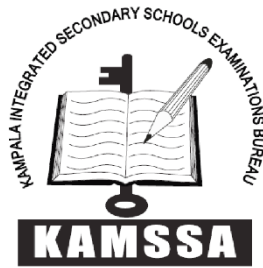


NAME:.....STREAM.....



KAMSSA LOWER SECONDARY EDUCATION EXAMINATIONS
PHYSICS
SENIOR ONE
END OF YEAR 2022
2 Hours 15 Minutes

INSTRUCTIONS TO LEARNERS

- Answer all questions.
- Show all you're working.
- All answers should be written in the spaces provided.

1)(a) Define physics? **(01mark)**

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(b) State any three career opportunities in physics. **(03marks)**

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2) (a) What is meant by the term laboratory **(01marks)**

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(b) State any three laboratory safety rules. **(03marks)**

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3. Mr. Owiny and Mr. Ochen had an argument over the width of the path that separates their land. Mr. Owiny claimed that the path is 12 feet wide. However, Mr. Ochen claimed it was 10 feet. When the chairman intervened, he measured the path with a foot rule and found out that it was 8 feet, after that the three were in disagreement.

a) Why did Mr. Owiny and Mr. Ochen fail to agree on the width of their path? **(01mark)**

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b) Why do you think the chairman got a different measurement?

(01mark)

c) As a physics learner, how would you solve the disagreement?

(02marks)

4. Complete the table below

	Physical quantity	S.I unit	symbol
1.	Mass	Kg
2.	Seconds
3.	Length

5.A book of 32 pages is bound with sheets of paper each of thickness 0.20mm and two covers each of thickness 0.50mm.What is the thickness of the book in.

(04 marks)

i) mm

ii) m

6. Give two examples of natural luminous objects and artificial luminous objects. Present your work using a table.

(02marks)

7.The table below shows some of the physical properties of mercury, alcohol and water.

	FP(°)	BP(°)	Color	Contact with glass	Heat conduction	Expansion
Mercury	-39	357	Silver	Does not wet glass	Good conductor	Expand uniformly
Alcohol	-115	78	Colorless	Wets glass	Poor conductor	Expand uniformly
Water	0	100	colorless	Wets glass	Poor conductor	Not uniform

Use the information from the table and answer the following questions.

a) What are the advantages of mercury over alcohol as a thermometric liquid? **(02marks)**

b) Why is water not used as a thermometric liquid?

(02marks)

8) (a) What do we use to measure temperature.

(01 marks)

b) Look at the figure below and answer the questions that follow.



i) Have you ever seen this kind of instrument.

(01mark)

ii) What is it used for.

(01mark)

iii) What are its main features?

(01mark)

9) Mrs. Joan prepared tea for her sick daughter. She dipped a tea bag in hot water and the color of water changed instantly.

a) By what process did the color of water change?

(02mark)

b) Suggest a statement that summarizes the meaning of diffusion.

(02marks)

10)(a) Define force and state its SI unit.

(02marks)

b) State four types of forces.

(02marks)

11) Mr. Alex and Mr. James applied forces of 16N and 25N on a table respectively. Find the resultant force if

a) They both push the table.

(02marks)

b) Mr. Alex pushes and Mr. James pulls the table.

(02marks)

12) (a) Is mass the same as weight?

(01mark)

Yes
No

b) If they are different, state two differences.

(02marks)

c) Given that the acceleration due to gravity on mars is 3.77, calculate the weight of a needle of mass 300g on mars.

(01mark)

13) Distinguish between a scalar and vector quantities giving one example for each.

(04marks)

14)(a) What is the meaning of the term surface tension.

(02marks)

b) How can you increase or reduce the effect of surface tension of a liquid.

(02marks)

15) The picture below shows a vehicle stuck in mud



a) Suggest two possible ways to remove the truck from the position.

(02marks)

b) Advise the driver on how to avoid the above situations.

(02marks)

16) (a) List two examples from your community, where estimation is used as a method of measurement. **(02marks)**

b) State two disadvantages of using estimation method of measurement. **(02 marks)**

17) Calculate the following and express your answers to three significant figure **(04marks)**

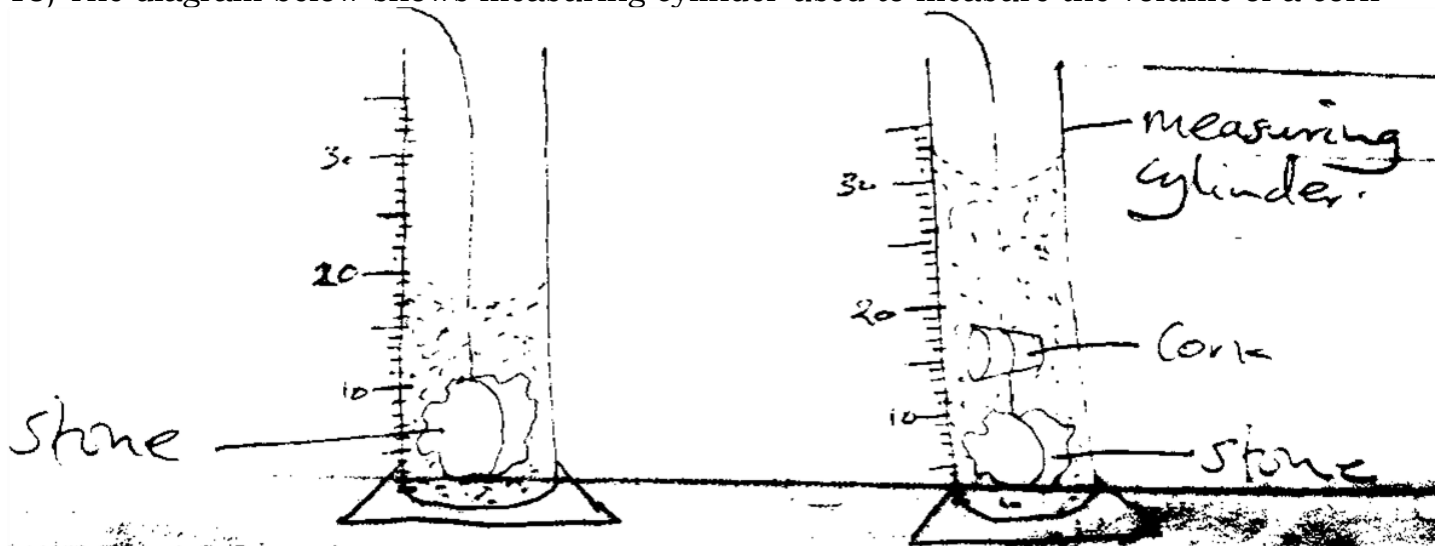
a) $379 \div 0.0751$

b) $\pi \times 242$

c) 58.4×0.00127

d) $6278 \div 12.8$

18) The diagram below shows measuring cylinder used to measure the volume of a cork



a) In which unit does it measure the volume **(01 mark)**

b) What is the volume of the cork? **(02 marks)**

c) What are the likely sources of errors during the experiment? **(01 mark)**

19) Calculate the mass of air of density 1.2Kg m^{-3} in a room of dimensions 8m by 6m by 4m. **(04 marks)**

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20) State any four characteristics of images formed by plane mirrors. **(04 marks)**

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END