** the questions in Section **I** and only **five** questions from Section **II**.*
(v) *All answers and working must be written on the question paper in the spaces provided below each question.*
(vi) *Show all the steps in your calculation, giving your answer at each stage in the spaces provided **below** each question.*
(vii) *Marks may be given for correct working even if the answer is wrong.*
(viii) *KNEC Mathematical tables **may be** used, except where stated otherwise.*
(ix) *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*
(x) ***Candidates should answer the questions in English.***

FOR EXAMINER'S USE ONLY:

SECTION I

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

SECTION II **GRAND TOTAL**

17	18	19	20	21	22	TOTAL

SECTION A (Answer all questions in the spaces provided)

1. Arrange the following sets of numbers in descending order. **[2 Marks]**

404,044 440,440 440,404 404,444 444,044

2. Prove that 581,526 is divisible by both 9 and 11. **[2 Marks]**

3. When a number u is divided by either 36, 24 or 45, the remainder is always 5. Find the least value of u. **[3 Marks]**

4. Using mathematical tables, find the cubes of each of the following numbers. Leave your answer in standard form.

(a) 2341 **[2 Marks]**

(b) 0.00472 **(2mks)**

5. Use logarithms tables to evaluate; $\frac{743.1\times34.8}{15.6\times102.7}$ **[4 Marks]**

6. Find the equation of a line that passes through (3, -5) and is perpendicular to a line whose equation is $4x - 5y - 6 = 0$ **[3 Marks]**

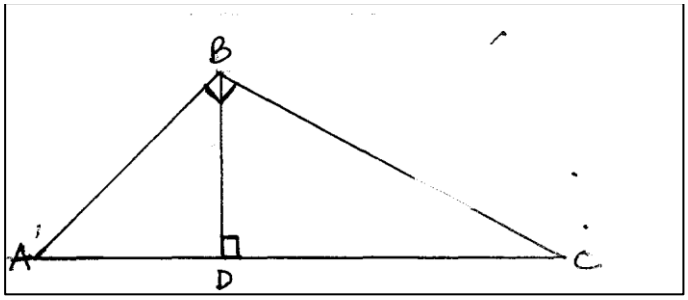
7. Two similar vases have their heights in the ratio 3:2. What is the ratio of

I. Their surface areas **[1 Mark]**

II. Their volumes **[1 Mark]**

8. A rectangular container measuring 1.2m long, 70 cm wide and 55 cm high is half full of water. All this water is poured into an empty cylindrical tank of diameter 1.4 metres. Find the height to which the water rises. **(4 mks)**

9. In the triangle below, AB=12cm AC=13cm and ABC=BDC=90^0.



Calculate;

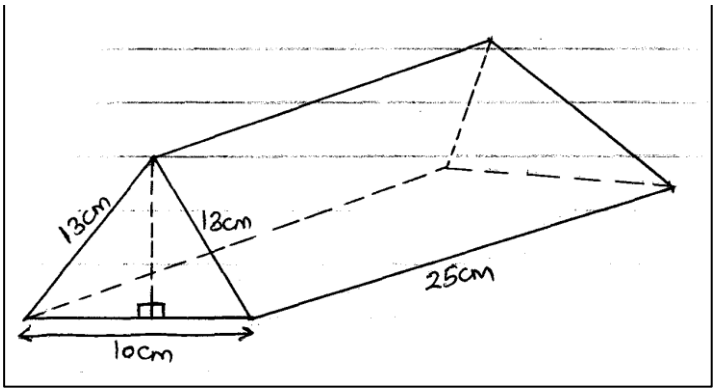
i. The length of BC **[2 Marks]**

ii. The length of BD **[2 Marks]**

10. Express as a single fraction in the simplest form; $\frac{x-3}{5} + \frac{2x-5}{4}$ **[3 Marks]**

11. The ratio of boys to girls is 3:2. When $\frac{1}{3}$ of the boys and 6 girls are absent, the ratio remains the same. Find the number of students in the class. **[4 Marks]**

12. The diagram below shows a triangular prism. Determine its total surface area. **[3 Marks]**



13. The size of the interior angle of a regular polygon is $x°$ and the exterior angle is $(\frac{x-36}{3})^0$

f) Calculate the value of x **[2 Marks]**

g) How many sides does the polygon have? **[2 Marks]**

14. Solve for the value of θif **[2 Marks]**

$$sin\ sin\ (2\theta + 30) = cos\ cos\ (2\theta + 20)$$

15. A triangle measures 16cm by 20cm by 24cm. calculate its area using the Hero's formula. **[3 Marks]**

16. If $a = 8\ and\ b = 36$, calculate the value of; **[3 Marks]**

$$(a^{-\frac{2}{3}} + b^{\frac{1}{2}})^{\frac{1}{2}}$$

SECTION B (Answer any 5 questions)

17. The table below is a bus timetable for journeys between towns E and J via towns FGH and I. Use it to answer the questions that follow.

Town	Arrival	Departure
E		0500
F	0630	0645
G	0710	0720
H	0820	0830
I	1145	1230
J	1345	

a. At what time does the bus leave town G in 12hr system. [**1 Mark]**

b. How long does it take between town E and G. **[1 Mark]**

c. In which town does the bus stop the longest and for how long? **[2 Marks]**

d. If the bus does not stop anywhere;

(iii) How long would it take to travel from town E to town J. **[2 Marks]**

(iv) At what time would it arrive at town J. **[1 Mark]**

e. If the distance between town G and J is 400km, calculate the average speed between G and J. **[3 Marks]**

18. In a certain day secondary school in Vihiga County. There were 500 students. The ratio of boys to girls is 3:2.

a) How many more boys than girls are there in the school? **[2 Marks]**

b) i. One day 10% of the girls and two fifth of the boys went for music and drama festivals. How many students were left in the school?**[3 Marks]**

ii. During the Festivals each student was given 100/= and the two accompanying teachers were given 1000/= each for lunch. What was the total expenditure?**[2 Marks]**

c) On a certain morning, ½ of the boys and 0.75 of the girls were sent home for fees. Given that each student brought 2500/= the following day, calculate the total amount of money that was collected.

[3 Marks]

19. A line L_1 passes through (3, -2) and (5,4).

(i) Determine the gradient of line L_1 **[1 Mark]**

(ii) The equation of line L_1 **[2 Marks]**

(iii) Line L_1 cuts $x - axis$ at point P and the $y - axis$ at point Q. determine the co-ordinates of P and Q. **[4 Marks]**

(iv) Another line L_2 passes through (-3,7) and is perpendicular to L_1. Determine its equation. **[3 Marks]**

20. a. Given that the ratio of the areas of two similar solids is 9:25

iv) What is the linear scale factor between the two solids? **[2 Marks]**

v) If the length of the smaller solid is 1.2m, what is the length of the bigger solid?

[2 Marks]

b. The linear dimensions of a model car are $\frac{1}{16}$ of the dimensions of the actual car.

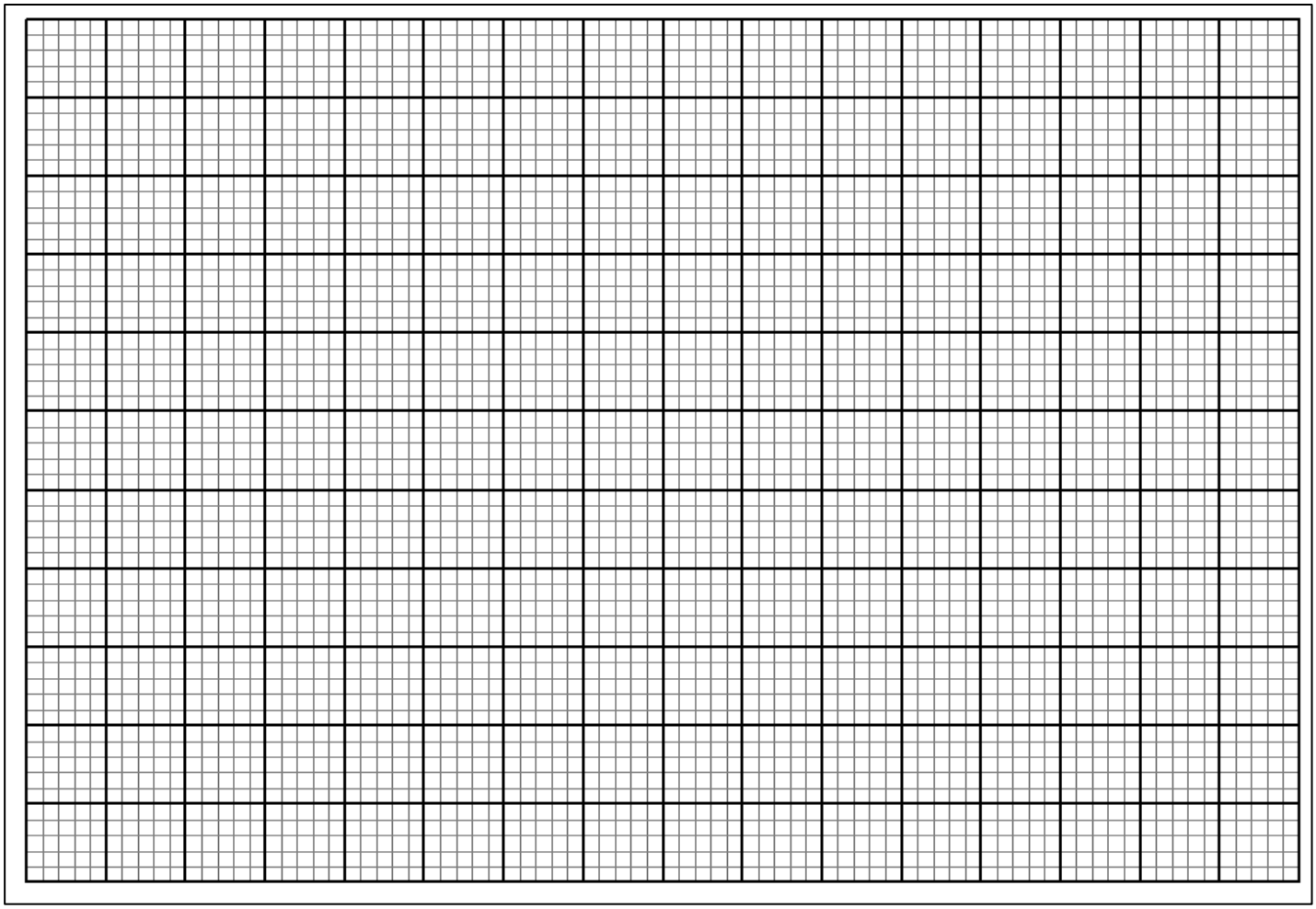
i. What is the area of the windscreen of the actual car if the windscreen of the model car is $3cm^2$? **[2 Marks]**

ii. If the capacity of the boot of the model car is $15cm^3$, find the capacity of the boot of the model car. **[2 Marks]**

c. The volume of two similar jugs are in the ratio 8:125. What is the ratio of their surface areas? **[2 Marks]**

21. A triangle PQR has co-ordinates P(1,1) Q (1,3) R (3,1)

a) Plot the triangle in the graph paper provided. **[1 Mark]**



b) P'Q'R' is the image of PQR under an enlargement scale factor 2 about origin.

(i) Plot P'Q'R' in the graph provided. **[3 Marks]**

(ii) State the co-ordinates of P'Q'R'. **[1 Mark]**

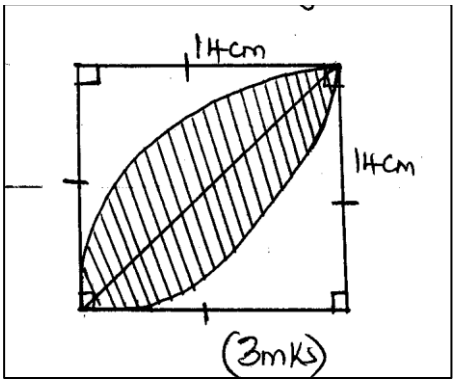
c) P''Q''R'' is the image of P'Q'R' under reflection in the $y - axis$. Plot P''Q''R'' in the graph paper and state its co-ordinates.

[4 Marks]

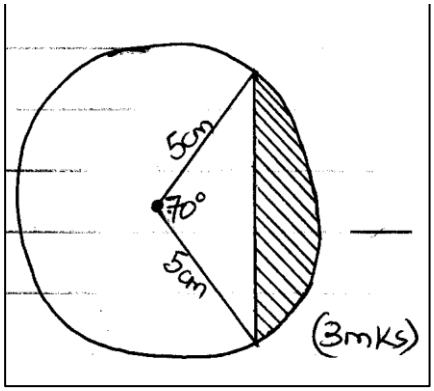
d) Calculate the area of triangle P''Q''R'' **[1 Mark]**

22. In each of the following figures, calculate the area of the shaded regions.

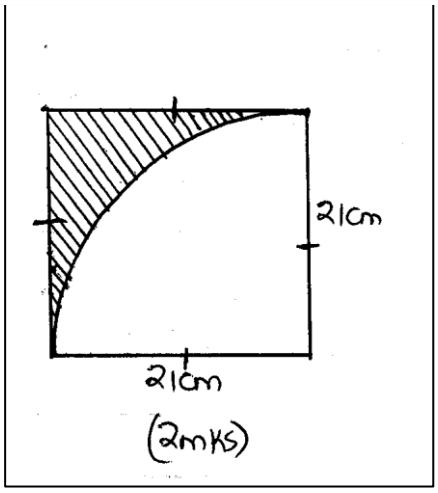
(i)



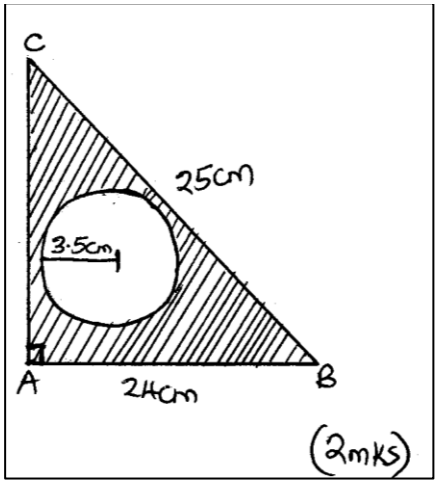
(ii)



(iii)



(iv)



23. Amina bought 3 pens and 2 pencils for shs. 13. Njoki bought 2 similar pens and 1 pencil and spent shs. 5 less than Amina.

a) Form 2 simultaneous equations to represent the above information **[2 Marks]**

b) Using substitution method, determine the price of each item. **[3 Marks]**

c) Migwi bought 100 pencils and 150 pens from the same shop.

(i) What was the total cost? **[2 Marks]**

(ii) He later sold all the pencils at a profit of 30% and all the pens at a profit of 50%. Determine the total profit. **[3 Marks]**

24. A bus has a carrying capacity of 52 passengers and a Nissan 14 passengers. Both vehicles were used to ferry people from a village to a church for a wedding function. The distance from the village to church is 80km and the fuel consumption of the bus is 1 litrefor every 8km and the Nissan is 1 Litre for every

15 km. Fuel costs shs. 15 per litre. The bus made 5 complete round trips and the Nissan made 8 complete round trips with full capacity. If each passenger was paying shs. 100 to be ferried to the function; Find

(i) The total collection made by each vehicle. **[3 Marks]**

(ii) The total cost of fuel used by each vehicle. **[2 Marks]**

(iii) The net profit made by each vehicle. [**3 Marks]**

(iv) The total number of people who were ferried to the function**.[2 Marks]**

NAME……..... CLASS…….……..

ADM NO……SIGNATURE…….

DATE…….

FORM 2 END TERM 2 SERIES 1 EXAMS

FORM 2

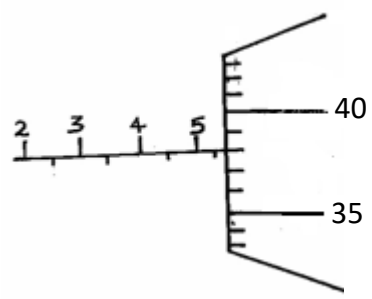
PHYSICS

TIME: 1 HOUR 45 MINS

*Answer **ALL** questions this section in the spaces provided.*

SECTION A : (30 MARKS)

1. Figure 1 shows a micrometer with a negative error of 0.02mm used to measure the diameter of a ball bearing.

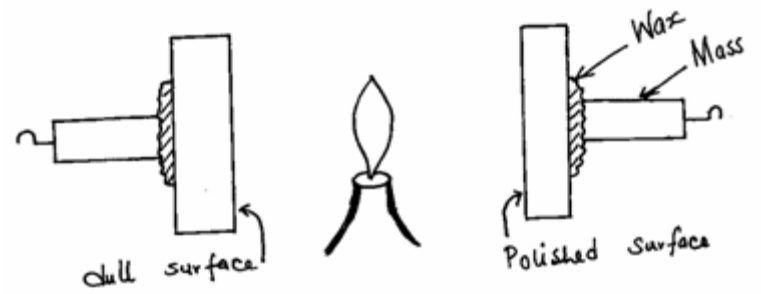


Record the diameter of the ball. **(2mks)**

2. An oil drop of volume 0.4mm³ was placed on a clean water surface. It spread to form a monoatomic circular patch of area 2000mm². Use this data to calculate the diameter of a molecule of oil. (3mks)

3. A fixed mass of pure water was cooled from 20°C to O°C. Sketch a graph of density of the water against temperature. **(2mks)**

4. Two 10g masses are fixed onto two similar aluminium plates, one polished and the other painted black, using wax as shown in the figure **below**.



Give and explain the observation made. **(2mks)**

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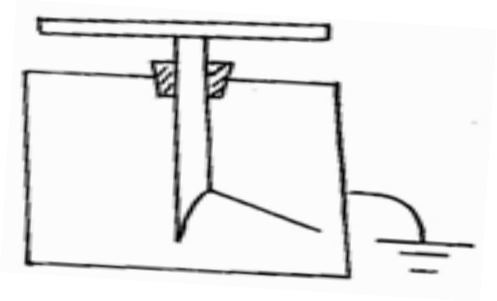
5. The figure **below** shows a charged leaf electroscope.



Given a dry glass rod and silk cloth, explain how you would determine the type of charge on the electroscope. **(2mks)**

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……

6. State **two** advantages of alkaline accumulator over the lead-acid cell. **(2mks)**

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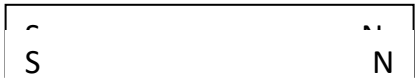
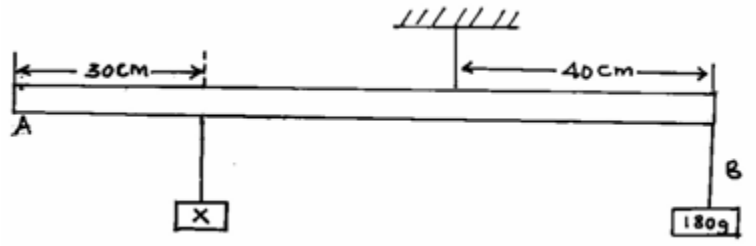
7. The figure **below** shows two magnets whose North poles are brought close to each other. Indicate the magnetic field pattern between the two magnets. **(2mks)**



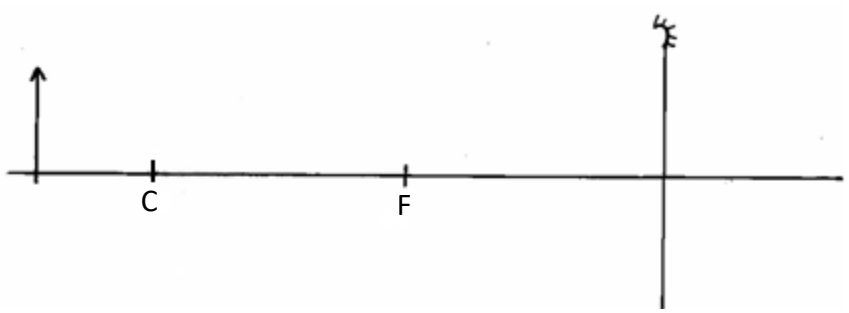
8. The diagram shows a system in equilibrium with the uniform rule supported at Q and resting horizontally.



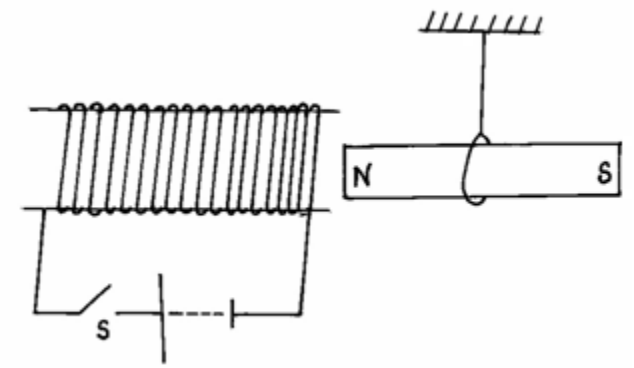
The rule is 1m long and weighs 1.8N. Calculate the weight of the block X. **(3mks)**

` **9.** An object is placed infront of a concave mirror as shown in the figure **below**.

Complete the diagram to show how the image is formed. **(3mks)**

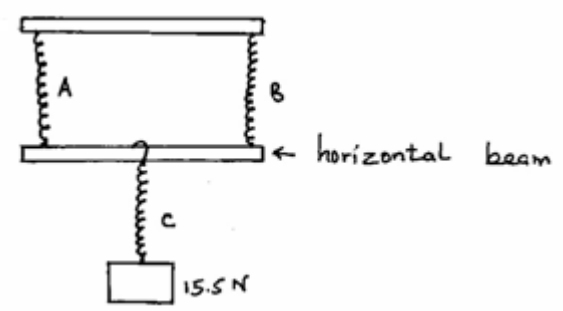


10. State and explain what will happen to the freely suspended magnet when the switch S is closed. **(2mks)**



11. Three identical springs **A**, **B** and **C** are used to support a 15.5N weight as shown in the

figure **below**.



If the weight of the horizontal beam is 0.5N, determine the extension of each spring given that 4N cause an extension of 1cm when using one spring. **(3mks)**

12. State **one** of the major differences between mechanical waves and electromagnetic waves**.** **(2mks)**

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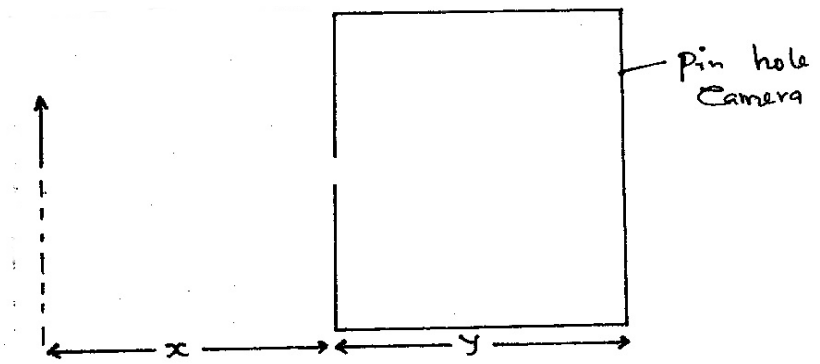
13. A boat sent an ultrasound signal to the bottom of the sea and its echo received after 10 seconds. If the wavelength of the ultrasound in water is 0.05m and the frequency of the transmitter is 50 KHz, calculate the depth of the sea. **(3mks)**

SECTION B: (40 MARKS)

14. (a) Complete the diagram **below** to show how an image is formed in a pinhole camera. **(3mks)**



(b) State **two** characteristics of the image above. **(2mks)**

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c. State **two** changes that will be observed about this image if the pinhole is made wider. **(2mks)**

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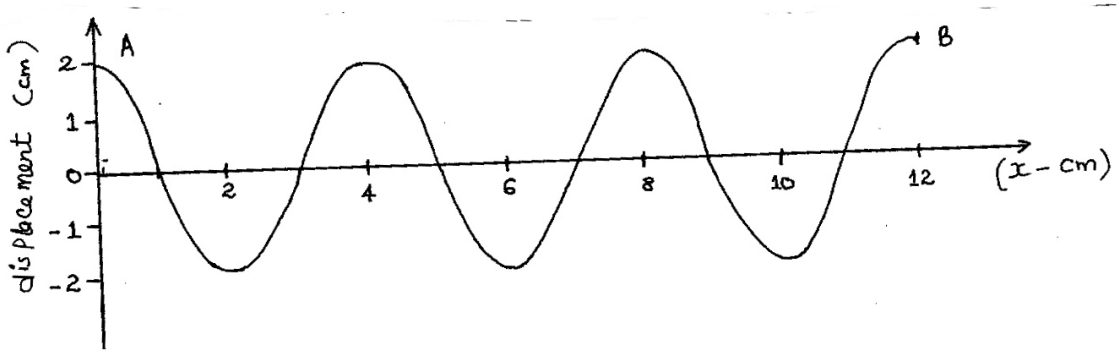
a. If χ = 30cm, y = 12cm and the heights of the image is 4cm, calculate the height of the object. **(3mks)**

15. The diagram **below** shows the wave profile of a transverse wave.



a) Determine

(i) the amplitude of the wave. **(1mk)**

(ii) the wavelength of the wave in metres. **(2mks)**

(iii)the period of the wave if it takes 1.5 seconds to move from **A** to **B**. **(3mks)**

b) Calculate:

(i) the frequency of the wave. **(2mks)**

(ii) the velocity of the wave. **(2mks)**

16. (a) What is diffusion? **(2mk)**

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(c) A smoke cell contain a mixture of trapped air and smoke.

The cell is brightly lit and viewed through a microscope. State and explain what is observed. **(2mks)**

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c) A beaker is filled completely with water. A spoonful of common salt is added slowly. The salt dissolves and the water does not overflow.

(i) State why the salt is added slowly. **(1mk)**

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ii) Why doesn't the water overflow? **(1mk)**

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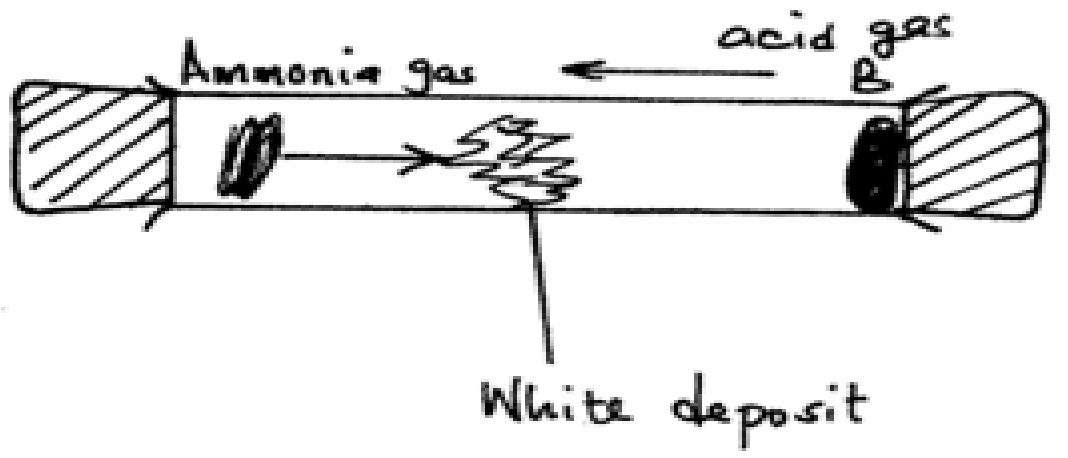
d) In the figure **below**, ammonia gas and acid gas diffuse and react to form a white deposit on the walls of a long glass tube as shown.



(i) What **conclusion** can be made from this result of this experiment? **(1mk)**

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(ii) How does the density of a gas affect the rate of diffusion? **(1mk)**

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e) The experiment is performed at a lower temperature**. State** and **explain** what would
happen to the rate of diffusion of the gases. **(2mks)**

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17. (a) Give **four** differences between mass and weight. **(4mks)**

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(b) Sate Pascal's Principal. **(1mk)**

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(c) Name **two** applications of Pascal's Principle. **(2mks)**

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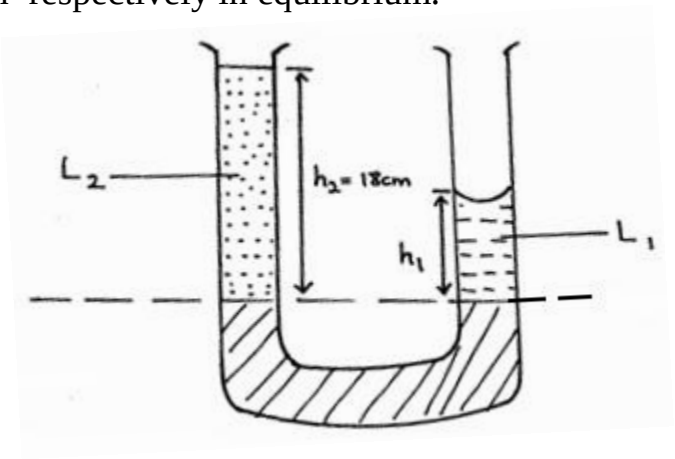
(d) Figure **3** shows a U-tube containing two liquids L_1 and L_2 of densities 1.6g/cm³ and 0.8g/cm³ respectively in equilibrium.



Given that h_2 = 18cm, determine the value of h_1. **(3mks)**

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