BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS *(ALL SUBJECTS TESTED)*



BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……

SCHOOL: ……..……..

ADM NO: …….. SIGN: ……. DATE: ……

FORM THREE

AGRICULTURE

TIME 2 HRS

INSTRUCTIONS

This paper has three sections A, B and C.

Answer all questions in section A and B and any two in section C.

Answer should be written in the provided spaces.

SECTION	QUESTION	MAX SCORE	CANDIDATE'S SCORE
A	1 – 20	40	
B	21 – 23	20	
C	24 - 26	40	
	TOTAL	100	

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SECTION A. **40 MARKS.**

1. State three branches of horticultural farming giving an example in each. **(3mks)**

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2. State two ways through which transport and communication influence agriculture. **(2mks)**

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3. List one way a farmer can use to improve single grained structure of soil. **(1mk)**

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4. State the functional difference between adjustable spanner and ring-spanner. **(2mks)**

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5. Name three reasons that would make a farmer carry out land clearing before planting crops. **(3mks)**

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6. State the importance of the following chemicals in water treatment. **(2mks)**

a) sodium bicarbonate (soda ash)

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……
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b) Aluminum-sulphate (Alum)

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7. State two factors a farmer would consider when choosing the type of irrigation method to use on his farm. **(2mks)**

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8. Name three characteristics of a fertile soil. **(3mks)**

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9. State one advantage of keeping dual-purpose breed of cattle. (1mk)

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10. State two types of labour records a farmer can keep. **(2mks)**

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11. State two reasons why it's advisable to apply phosphatic fertilizer when planting crops. **(2mks)**

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12. Differentiate between the terms below.

a) Seed dressing and Seed inoculation. (2mks)

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13. Name one importance of hardening-off in nursery management practices. **(1mk)**

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14. List two types of mulching materials a farmer can use when mulching crops. **(2mks)**

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15. Name two advantages of training in tomato production. **(2mks)**

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16. Name two signs of good health in livestock. **(2mks)**

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17. State two effects of lice in poultry production. **(2mks)**

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18. Define the terms below; **(2mks)**

a) Breech presentation

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b) Prolificacy

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19. State two signs of parturition in a doe. **(2mks)**

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20. State the importance of the following practices in livestock rearing **(2mks)**

a) Docking

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b) Dusting

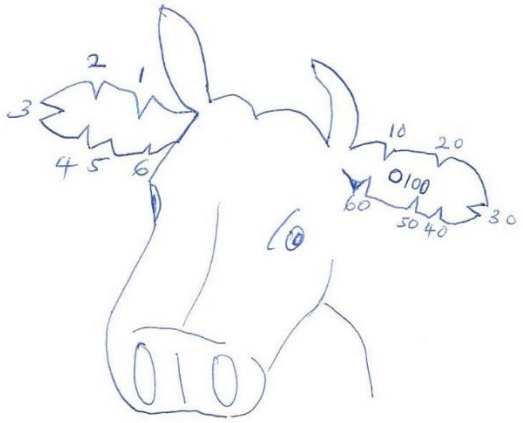
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SECTION B: 20 MKS

21) Study the diagram below and answer the questions that follow.



a) Identify the method above **(1mk)**

……

b) Using a well labelled diagram, show animal number 230. **(3mks)**

c) State three practices that are facilitated by the above method in livestock handling. **(3mks)**

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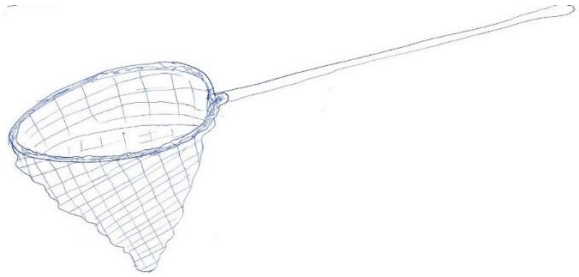
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22. Study the diagram below and answer the questions.



a) Identify the tool above as used in bee keeping. **(1mk)**

……

b) Name any other tool that can be used for the same purpose as the tool above. **(1mk)**

……

……

c) State one precaution observed when using the above tool. **(1mk)**

……

d) State four reasons that would make bees swarm away from the hive. **(4mks)**

……

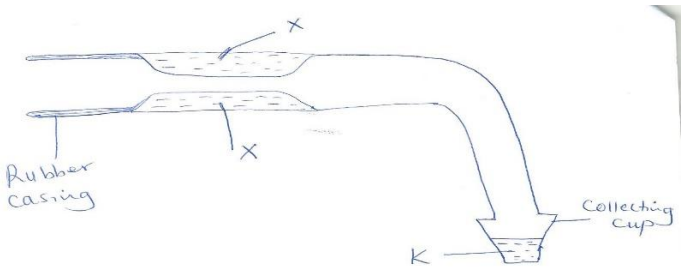
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23) Using the diagram below answer the questions that follow.



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

……

b) Name the parts labelled X and K. **(2mks)**

……

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……

c) State three advantages of using artificial insemination over natural mating. **(3mks)**

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SECTION C: 40 MKS

Answer any two questions in this section.

24a) Explain five reasons of pruning coffee plants. **(10mks)**

b) Explain five factors that would predispose a beef cow to disease attack. **(10mks)**

25a) Discuss six factors a farmer would consider when selecting a breeding stock. **(12mks)**

b) Explain three types of special feeding that are given to livestock. **(6mks)**

c) Name two reasons of culling in livestock production. **(2mks)**

26a) Explain five factors a farmer would consider when sitting an apiary. **(10mks)**

b) Discuss five factors considered when sitting a farm structure. **(10mks)**

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NAME: ……

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

FORM THREE

BIOLOGY

TIME: 2 HOURS

INSTRUCTION TO THE CANDIDATES.

- Write your name and admission number in the spaces provided
- Sign and write the date of examination in the spaces provided
- Answer all questions in section **A** and **B.** In section **C**, answer questions 15 (compulsory) and either 16 or 17 in the spaces provided.
- Answer all the questions in the spaces provided.
- Candidates should answer all the questions in English.

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SECTION	MAXIMUM SCORE	CANDIDATES SCORE
A	**34**	
B	**26**	
C	**40**	
TOTAL SCORE	**100**	

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SECTION A: **(34MKS)**

Answer all the questions

1.States the name given to the study of **(3mks)**

a) The cell ……

b) Micro-organism ……

c) Insects ……..

2.State one use of each of the apparatus **(2mks)**

a) Bait trap

……

……

b) Specimen bottles

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……

3.State two importance of nutrition in living organisms **(2mks)**

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4.Name the organelle that performs each of the following functions in a cell

a) Protein synthesis (2mks)

……

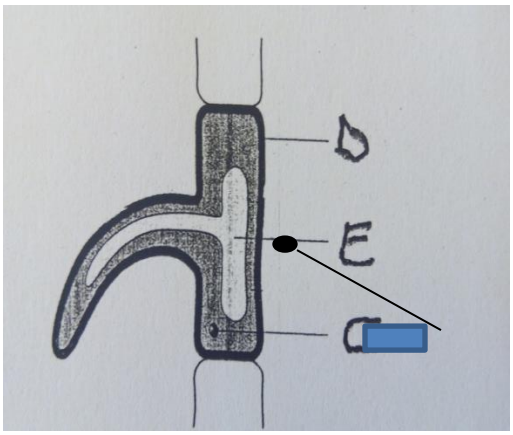
b) Transport of cell secretions

……

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5.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. **(3mks)**

6.The diagram below shows a specified plant cell



a.

(i) Name the cell **(1mk)**

……

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

……

……

……

b. State the function of parts labelled C **(1mk)**

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7.

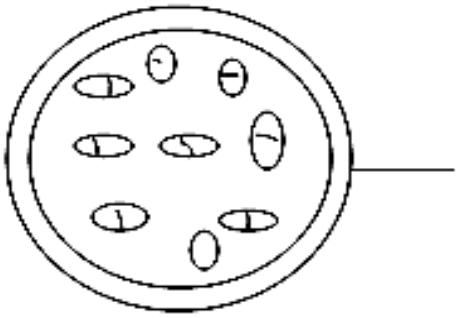
a) Name the disease that causes thickening and hardening of arteries **(1mk)**

……

b) State the structural difference between arteries and veins in mammals **(3mks)**

Arteries	Veins

8.The diagram below shows a transverse section of a plant organ



a.Name the plant organ from which the section was obtained **(1mk)**

……

……

b.

(i) Name the class to which the plant organ was obtained **(1mk)**

……

……

(ii) Give a reason for your answer in bi) above **(1mk)**

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

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10. a) Name the causative agents of the following respiratory diseases

(i) Whooping cough **(1mk)**

……

(ii) Pneumonia **(1mk)**

……

b) How are Pneumatophores adapted to their function? **(2mks)**

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11. State four ways in which respiratory surfaces are adapted to their functions. **(4mks)**

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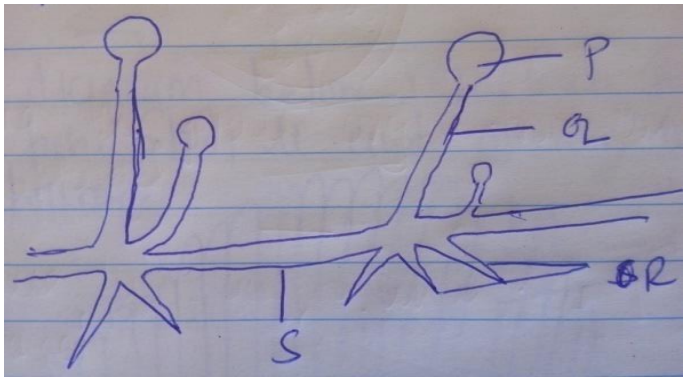
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SECTION B: (26MKS)

Answer all the questions



12. The diagram below represents a mature bread mould (Rhizopus)

a) Name the parts labelled Q and S **(2mks)**

……

……

……

b) State the functions of the parts labelled P and R **(2mks)**

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c) Name the kingdom to which the bread mould belongs **(1mk)**

……

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d) State three characteristics of the member of the kingdom named in c) above **(3mks)**

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13.

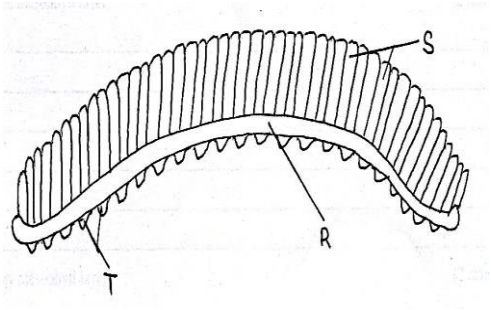
a. Name two sites where gaseous exchange takes exchange takes place in aquatic plant **(2mks)**

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b. The diagram below represents the gills of a bony fish, study it and answer the questions that follow



i. Name the parts labelled T, R and S **(3mks)**

T…….

R…….

S …….

ii. State the functions of the parts labelled T and S **(2mks)**

T

……

S

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iii. Explain how the part labelled S is adapted to perform its function. **(2mks)**

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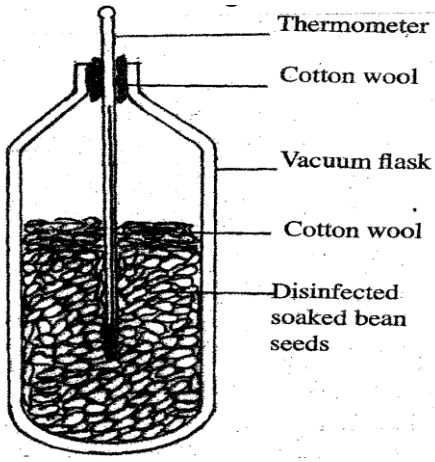
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c. Explain why the red blood cells are biconcave and lack nucleus **(1mk)**

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14. In an experiment, disinfected soaked been seeds were put in a vacuum flask which was then fitted with a thermometer as shown in the diagram below.



The temperature readings were taken every morning for three consecutive days.

a. Which process was being investigated? **(1mk)**

……

b.

(i) What were the expected results? **(1mk)**

……

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(ii) Account for the answer in bi) above **(2mks)**

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c. Why were the seeds disinfected? **(2mks)**

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d. Why was the vacuum flask used in the set up? **(1mk)**

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e.How would a control experiment be set? **(1mk)**

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SECTION C (40MARKS)

Answer question 15 (compulsory) and either question 16 or 17.

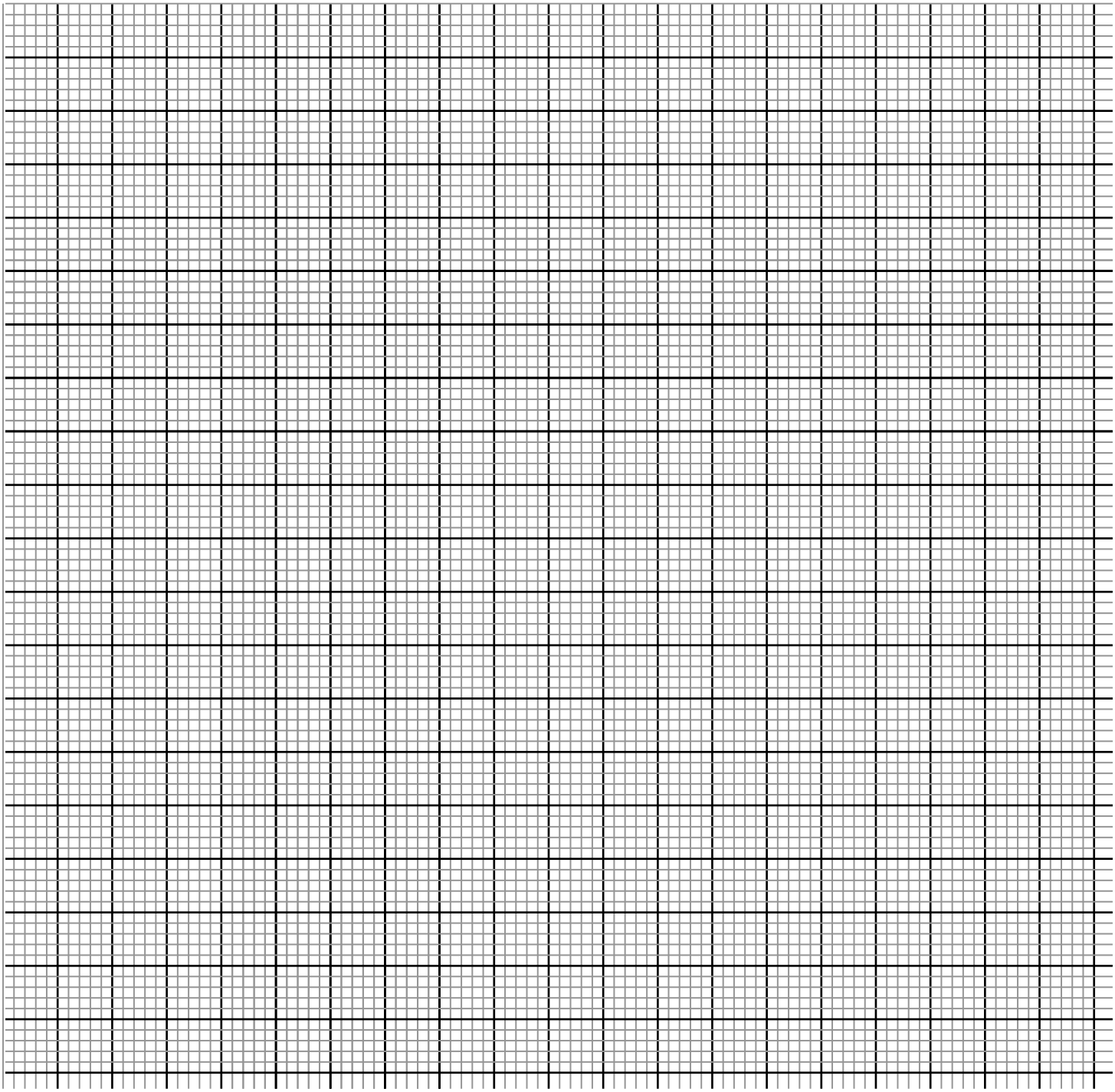
An experiment was carried out to investigate haemolysis of human red blood cells. The red blood cells were placed in different concentration of sodium chloride solution. The percentage of haemolysed cells was determined. The results were as shown in the table below:

Salt concentration g/100cm^3 (%)	0.33	0.36	0.38	0.39	0.42	0.44	0.48
Red blood cells haemolysed(%)	100	91	82	69	30	15	0

a.

(i)On the grid provided, plot a graph of haemolysed red blood cells against salt concentration**. (6mks)**

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(ii)At what concentration of salt was the proportion of haemolysed cells equal to non- haemolysed cells? **(1mk)**

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(iii)State the percentage of cells haemolysed at a salt concentration of 0.45% **(1mk)**

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b) Account for the results obtained at **(3mks)**

(i)0.33 percent salt concentration

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……

0.48 percent salt concentration **(3mks)**

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c) What would happen to the red blood cells if they were placed in 0.50 percent salt solution? **(3mks)**

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d) Explain what would happen to onion epidermal cells if they were placed in distilled water? **(3mks)**

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16(a) what is an enzyme? **(2mks)**

b) State the properties of enzymes **(6mks)**

c) Describe the factors that affect the rate of enzyme-catalysed reactions **(12mks)**

17) How is the mammalian skin adapted to its function? **(20mks)**

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……

SCHOOL: ……..……..

ADM NO: …….. SIGN: ……. DATE: ……..

FORM THREE

BUSINESS STUDIES.

TIME: 2HRS

INSTRUCTIONS.

a) Write your name, class and admission number in the spaces provided above.

b) Answer all the questions.

c) Answers must be written in black or blue pen.

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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 Score

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1. Outline four factors that can be considered when determining the size of a firm. **(4mks)**

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2. State ways in which a firm may acquire a monopoly position. **(4mks)**

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3. Outline four ways of determining price of a product in the market. **(4mks)**

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4. Highlight four advantages of promoting products through the internet. (4mks)

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5. State four principles of insurance. **(4mks)**

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6. John intends to construct his own warehouse. Outline four features that his warehouse should have in order to function effectively. **(4mks)**

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7. State line of communication involved in each of the following. (4mks)

a) The manager of ABC Company Ltd talking to the manager of XYZ Company Ltd_____

b) A secretary asking for time off from her boss_____

c) The production manager giving instructions to the secretary of the sales Manager_____

d) The store keeper giving explanations to the chief Accountant _____

8. Highlight four advantages of Human porterage as a means of transport. (4mks)

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9. State four categories in which the various types of business partners may be classified. **(4mks)**

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10. Outline four reasons why the government of Kenya may use regulatory measures to protect consumers against exploitation. **(4mks)**

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11. Outline four circumstances under which a cheque may be dishonoured upon presentation to the Bank for payment. (4mks)

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12. Outline four advantages of open office layout. **(4mks)**

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13. State four factors that may promote entrepreneurship in Kenya. **(4mks)**

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14. List four characteristics of capital as a factor of production. **(4mks)**

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15. Classify the following economic resources as either renewable or Non-renewable resource.**4mks**

a) Gold_____

b) Forest_____

c) Clothes_____

d) Leather_____

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16. State four ways in which peace within a country may encourage entrepreneurial development. **(4mks)**

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17. Outline four services that a retailer may render to a consumer. **(4mks)**

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18. State four features of a perfectly competitive market. **(4mks)**

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19. Highlight four benefits that would accrue to a firm located near other existing firms. **(4mks)**

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20. Highlight four factors that may cause a supply curve to shift to the right. **(4mks)**

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21. Highlight four advantages of using posters as a means of advertising. **(4mks)**

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22. Outline four factors that would make two people taking the same type of life assurance policy with the same insurer to pay different amount of premiums. **(4mks)**

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23. State four advantages of a bonded warehouse to the government. **(4mks)**

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24. Highlight four factors that one may consider when selecting a means of communication. **(4mks)**

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25. Outline four circumstances under which goods may be transported by use of containers. **(4mks)**

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NAME: ……

SCHOOL: ……..……..

ADM NO: …….. SIGN: ……. DATE: …….

FORM THREE

CHEMISTRY

2 HOURS

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.

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

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SECTION A **40MARKS**

1[a] State Boyles law **[1mk]**

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[b]600cm^3 of a gas exert a pressure of 0.48 atmosphere at 47^0C. What volume of the gas would exert a pressure of 0.75 atmosphere at 62^0C **[3mks]**

2. Oxygen gas can be obtained by isolation from the air

[a]State one use of oxygen gas **[1mk]**

……

……

[b]State one possible role of the following during this process

i. Sodium hydroxide solution **[1mk]**

……

……

ii. Concentrated sulphuric [VI]acid **[1mk]**

……

……

3. Using dots and crosses, show bonding in the following **[3mks]**

[a]Chlorine molecule

[b]Ammonium ion $[NH_4^+]$

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4. The ratio of the rate of diffusion of gas Q and oxygen gas is 4:5. Find the molecular mass of gas Q [O=16} **[3mks]**

5. Starting with barium carbonate, describe how you can prepare a dry sample of barium sulphate **[3mks]**

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6[a] Give two examples of acid salts. **[2mks]**

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[b] When lead {II} Nitrate was heated in a dry test tube, solid A, gas B and gas C were formed. Gas C was colorless

[i]Identify solid A and gas B **[2mks]**

A ……

B……

[ii]Write a chemical equation for the reaction that occurred **[1mk]**

……

……

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7. An isotopic element T has three isotopes T – 34, T - 36 and T - 40 which occur in the ratio 3:5:2. Determine the R.A.M of element T **[3mks]**

8. State one use of each of the following apparatus in the laboratory

[a]Desiccator

……

[b]Crucible

……

[c]Pipe clay triangle

……

9. Omolo accidentally added sand to water. He was advised to separate the mixture using filtration method

[a]Name any other method that could use to separate the mixture **[1mk]**

……

[b]Name two apparatus that he required to separate the two using filtration method **[2mks]**

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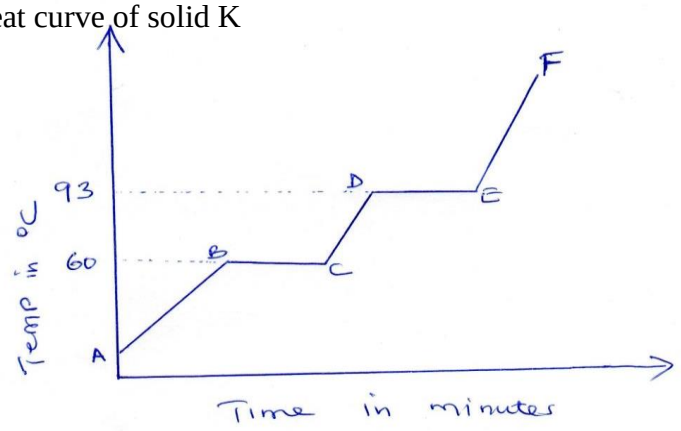
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[c]State one application of filtration as a method of separating mixtures **[1mk]**

……

10. The diagram below shows the heat curve of solid K



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[a]With a reason, state whether solid K was pure or not [2mks]

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[b]Considering the three regions AB, CD and EF

[i]In which region do particles of K have greatest Kinetic energy **[1mk]**

……

……

……

[ii]In which region and the particles of K closer to each other **[1mk]**

……

……

[c]State the boiling point of K [1mk]

……

……

11. 25g of a compound of copper has 6.4g copper, 3.2g sulphur, 6.4 grams oxygen and the rest is water of crystallization. Given C=64, O=16, S=32, H=1. Determine its simplest formulae [4mks]

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SECTION B: 40 MARKS

12. In an experiment to determine the volume of 0.75M hydrochloric acid [solution P] required to neutralize 25 cm^3 portion of sodium hydroxide [solution T], a student filled a clean burette with solution P. He then titrated solution P against 25cm^3 portions of solution T as he recorded the results in the table below.

	I	II	III
Final burette reading [cm^3]	12.9	25.0	37.2
Initial burette reading [cm^3]	0.0	12.9	25.0
Volume of solution P used [cm^3]			

[a]Complete the table **[1mk]**

[b]Calculate the;

[i]Average volume of solution P {HCl} used **[1mk]**

[ii]Number of moles of solution P that reacted with each 25cm^3 portion of solution P {NaOH} **[1mk]**

[c] Write a stoichiometric equation of the reaction between solution P (HCl) and solution T (NaOH) **[1mk]**

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[d]Calculate the;

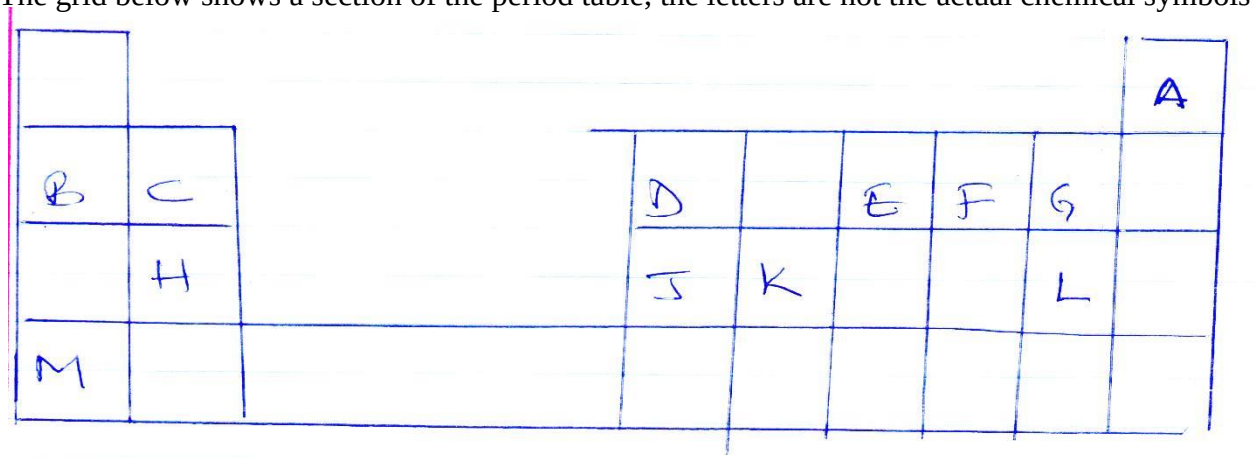
[i]Number of moles of solution T that reacted with each portion of solution P **[2mks]**

[ii]Concentration of solution T in moles per litre **[2mks]**

[iii]Concentration of solution T in g/cm^3

{Na=23, O=16, H=1} **[2mks]**

13. The grid below shows a section of the period table, the letters are not the actual chemical symbols



[a]Name the family into which the following elements belong

[i]B **[1mk]**

……

[ii]G **[1mk]**

……

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[b]Write the formulate of the;

[i]oxide of J **[1mk]**

……

[ii]Chloride of M **[1mk]**

……

[iii]Phosphate of C **[1mk]**

……

[c]How does the following compare. Explain your answer;

[i]Atomic and ionic radius of F **[2mks]**

……

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……

……

[ii]Melting point of B and M **[2mks]**

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[d]Which letter represents;

[i]The least Reactive element **[1mk]**

……

……

……

[ii]Most reactive element in group {VII] **{1mk}**

……

……

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14.[a]carbon has two allotropes

[i]Define the term allotropes **[1mk]**

……

……

……

[ii]Identify the two allotropes of carbon [2mks]

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[iii]Which of the allotropes you have named in [i] above is a good conductor of electricity .Explain **[2mks}**

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[b]Carbon {IV} oxide is one of the oxides of carbon

[i]Name another oxide of carbon [1mk]

……

[ii]Carbon {IV} oxide is commonly used in fire extinguisher. State two properties of carbon {IV} oxide that makes it appropriate for the use [2mks]

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[c]State one use of sodium carbonate [1mk]

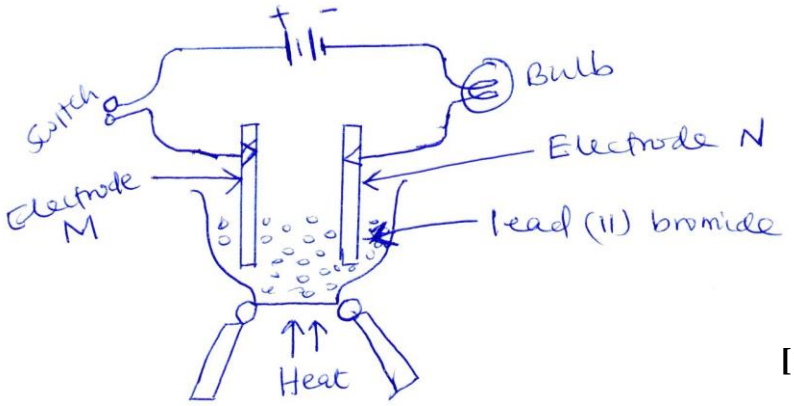
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15. The diagram below shows part of a set-up used to investigate effect of electric current on molten lead{II} bromide



[a]Which letter represents;

[i]Cathode **[1mk]**

……

[ii]Anode **[1mk]**

……

What was the role of the bulb in the experiment **[1mk]**

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[c]Why was heating necessary in the above experiment **[2mks]**

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[d]Write ionic equation of the reaction that occurred at;

[i]electrode M [1mk]

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[ii]Electrode N [1mk]

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[e]Name two substances that can be used as electrodes M and N [2mks]

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……

SCHOOL: ……..……..

ADM NO: …….. SIGN: ……. DATE: ……

FORM THREE

CHRISTIAN RELIGIOUS EDUCATION

TIME 2 ½ HRS

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						

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QUESTIONS

1 a) Identify seven literary forms used to write the bible. **(7mks)**

b) Give reasons why the bible is referred to as a library **(6mks)**

c) Identify ways in which the bible is misused today. **(7mks)**

2 a) From the story of Naboth's vineyard explain 4 commandments which king Ahab broke. **(8mks)**

b) Describe the contest between prophet Elijah and the prophets of Baal at Mt. Carmel. **(7mks)**

c) What life skills do Christians need to use to fight corruption in Kenya. **(5mks)**

3 a) State the characteristics of true prophets in the old testament. **(7mks)**

b) Explain 4 differences between traditional African and old testament prophets. **(8mks)**

c) What lessons can Christians learn from the old testament prophets **(5mks)**

4 a) Outline Jesus teachings on the cost of discipleship Luke 14: 25 – 33 **(8mks)**

b) Give an account of the healing of the 10 lepers. Luke 17 : 11 – 19 **(7mks)**

c) Give reasons why Jesus continuously spoke about His coming death to his disciples. **(5mks)**

5 a) Give 6 reasons why Peter denied Jesus. **(6mks)**

b) Narrrate the testimony of the holy woman regarding the resurrection of Jesus Christ. Luke 24: 1 – 10 **(8mks)**

c) State the ways through which Christians in Kenya express their joy for the resurrection of Jesus. **(6mks)**

6 a) Explain the role of the holy spirit as taught by Jesus **(6mks)**

b) State the characteristics of love according to St.Paul 1cor 13: 4 – 8 **(8marks)**

c) Identify ways in which the gift of prophecy is abused in Kenya churches today. **(5mks)**

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……

SCHOOL: ……..……

ADM NO: …….. SIGN: ……. DATE: ……..

FORM THREE

ENGLISH PAPER 2

TIME: 2 HOURS

INSTRUCTIONS:

a). Write your name, class and Admission number in the spaces provided above.

b).Answer all the questions

c). All answers must be written in the space provided in this booklet.

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1.POETRY **(20 MKS)**

Read the poem below and answer the questions that follow.

ILLEGAL BREW

He was a man
Of favoured health,
Whose speech was clarity
A successful player
In the mysterious game
Of fluctuating life.

The beginning
Was only a few sips?
But each time,
He hit the fullness
Of bulging calabashes

Time pulled on;
His head entered a pot
And remained
Firmly stuck in;
His head flooding
With intoxicating
Currents of alcohol,
He is now the last
To leave the beer markets.

Despite floods of warnings
From families and friends,
He firmly transplanted
His young life
On the lip-burning
Illegal brew.

Of late,
His bowels have become
Visibly distended;
His breath short
And shallow,
He also drags thickly
Sollen limbs.

Beyond despair,
He sees the leveler coming
To add him to a list
Like some heedless neighbor
Who perished the same way.

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Questions

i) What is the poem about? **(3mks)**

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

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3. Describe the current condition of the man in the poem. **(3mks)**

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4.Identify and illustrate any two stylistic devices used in the poem. **(4mks)**

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5. What does the poet mean by;

"Each time he hit the fullness of the bulging calabashes." **(2mks)**

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6.Explain the contrast brought out in the first and last stanza in the poem. **(2 mks)**

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7.Describe the tone of the poem. (2mks)

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8.Explain the meaning of the following words as used in the poem. (2 mks)

i) Distended-

……

……

……

ii) Heedless –

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2.READ THIS EXCERPT AND ANSWER THE QUESTIONS 20MKS

A DOLL'S HOUSE

Read the excerpt below and then answer the questions that follow

Mrs. Linde: Yes, that was what I was thinking of.
Nora: He must, Christine. Just leave it to me; I will broach the subject very cleverly- I will think of something that will please him very much. It will make me so happy to be of some use to you.

Mrs. Linde: How kind you are, Nora, to be so anxious to help me! It is doubly kind of you, for youknow so little of the burdens and troubles of life.

Nora: I -? I know so little of them?

Mrs. Linde: (Smiling) My dear! Small household cares and that sort of thing! - You are a child,Nora.

Nora: (tosses her head and crosses the stage) You ought not to be so superior,
Mrs. Linde: No?
Nora: You are just like the others. They all think that I am incapable of anything really serious-
Mrs. Linde: Come, come –
Nora: - that I have gone through nothing in this world of cares.
Mrs. Linde: But, my dear Nora, you have just told me all your troubles.
Nora: Pooh! – those were trifles. (Lowering her voice) I have not told you the important thing.
Mrs. Linde: The important thing? What do you mean?
Nora: You look down upon me altogether, Christine – but you ought not to. You are proud, aren't you, of having worked so hard and so long for your mother?

Mrs. Linde: Indeed, I don't look down on anyone. But it is true that I am both proud and glad to think that I was privileged to make the end of my mother's life almost free from care.
Nora: And you are proud to think of what you have done for your brothers?
Mrs. Linde: I think I have the right to be.
Nora: I think so, too. But now, listen to this: I too have something to be proud and glad of.
Mrs. Linde: I have no doubt you have. But what do you refer to?
Nora: Speak low. Suppose Torvald were to hear! He mustn't on any account – no one in the world must know, Christine, except you.

Mrs. Linde: But what is it?
Nora: Come here. (Pulls her down on the sofa beside her.)
Now I will show you that I too have something to be proud and glad of.

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Questions

a) What does Mrs. Linde refer to when she says "that was what I was thinking of"? **(2mks)**

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b) How do you compare Mrs. Linde's reference to Nora as a child and Torvalds Helmer's of her from the text? **(2mks)**

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c) Describe characters of: **(4mks)**

i) Mrs. Linde:

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ii) Nora:

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d) What is Mrs. Linde's attitude towards Nora? **(2mks)**

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e) From your knowledge of the text, why does Nora refuse to tell her secret to her husband? **(3mks)**

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f) Rewrite the following in reported speech **(2mks)**
Nora: You look down upon me altogether, Christine – but you ought not to .

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……

g) What is ironical about Nora's assertion that 'no one in the world must know, Christine, except you.' And what does this reveal about Nora's character? **(3mks)**

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h) Explain any aspect of style inherent in the above excerpt. **(2mks)**

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i) Identify and illustrate any theme evident in this excerpt **(2mks)**

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j) Change the sentence below into a interrogative one. **(1mk)** I think I have the right to be.

……

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k) Explain the meaning of the following expressions as used in the passage. **(2mks)**

i) Broach – ii) Look down on

……

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3.GRAMMAR 20 MKS

1.**Rewrite the following sentences according to the instructions given after each.**

a) He crawled like a snake and moved towards the dimly lit house.

(Begin: Crawling……)

……

……

……..

b) Go out and warn them. (supply a question tag)

……

c) Mr Munyaga is teaching Mathematics. Rewrite beginning: Mathematics ……..

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……..

d) "What are you waiting for now?" Mary asked.(Rewrite in reported speech)

……

……..

e) My students don't drink. My students don't smoke. (Join into one sentence using neither…….)

……

……..

iii) **Fill in the blanks with the correct preposition (3mks)**

a) Jane has a special liking **……**mathematics.

b) I have placed the coffee table**……**the shade of that tree over there.

c) My sister is good **……** swimming.

iv) **Fill in the spaces below with little, a little, few, a few)**

a) The demand he placed before us left us with**……**options but to yield.

b) Since I was punctual, I found **……..**people had already gathered

c) Kamau is diabetic so he uses**……**sugar in his tea.

d) ……...respect is all that is needed for a student to excel.

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v) Fill in the blanks in the following sentences with the type of connectors shown in brackets. (3mks)

a) **……**the hot weather, the scouts walked twenty kilometers. (contrast)

b) Many insects **……...** the praying mantis, can fly (illustration)

c) I was exhausted **……** I sat down to rest (consequence).

vi) Fill in the blanks spaces with the correct form of the words in the brackets.

a) This is the **……**of all the sums. (easy)

b) He did not know the reason for his**……... (**dismiss)

c) It was never her **……**to start the quarrel (intent)

vii) **Fill in the blank spaces with the most appropriate choice from the ones provided. (3mks)**

a) Odongo introduced Lewa and **……** (her, she) to his father.

b) Mrs Ribe sent two students, **……** (I, me) and John out of her class.

c) We are better than **……. (**they, them)

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……..

SCHOOL: ……....……

ADM NO: …….. SIGN: ……. DATE: …….

FORM THREE

GEOGRAPHY

TIME: 2 HOURS 45 MINUTES

INSTRUCTIONS:

a). Write your name, class and Admission number in the spaces provided above.

b).Answer all the questions

c). All answers must be written in the space provided in this booklet.

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SECTION A

1. a) Name two parts that make up the crust. **(2 mks)**

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……..

b) State three characteristics of mantle. **(3 mks)**

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2. a) State three characteristics of sedimentary rocks. **(3 mks)**

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b) Give two examples of chemically formed sedimentary rocks. **(2 mks)**

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3. a) Name two scales used to measure the intensity of an earthquake. **(2 mks)**

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b) Give three natural causes of earthquake. **(3 mks)**

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4. a) Differentiate between magma and lava. **(2 mks)**

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b) Name three intrusive volcanic features. **(3 mks)**

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5. a) What is mass wasting? **(2mks)**

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b) Give three processes of slow mass wasting. (3 mks)

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SECTION B

Attempt all questions.

6. Study the map of Oyugis 1:50,000 (Sheet 130/1) provided and answer the following questions.

a) i) Name the title of adjoining sheet to the North and East of Oyugis map. **(2 mks)**

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……..

ii) Give the four grid reference of Achoro Dam in the map. **(2 mks)**

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iii) Measure the distance of the loose surface road from the junction in the grid square (7723) to the junction in the grid square (7633) near Rangwe Market. **(2 mks)**

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b) Describe the drainage of the area covered by the map. **(4 mks)**

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c) Citing evidence from the map, give three economic activities. (3 mks)

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d) Draw a cross-section along Northings 43 and between Easting 77 to 81. Use vertical scale of 1cm rep. 50m. **(4mks)**

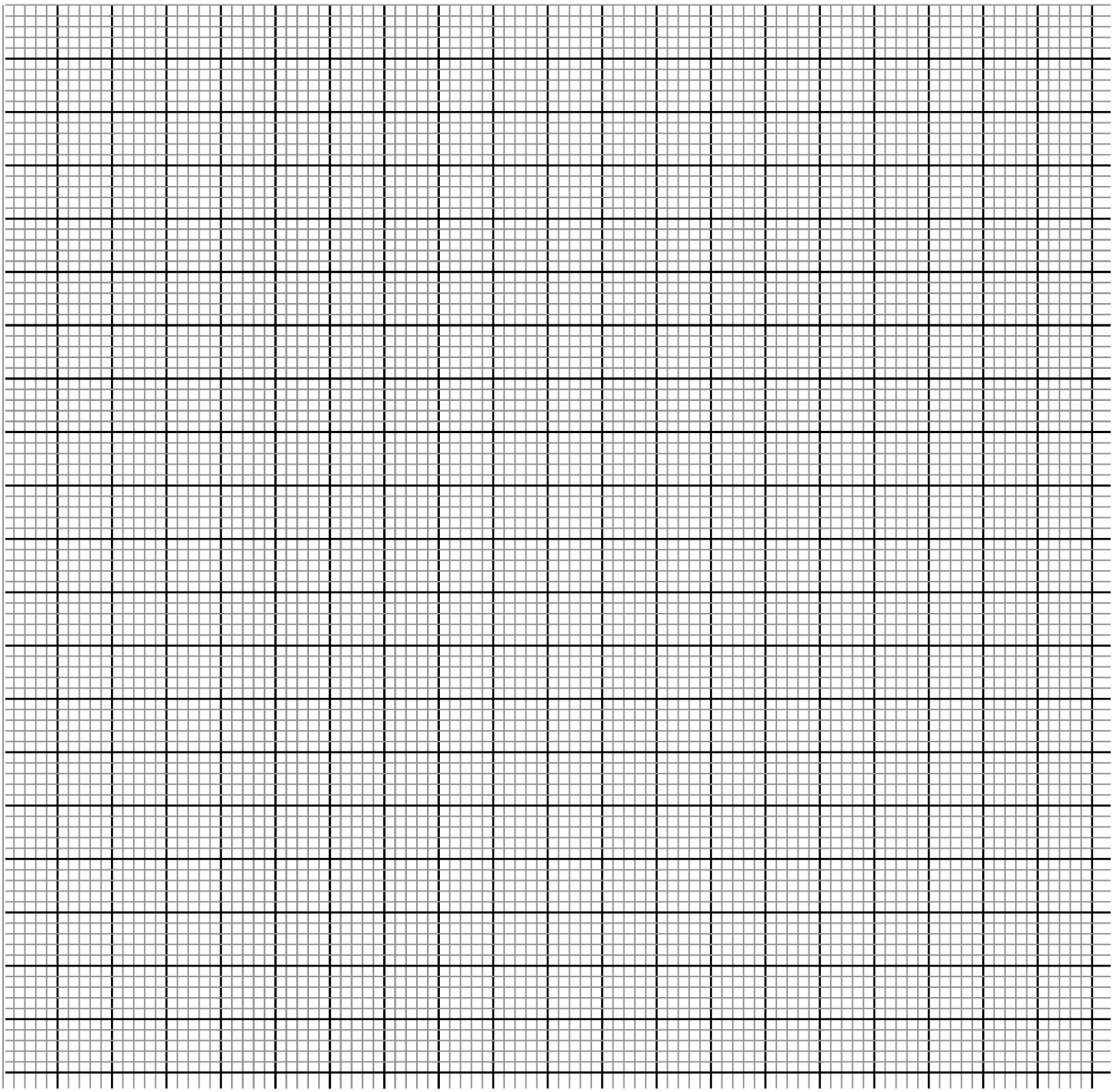
On it indicate:

i) River **(1mk)**

ii) Hill **(1mk)**

iii) Road **(1mk)**

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7. a) Name three agents of denudation. **(3 mks)**

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b) Explain how the following factors affect the rate of weathering.

i) Nature of the rock **(2 mks)**

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ii) Plants and animals **(2 mks)**

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c) Explain three ways in which soil creep occurs. **(3 mks)**

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d) i) What is mass wasting? **(2 mks)**

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ii) State three factors that influence mass wasting. **(3 mks)**

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8. a) Name three methods of mining. **(3 mks)**

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b) State the countries where the following minerals are mined in East Africa. **(3 mks)**

i) Fluorspar – **……**

ii) Copper – **……..**

iii) Diamond – **……..**

c) Explain three ways in which soda ash has contributed to the economy of Kenya. **(6 mks)**

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d) State three ways in which mining derelicts can be reclaimed. **(3 mks)**

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

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b) Identify three activities that may be undertaken in your school to conserve trees. **(3 mks)**

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c) Name two forest reserves in the coastal region of Kenya. **(2 mks)**

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d) Explain four problems facing forestry in Kenya? **(8 mks)**

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10. a) Name two dormant volcanoes in Kenya. **(2 mks)**

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b) Describe how the following features are formed.

i) A sill **(3 mks)**

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ii) A caldera **(4 mks)**

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c) Explain three ways in which volcanic mountains positively influence human activities. **(6 mks)**

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……..

SCHOOL: ……....……

ADM NO: …….. SIGN: ……. DATE: ……..

FORM THREE

HISTORY

TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS:

a) This paper consists of three sections**: A, B,** and **C.**

b) Answer **all** the questions in section **A**, **three** questions in section **B** and **two** questions from section **C**.

c) Answers to all questions should be written in the answer booklet provided.

SECTION	QUESTIONS	SCORE
A	1- 17	
B	18	
	19	
	20	
	21	
C	22	
	23	
	24	
	TOTAL	

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SECTION A **(25 MARKS)**

Answer <u>ALL</u> questions in this section

1.Give two reasons why there is need for a government. **(2 mks)**

2.State two ways in which the Southern Cushites influenced the Bantu. **(2 mks)**

3.Give one early visitor to the Kenyan coast before 1500 AD **(1 mk)**

4.Give the main reason why the Portuguese conquered East Africa so early. **(1 mk)**

5.Define the term national integration **(1 mk)**

6.State the main reason for calling the Aglo-German Agreement of 1886. **(1 mk)**

7.Give two ways in which Kenyan citizens participate in running the government. **(2 mks)**

8.Identify any two groups that monitor human rights in Kenya **(2mks)**

9.Name two Palaeolithic periods/stone age periods. **(2 mks)**

10. Identify one agricultural practices used in Europe before agrarian revolution. **(1 mk)**

11. How does river Nile contribute to the development of early Agriculture in Egypt. **(2mks)**

12. Name one kingdom in West Africa that contributed to the development of Trans-Saharan trade. **(1 mk)**

13. Give two reasons why Africans slaves were preferred during the trans-Atlantic slave trade. **(2 mks)**

14. State one advantage of the telephone as a means of communication. **(1 mk)**

15. Give two reasons why the British used company rule to administer African colonies. **(2mks)**

16. Give the meaning of the term 'scramble for Africa' **(1 mk)**

17. Name one treaty that was signed between Lewanika and the British. **(1 mk)**

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SECTION B. (45 MARKS)

Answer any <u>THREE</u> questions in this section

18. (a) State three methods used to acquire slaves from west Africa during the Trans-Atlantic trade. **(3 mks)**

(b) Explain five negative impact of modern forms of communication. **(10 mks)**

19. (a) Give three reasons that made the European from Britain to migrate to North America from the 17th century. **(3 mks)**

(b) Explain six characteristics of the industrial revolution in Europe. **(12 mks)**

20. (a) Give five duties of Kabaka among the Buganda. **(5 mks)**

(b) Explain the economic activities of the Shona Kingdom. **(10 mks)**

21. (a) Identify three methods the European powers used to acquire colonies in Africa. **(3 mks)**

(b) Explain six results of maji-maji rebellion of 1905-1907 **(12 mks)**

SECTION C (30 MARKS)

<u>Answer any TWO questions in this section</u>

22. (a) Using specific examples, name three groups into which the Nilotes are divided**. (3 mks)**

(b) Explain the social organisation of the maasai. **(12 mks)**

23. (a) identify the reason why Seyyid Said moved his capital from muscat to Zanzibar in 1840 (3 mks)

(b) Explain the reasons that led to the decline of the Portuguese rule along the East African coast. **(12 mks)**

24. (a) Give three duties given by the European power to the imperial British East Africa company (IBEAC) in Kenya. **(3 mks)**

(b) Explain the reasons why the Maasai collaborated with the British in Kenya. **(12 mks)**

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……..

SCHOOL: ……....……

ADM NO: …….. SIGN: ……. DATE: …….

FORM THREE

441/1 HOME SCIENCE THEORY

TIME: 2 HOURS

Instructions to candidates:

3.This paper consists of three sections A, B and C.

4.Section A and B are compulsory.

5.Choose any other **two** questions in section C.

SECTION A: (40 MARKS)

Answer all the questions.

1.Give two reasons why Formica is commonly used in covering working surfaces at home. **(2mrks)**

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2.State three factors to consider when setting a table. (3mrks)

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3.Explain three factors that determine an individual's nutrient requirement. **(3mrks)**

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4.Write down three rules to observe in order to lower costs when shopping. **(3mrks)**

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5.State three qualities you would look for when choosing tomatoes. **(3mrks)**

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6.Explain three roles of TBA (traditional birth attendant). **(3mrks)**

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7.Give two differences between electric and charcoal iron box. **(2mrks)**

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8.Suggest four methods of neatening raw edges of an open seam. **(2mrks)**

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9. Explain two benefits of consumer education to students. **(2mrks)**

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10. State four vaccines that every child should receive. **(2mrks)**

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11. What is the relationship between calcium and phosphorus and vitamin D in our bodies? **(2mrks)**

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12. Mention two ways of keeping the house free from household pests. **(2mrks)**

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13. Explain three benefits of attending postnatal clinic. **(3mrks)**

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14. What is the importance of a pressure cooker at home? **(2mrks)**

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15. Name three risk factors that can cause premature birth. **(3mrks)**

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16. Highlight three points on importance of planning meals. **(3mrks)**

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SECTION B: COMPULSORY **(20 MARKS)**

17. Your parents are away and you have been left in charge of the home. Using the knowledge and skills learnt in home science:

(a) Explain how you would launder your mother's viscose rayon dress. **(10mrks)**

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(b) Explain how you could improvise a broom to sweep an earthen floor of your mother's kitchen. (5mrks)

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(c) Describe the procedure you would use to clean a wooden cooking spoon you have used to prepare ugali. (5mrks)

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SECTION C: ANSWER ANY TWO QUESTIONS. (40 MARKS)

18. (a) Highlight four measures/steps to take to avoid suffocation and fire outbreak in case of gas leakage at home. **(4mrks)**

(b) Describe how you would go about managing an insect in the ear. **(6mrks)**

(c) Discuss three social needs of an expectant mother. **(6mrks)**

(d) List down four signs and symptoms of pregnancy during the first trimester. **(4mrks)**

19. (a) Draw laundry symbols to show the following:

(i) Dry in direct sunlight

(ii) Drip dry

(iii) Use hot iron

(iv) Do not dry clean

(b) Explain three dangers of getting pregnant when over 35 years. **(6mrks)**

(c) Give three reasons for wearing socks while in school. **(3mrks)**

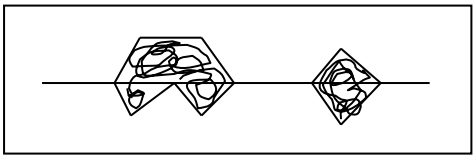
(d) Name three diseases/disorders associated with one's lifestyle. **(3mrks)**

20. (a) Label the following pattern marks. **(5mrks)**

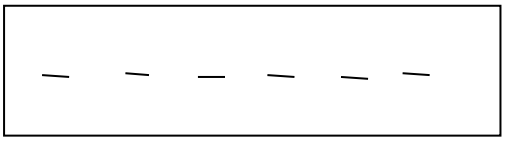
i)



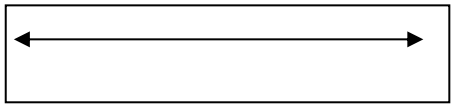
ii)



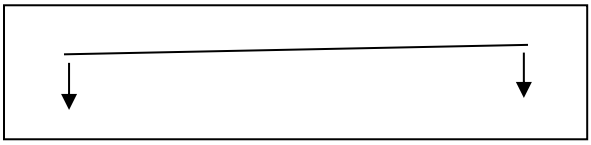
iii)



iv)



v)



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(b) List down five table etiquette that should be observed during meal times. **(5mrks)**

(c) State the use of the following laundry agents. **(5mrks)**

i) Washing soda

ii) Salt

iii) Starch

iv) Solvents

v)Ammonia

(d) Suggest five desirable properties of cotton fibre. **(5mrks)**

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

JINA: ……

SHULE: ……..……..

NAMBARIYAUSAJILI: …….. SAHIHI: ……. TAREHE: …….

KISWAHILI INSHA

KIDATO CHA TATU

MUDA: DAKIKA 50

Maagizo

Insha yako isipungue maneno 400.

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SWALI

Wewe ni Waziri Wa Usalama Wa Ndani katika nchi ya Kenya.

Andika hotuba utakayoitoa katika sherehe ya Sikukuu ya Jamhuri kuhusu mambo yanayoathiri umoja na utangamano katika taifa hili. Alama 20.

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

JINA: ……

SHULE: ……..……..

NAMBARIYAUSAJILI: …….. SAHIHI: ……. TAREHE: …….

KIDATO CHA TATU

MATUMIZI YA LUGHA NA FASIHI

MUDA: SAA 2

Maagizo

Jibu maswali yote katika sehemu ya ufahamu, isimujamii na matumizi ya lugha.

Chagua maswali mawili katika sehemu ya fasihi.

UFAHAMU **ALAMA 15**

Tunapoakisi hatua ambayo mfumo wa kiteknohama umepiga misamba, kizazi cha vichakazi (facebook) kimetoweka na kupisha kile cha kututumiwa (GMO). Sidhalilishi hivi vikembe na vijikembe vya kututumuliwa japo kunao wenye falfasa hasi kuhusu vikembe hivi. Vijetegemeo mji wao ja waso haya.Hivi vya kutitimuliwa vina mitindo anuai ya kujinakia.Kama wewe si kufu au lahiki yao basi wewe jua bayana kuwa umepitwa na wakati. Utembeapo katika vitongoji vya janibu hizi si Gitau hadi Kaanwa, si Thuchi hadi Mutuati...sisemi Mukothima, utapatana na vikembe hivi vya kututumuliwa. Barobaro hujivika magwanda yanayoonekana kama yatabambuka wakati wowote na kuacha wazi sehemu tunazotegemea.

Vijembe navyo huwa vimejisetiri nusu kwa vijigwanda ambavyo vimeundwa kutoka kwenye shashi. Wafahamu shashi?Kile kitambaa kidogo cha kupangusia pua. Japo mimi vizazi hivi huviona maridadi na anisi, ni yakini kwamba maadili yamewapaa kabisa. Maghulamu wa kukutumuliwa hutembea kwa miondoko au kwa kudakia ukipenda. Zamani nikiwa mdogo tulivaa kaptura na shati za kawaida.Tulijinakia kuchezea matope huku tukivaa nguo safi siku ya Dominika pekee.

Vikembe vya kututumuliwa daima vina vidubwasha maskioni vikiburudika kwa mahadhi ya miziki kutoka kwenye simu zao za ruhunu. Hata kikutane na nani au nani sharti ampishe njia.Enzi zetu mwalimu hakuwa

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akifanya mambo mengine kama vile kula aina fulani ya chakula sisemi hata kwenda haja. Ukipatana naye njiani wee! Sharti utafute mahali ujifiche mpaka mwalimu apite.Vikembe vya kututumuliwa huwa tunaviheshimu sana. Mara nyingi vitakuona vipi na huku vikembe na vijikembe hutembea huku vimepatikana kama mwanakima na mamake. Waso haya wana mji wao.

Ukikutana navyo njiani utatamani kurudisha saa yako ya maisha nyuma kidogo. Lakini ndugu, ujajani moshi, ukienda .. Hubagui baina ya vikembe na vijikembe kwani wote vipuli vimebanwa katika sikio moja na kama si moja kijikembe cha kututumuliwa huwa na kipuli kirefu kifikiapo hadi begani.Kijikembe hutembea huku kimesetiri miguu yake kwa jumu yake kwa jumu ambazo zimefika hadi kwenye goti. Na visigino je? Yuatembeahuku akihofu ardhi isibonyee au kuseteka.

Enzi zetu kila baada ya shughuli za shule jioni tulikuta faradhi za kila nui zatusubiri. Mojawapoilikuwa kuwapeleka mifugo malishoni. Kizungumkuti kilikuwa pale ambapo katika michezo yetu ya vijana, ng'ombe wataishia katika shamba la jirani. Jioni hiyo sharti uyatayarishe sisemi makalio kwa utovu wa tafsida Lakini mijeledi itazuru hapo si katiyi.

Vile vikembe vyetu vya kututumuliwa vitakuwa pengine kwenye runinga au kwenye simu zao za rununu na wakati mwingine vimepakata vipakatalishi huku vikibovya vidude hapa na pale. Kila shughuli yao huwa ya mwendo wa pole pole havina mchapuo. Vinyonge hivi si kama vya enzi ya mababu zetu ambao walikuwa wakichapa mpira juu na kuketi kunusa ugoro huku wakisubiri mpira urudi ndiposa waendelee na mchezo wao.
Vikembe vya kutumuliwa huupisha tu na kikiteleza na kuanguka kidogo basi, mchezo umekoma hadi kipelekwe si zahanatini Lakini katika hospitali kuu ya daraja la tano.

Kila jumapili jirani yangu alikuwa na zamu ya kushughulikia kichwa change kwa wembe wake. Hakuwa na shufaka au huruma ukipenda. Kichwa kilibaki kama kupe. Usishtuke kuviona vikembe vya kututumuliwa vichwa vyao vina ukwasi wa nywele si kipilipili bali kama za Bob Marley. Naona kana kwamba siku hizi kunz uhaba wa vinyoleo .

Sisemi kizazi kimetukinai, hata chembe. Ni kwa kiteule kwa hivyo tusikipurukushe au kukinyanyapaa. Kila uchao lawana zaradidiwa kuhusu kizazi hiki. Haya ni mambo mazito ja jabali na hivyo basi kinachobaki ni kukihusisha katika ushaui na nasaha. La sivyo sisi wenyewe ndio tutakuja kulio kilio cha mbwa mdomo juu.

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Maswali

a) Ipe taarifa hii anwani mwafaka. **(alama 2)**

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b) 'Kizazi chetu kimekosa maadili.' **(alama 3)**

Thibitisha kwa mujibu wa taarifa hii.

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c) Eleza tofauti nne ambazo mwandishi ameangazia kati ya kizazi cha zamani na kile cha kisasa. (alama 4)

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d) Mwandishi anamaanisha nini kwa : (alama 3)

i. ...umepitwa na wakati

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ii. ...vimeundwa kutoka kwenye shashi

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iii. mijiledi itazuru hapo si katiti

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e) Eleza maana za maneno haya kama yalivyotumiwa katika taarifa. (alama 3)

i. kujinaki

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ii. faradhi

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iii. tusikipurukushe

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MATUMIZI YA LUGHA ALAMA 35

(a) Ukizingatia sehemu ya kutamkia, mwinuko wa ulimi na hali ya mdomo, tofautisha sauti zifuatazo.

(alama 3)

/ *e* /, /i/ na /u /

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(b) Ukitolea mfano eleza aina **mbili** za miundo ya silabi katika Kiswahili. (alama 2)

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(c) Eleza maana ya mghuno katika lugha ya Kiswahili. (alama 1)

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(d) Ukitolea mfano mwafaka, fafanua majukumu yoyote **manne** ya viambishi awali. **(alama 4)**

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(e) Nomino zifuatazo zinapatikana katika ngeli zipi? **(alama 3)**

i) Chumvi:……

ii) Nywele:……....

iii) Mafuta:……..

(f) Tunga sentensi yenye muundo wa:

N + V + T + H + N + E + U + T. **(alama 4)**

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(g) Yakinisha katika umoja: **(alama 2)**

Msingalivumilia nyakati zile msingalipata zawadi kubwa.

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(h) Andika katika udogo.

Jijipu lilipasuka lenyewe. **(alama 2)**

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(i) Ukitolea mfano fafanua njia zozote **tatu** zinazotumiwa katika uundaji wa maneno. **(alama 3)**

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(j) Tunga sentensi kubainisha matumizi ya vivumishi vya nomino katika ngeli ya U – I; katika umoja na wingi.

(alama 2)

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(k) Ukitolea mfano mwafaka, eleza tofauti iliopo katika kauli zifuatazo.

Kutendeana na kutendana. **(alama 2)**

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(l) Andika katika usemi wa taarifa:

"Nataka ufikirie sana juu ya maisha yako ya ndoa. Sitaki uishi maisha yasiyo na mwelekeo."Babu alinishauri.

(alama 3)

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(m) Kwa kutoa mfano, eleza matumizi mawili ya alama ifuatayo: alama 2

Ritifaa

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(n) Tunga sentensi kwa kutumia kivumishi cha sifa kisichoambishika. **(alama 2)**

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(o) Kanusha sentensi ifuatayo bila kutumia kiunganishi. (alama 2)

Iwapo mvua itanyesha wakulima watapanda mapema.

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ISIMUJAMII ALAMA 10

Onyesha njia kumi zinazotumiwa kueneza Kiswahili kote duniani katika karne ya sasa.

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a. FASIHI SIMULIZI

a) Taja aina mbili za Fasihi (alama 2)

b) kwa kutolea hoja nane Tofautisha kati ya Fasihi ulizotaja hapo juu. (alama 8)

c) Eleza mambo matano yanayochangia kubadilika kwa fasihi simulizi (alama 10)

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……

SCHOOL: ……..……..

ADM NO: …….. SIGN: ……. DATE: ……

END TERM 2

Kenya Certificate of Secondary Education (K.C.S.E.)

FORM THREE

MATHEMATICS

TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS TO CANDIDATES

1.Write your name, class and Admission Number in the spaces provided above.
2.The paper consists of two sections. Section I and Section II.
3.Answer **ALL** the questions in **Section I**.
4.Answer **only five** questions only in **Section II**.
5.All answers and working must be written on the question paper in the spaces provided below each question.
6.Marks may be given for correct working even if the answer is wrong.
7.Negligence and slovenly work will be penalized
8.Non programmable silent electronic calculator and KNEC Mathematical tables may be used except where stated otherwise.

FOR EXAMINER'S 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	

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SECTION I (50 Marks)

Answer all the questions in this section.

1.Evaluate $\frac{-2(4-7)+8(-5+3)}{-5+(-8+2)}$ **(3 marks)**

2.Without using logarithm tables or calculator, evaluate **(3 marks)**

$$\frac{64000^{2/3} \times 36^{-1/2}}{5^3 \times 13^0 \times 30^{-2}}$$

3.Use the table of reciprocals to find $\frac{1}{0.582}$, hence evaluate **(4 marks)**

$$\frac{\sqrt[3]{0.000216}}{0.582}$$

4.Mwiti a Kenyan trader bought goods from Japan worth 5,500,000 Japanese yen. Custom duty of 20% was charged on the value of goods on their arrival in Kenya. If the exchange rates were

1 US dollar =115 Japanese yen

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1 US dollar= 74 Kenyan shillings

Calculate the duty paid in Kenyan shillings. **(3 marks)**

5.Simplify **(3 marks)**

$$\frac{9x - 4x^2}{2x^2 - 3x - 9}$$

6.If$\cos x = 0.8$, evaluate $\tan x - \sin x$ without using tables or calculators. **(3 marks)**

7.Solve the equation by completing the squares. **(3 marks)**

$2x^2 + 4x - 9 = 0$

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8. Use logarithms to evaluate **(4 marks)**

$$\sqrt[4]{\frac{(0.8932)^2 \times (582.3)^{1/3}}{(69.35)^{1/2}}}$$

9. Solve the simultaneous equation **(3 marks)**

$xy = 4$

$x + y = 5$

10. Simplify **(3 marks)**

$$\frac{9}{2\sqrt{3}}$$

11. If the position vectors of A and B are $\begin{pmatrix} 3 \\ -5 \end{pmatrix}$ and $\begin{pmatrix} 2 \\ 1 \end{pmatrix}$ respectively. Find $|AB|$ **(3 marks)**

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12. A frustum of height 24cm is obtained when a small cone of height 8cm is cut off from a larger cone. The smaller cone has a volume of 200cm^3. Determine the volume of the frustum.

(3 marks)

13. A liquid has a mass of 7.5kg and a density of 0.25g/cm^3. Calculate the volume of the liquid in litres.

(3 marks)

14. A spherical metal ball has a radius of 3.5cm.if it has a density of 7.2g/cm^3 find its mass in grams

(3 marks)

15. By correcting each number to one significant figure, approximate the value of (788 X 0.006). Hence calculate the percentage error arising from this approximation **(3 marks)**

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16. The sum of the interior angles of a regular polygon is 1800^0. Find the size of each exterior angle.

(3 marks)

SECTION II (50 MARKS)

Answer any FIVE Questions ONLY from this section

17. The following table shows the height to the nearest centimeters of some maize plants in a research farm

Height (cm)	80-84	85-89	90-94	95-99	100-104	105-109	110-104	105-119
frequency	5	14	16	17	24	12	11	4

a) State the modal class (1 mark)

b) Calculate to 2 decimal places

i) The mean height (5 marks)

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ii) The median height (4 marks)

18. A town is 90km from a college. At 9:30a.m a lecturer left the college and drove towards the town at an average speed of 60km/h. At 9:45a.m, Nalonja left the town and cycled towards the college at an average speed of 30km/h

a) Find

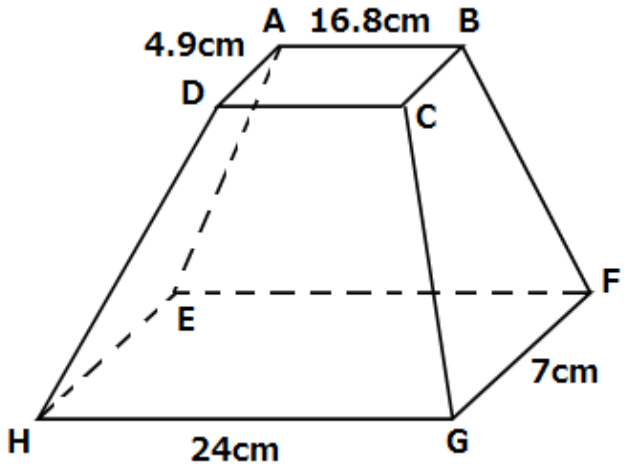
(i) The distance from the college to the point where Nalonja met the lecturer **(4 marks)**

(ii) The time when the two met **(2 marks)**

b) Atieno started driving from the collage at 10:00a.m she met Nalonja 10 minutes after the lecturer met him. Calculate Atieno's average speed **(4 marks)**

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19. The figure below shows a solid frustum of a right pyramid with a rectangular base EFGH measuring 24cm by 7cm. the frustum was obtained by cutting off a small pyramid along plane ABCD that is parallel to base EFGH. Plane ABCD measures 16.8cm by 4.9cm, and is exactly seven tenths way up the vertical height of the original pyramid.



Given that the original pyramid had a slant edge of 32.5cm, find

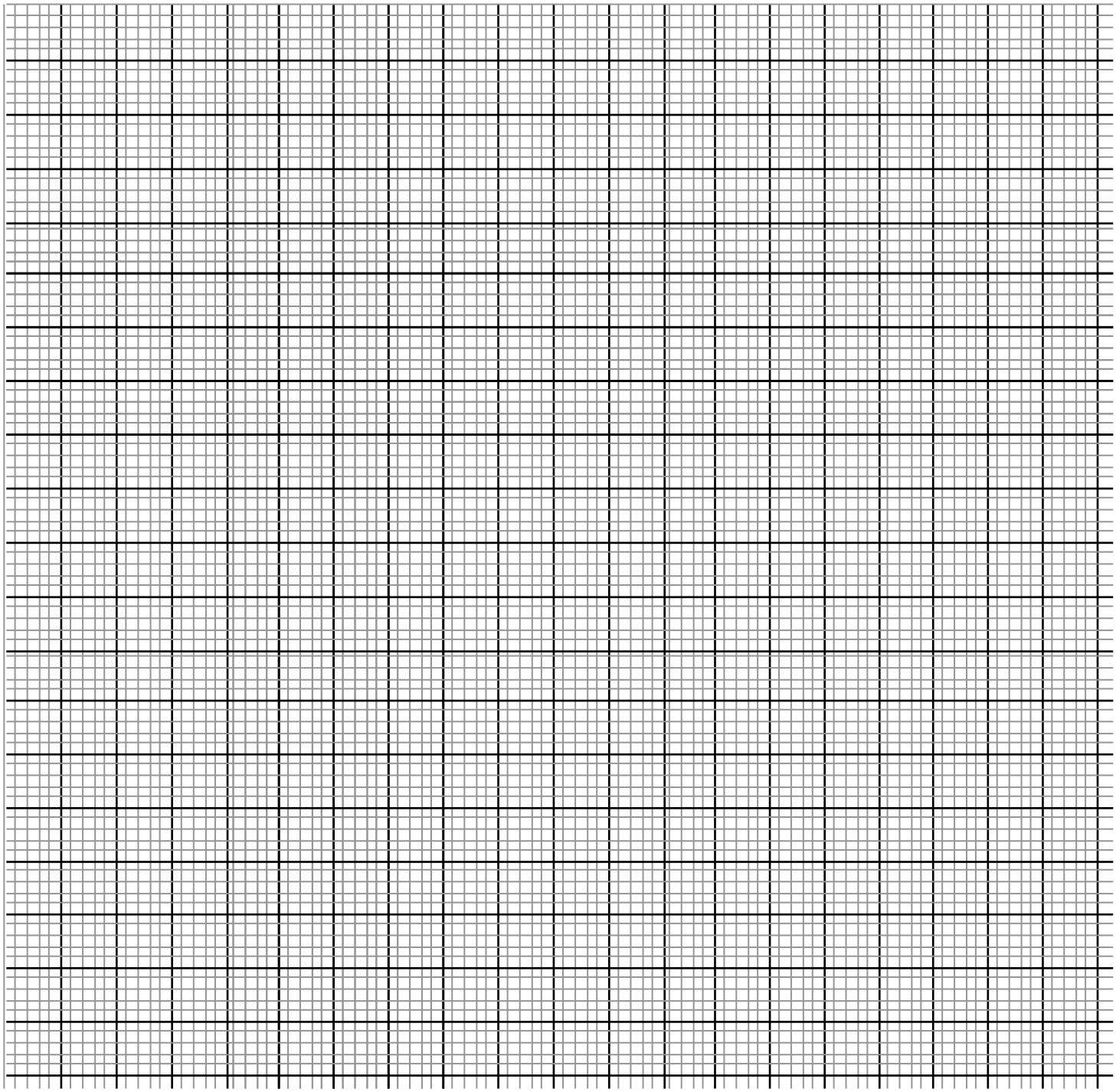
a) The perpendicular height of the frustum **(4 marks)**

b) The volume of the frustum **(3 marks)**

c) The surface area of the original pyramid **(3 marks)**

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20. (a) On the grid provided draw the quadrilateral PQRS whose vertices are P(-5,4), Q(-3,4), R(-5,3) and S(-4,3) **(1 mark)**



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(b) On the same grid draw;

i) P'Q'R'S' the image of PQRS under a reflection in the line y=0 (2 marks)

ii) P''Q''R''S'' the image of P'Q'R'S' under a rotation of $+180^0$ about (0,0) **(2 marks)**

iii) P'''Q'''R'''S''' the image of P''Q''R''S'' under an enlargement scale -2, centre (4,0)

(2 marks)

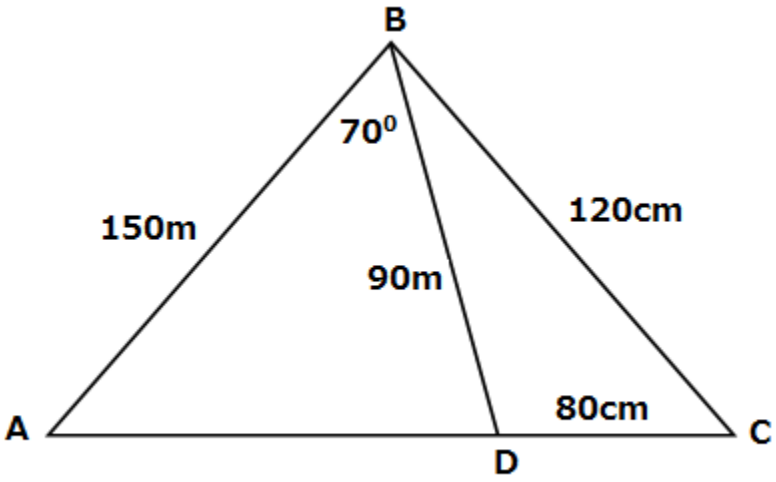
(c) Name the quadrilaterals that are

i) Directly congruent **(1 mark)**

ii) Oppositely congruent **(2 marks)**

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21. The figure below is that of Wesonga farm ABC. He divides the farm such that BCD is the homestead and ABD is cropped land ABD=70^0, AB= 150 m, BC=120m, and BD=90m.



Find

a) Distance AD **(2 marks)**

b) Angle BAC **(3 marks)**

c) Angle DBC **(3 marks)**

d) The area of the cropped land **(2 marks)**

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22. B is 102km on the bearing of 112° from A. C is 94km on the bearing of 062° from B D is 073° from A and 336° from C.

(a) Using a scale of 1cm to represent 20km, draw a diagram to show the positions of A, B, C and D **(6 marks)**

(b) Using your diagram, determine;

i) The bearing of B from D and A from C. **(2 marks)**

ii) The distance AC and BD **(2 marks)**

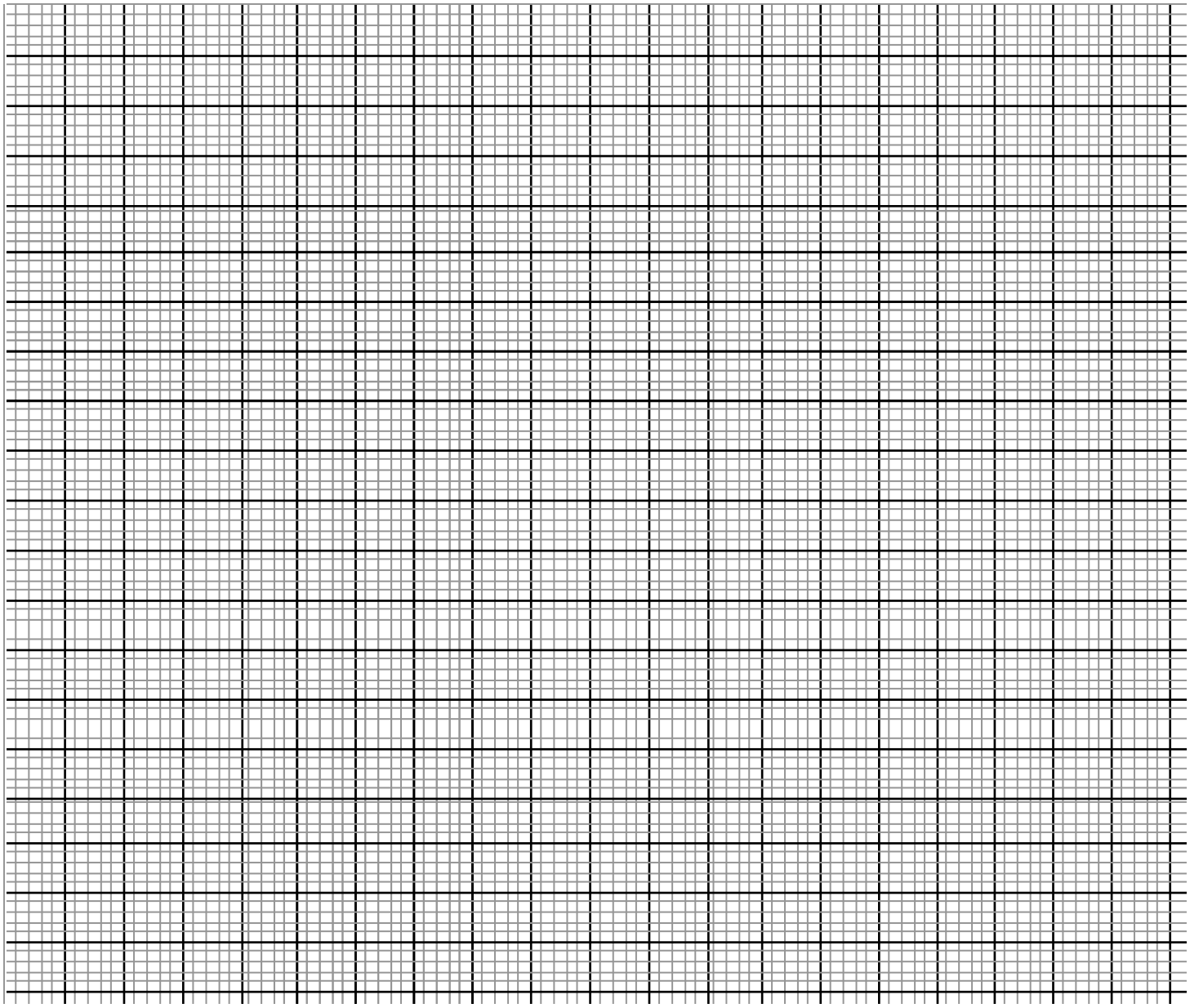
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23. (a) (i) Fill the table below for the function.

$y = 2x^2 + 5x - 12$ for $-8 \leq x \leq 4$ **(2 marks)**

x	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4
y	76					-9				-5			40

(ii) Using the table, draw the graph of the function $y = 2x^2 + 5x - 12$. Use the scale 1cm to represent 1 unit on the x-axis and 1cm for 10 units for the y – axis **(4 marks)**



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(b) Use the graph drawn above to solve the following equations.

(i) $2x^2 + 5x - 12 = 0$ **(2 marks)**

(ii) $3 - 7x - 3x^2 = 0$ **(2 marks)**

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24. Two lines L_1 with equation $2y - 3x - 6 = 0$ and L_2 with equation $3y + x - 20 = 0$ intersect at point A.

a) Find the co-ordinates of A **(3 marks)**

b) A third line L_3 is perpendicular to L_2 at point A. find the equation of L_3 in the form $y = mx + c$ **(3 marks)**

c) Another line L_4 is parallel to L_1 and passes through $(-1,3)$, find the x and y intercepts of L **(4 marks)**

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BRILLIANT STUDENTS FORM 3 END TERM 2 HYBRID EXAMS

NAME: ……

SCHOOL: ……..……..

ADM NO: …….. SIGN: …….. DATE: ……

FORM THREE

PHYSICS

2 HOURS

INSTRUCTIONS TO LEARNERS

1. This paper has two sections A and B. Answer all questions in both sections.

2. Show your working in the spaces provided.

3. Take g = 10N/kg where needed to use it.

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 13	25	
	14	15	
B	15	11	
	16	10	
	17	10	
	18	09	
	TOTAL SCORE	80	

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SECTION A: **(25 MARKS)**

1. Define a wave. **(1 mk)**

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2.Briefy explain how sound is produced ? **(1 mk)**

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3. Name 2 other types of flow other than turbulent flow. **(2 mks)**

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4. State Hooke's law **(1 mk)**

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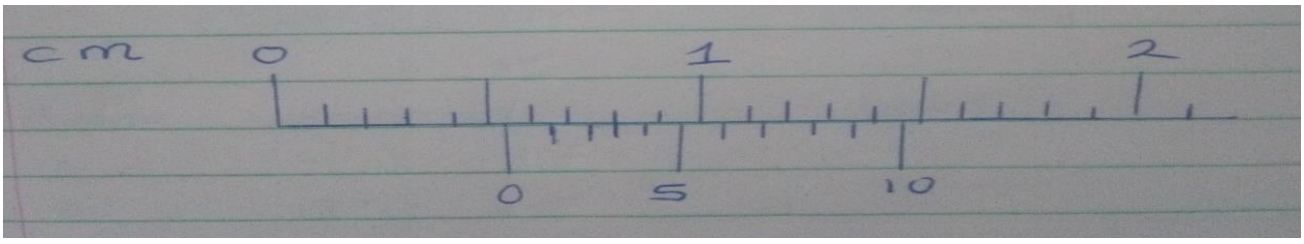
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5. A Bunsen burner has a wide and heavy base. Explain. **(1 mk)**

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6. What is the reading shown by the Vernier calipers below. **(2mks)**



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7. Name 3 factors that affect the strength of an electromagnet. (3 mks)

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8. An object is placed 30 cm from a concave mirror of focal length 20cm. Calculate:

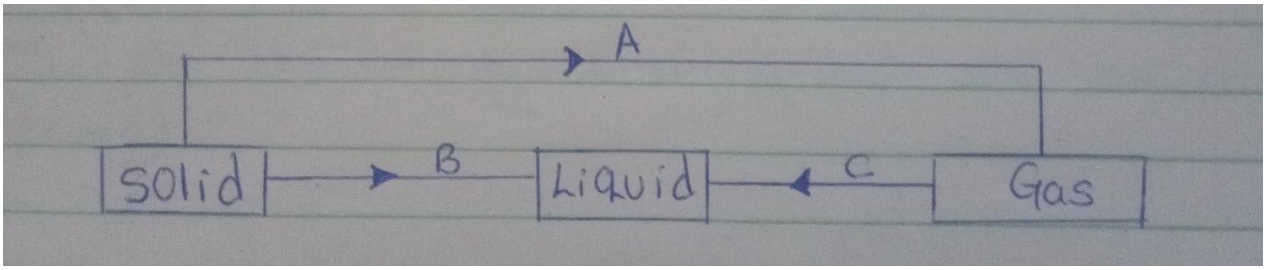
a) The image position. **(2 mks)**

b) The magnification. **(1 mk)**

9. Calculate the amount of current flowing through a bulb if 300 coulambs of charge flows through It in 3 minutes. (2 mks)

10. A girl stands 2m infront of a plane mirror. Calculate the distance between the girl and her image.(3 mks)

11) Use the figure below to answer the question below



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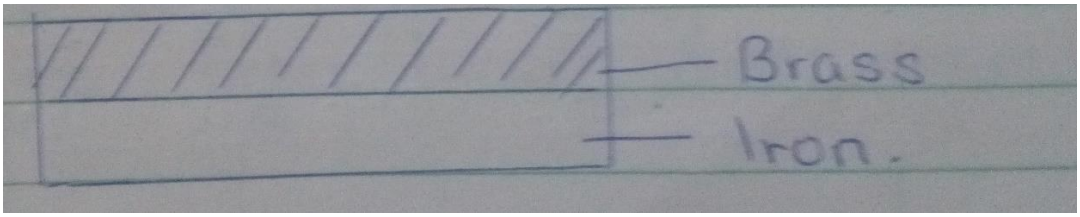
Name processes **(3 mks)**

A.....

B.....

C.....

12. The figure below show a bimetallic strip.



On heating brass expands more than iron. Draw it if it is cooled. **(2 mks)**

13. A spring stretches by 8mm when supporting a load of 2N. By how much would it stretch when supporting a load of 5N. **(3 mks)**

SECTION B (55 MARKS)

14. a) Differentiate between distance and displacement. (1 mk)

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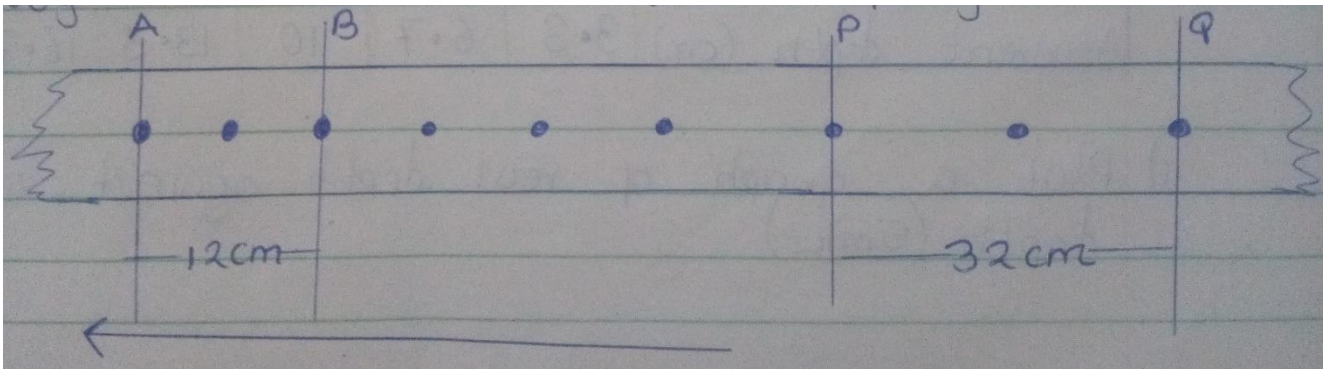
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b) A car starts from rest and accelerates uniformly to 15m/s in 5 seconds. It then continues at that speed for 40 seconds and then decelerates uniformly to a stop in 3 seconds. **(3 mks)**

ii) Determine the distance covered by the car. **(3 mks)**

iii) Find the average speed of the car during the journey. (2 mks)

c) The figure below shows the motion of a ticker – tape through a ticker whose frequency is $100H_z$.



Determine

i) Velocity at

I)AB **(2mks)**

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II) PQ **(2 mks)**

ii)Acceleration of the tape. **(2mks)**

ii) From the graph determine the refractive index of a substance. **(2 mks)**

15. Define the refractive index of a substance **(1mk)**

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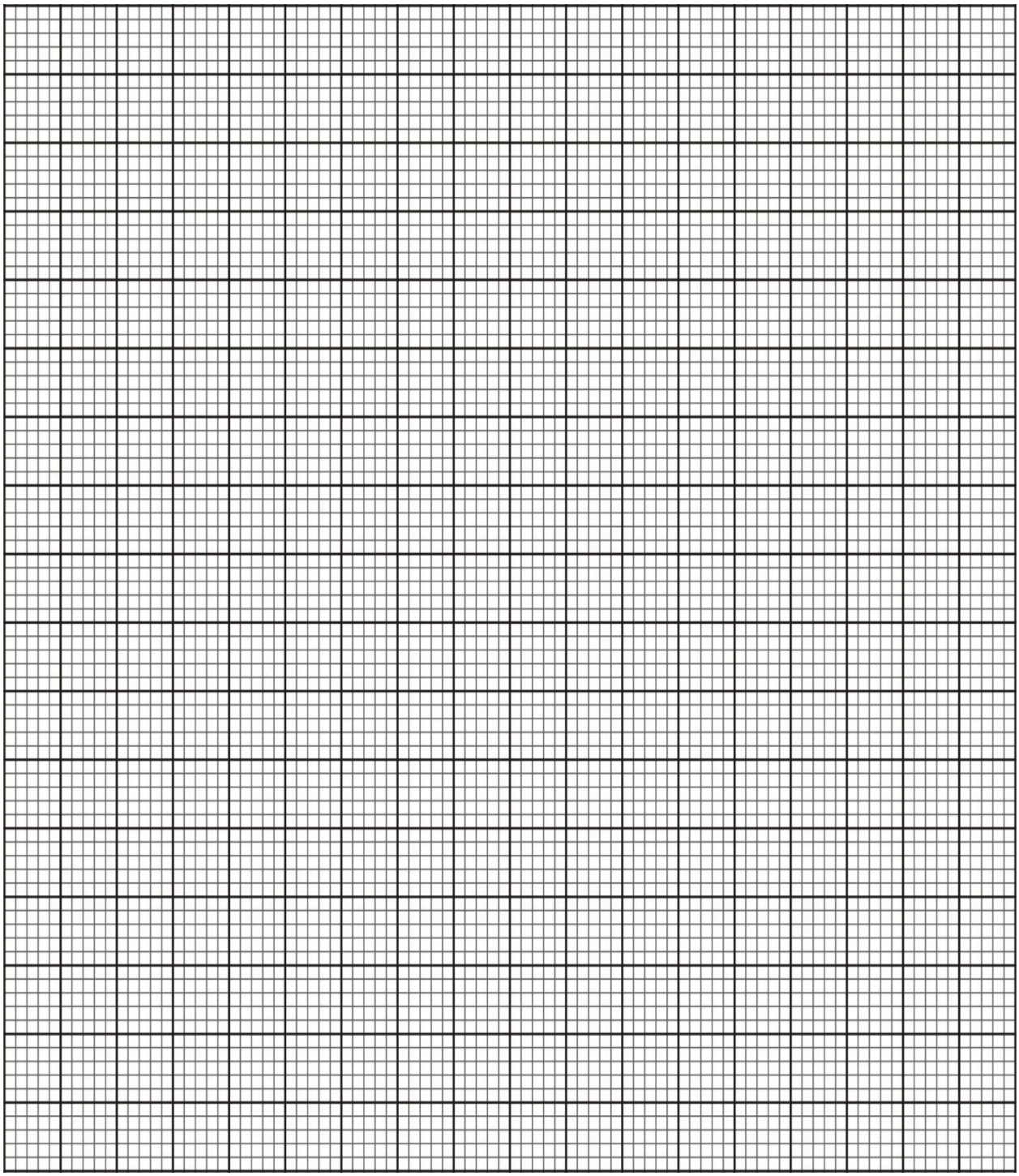
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b) In an experiment to determine the refractive index in a liquid, the liquid was poured into a measuring cylinder. A pin was placed at the bottom of the cylinder and another pin was used tro locate the apparent position of the first pin. The real and apparent depth were measured.The experiment was repeated with other values .The table below shows the results obtained.

Real depth(cm)	5	10	15	20	25
Apparent depth(cm)	3.3	6.7	10	13.3	16.7

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i)Plot a graph of real depth against apparent depth **(5mks)**



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ii) From the graph, determine the refractive index of the liquid **(2mk)**

c) The figure below shows a ray of light incident on a glass-air interface.

Given that the refractive index of glass is 1.6, determine angle **(3 mks)**

16.a) State Newton's first law of motion. **(1 mk)**

b) Explain how a passenger travelling in a vehicle experiences inertia **(3 mks)**

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c) A Trolley of mass 1.4kg moving at 0.8m/s on a frictionless horizontal surface was acted on by a force of 0.7N. If the resulting speed of the trolley was 1.7m/s.

Determine :

i) The change of momentum of the trolley. **(2 mks)**

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ii) The time interval the force acted on the trolley. **(2 mks)**

iii) The acceleration of the trolley. **(2 mks)**

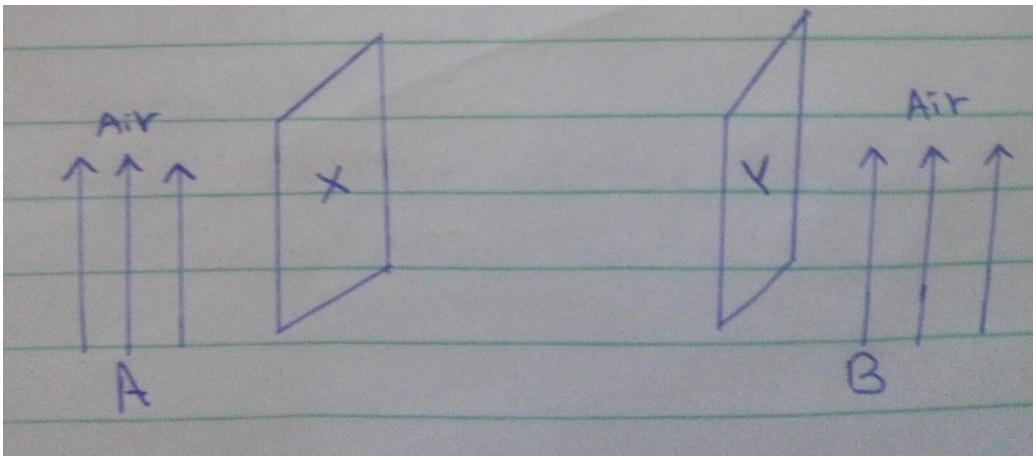
17a) Define a turbulent flow. **(1 mk)**

b) Water flows through a pipe of length 0.3m and of uniform cross sectiorial area $20cm^2$ in 2 seconds,
Calculate the rate of flow. **(3 mks)**

c) Water flows through a horizontal pipe of cross-sectional area $36cm^2$. The speed of the water is 6m/s but this speed increases to 9,/s in a constriction in the pipe.
What is the area of this narrow part of the pipe? **(3 mks)**

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d) The figure below shows two light sheets of paper x and y arranged as shown.



Air is blown at the same speed and time at points A and B. State and explain what is observed. **(3mks)**

18. a) Define a pulse. **(1 mk)**

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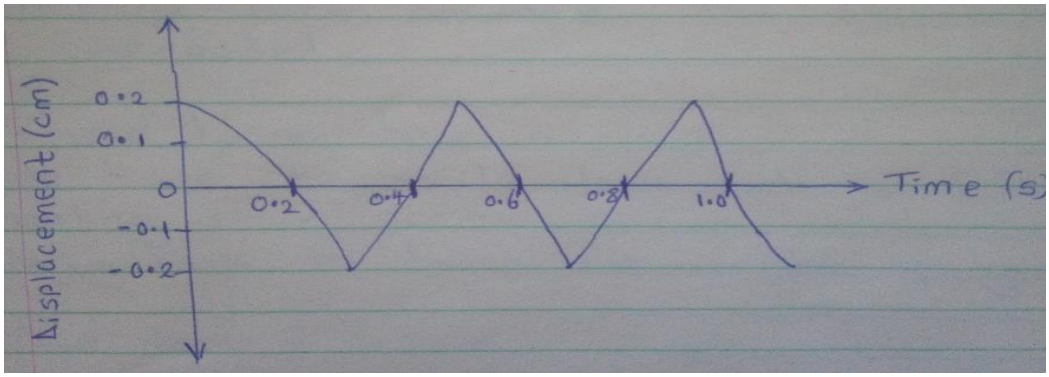
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b) State two conditions for particles in a wave to be oscillating in phase with each other. **(2 mks)**

c) The figure below shows the displacement – time graph of a wave travelling at 200cm/s.



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From the graph determine for the wave, the

i) Amplitude **(1 mk)**

ii) Period **(1 mk)**

iii) Frequency **(2 mks)**

iv) Wave length. **(2 mks)**

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