

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
BUKOB A SECONDARY SCHOOL
FORM TWO SERIES TEST NO 1

031

PHYSICS

TIME: 2:30 Hours

5th February, 2024

Indtructions

1. This paper consists of sections A, B and C with at total of **ten (10)** questions.
2. Answer **all** questions in the spaces provided.
3. All writing must be in **blue** or **black** ink except drawings which must be in pencil.
4. Communication devices and any unauthorized materials are not allowed in the test room.
5. Write your Name on the top of each page.
6. Where necessary the following constants may be used;
 - (i) Acceleration due to gravity, $g = 10 \frac{m}{s^2}$.
 - (ii) $\pi = 3.14$

QUESTION NUMBER	FOR TEACHER'S USE ONLY	
	SCORE	TEACHER'S INITIAL
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
TOTAL		

SECTION A (15 Marks)

Answer **all** questions in this section

1. For each of the items (i) – (x).choose the correct answer from the given alternatives and write its letter in the answer box given below.
 - (i) A student has an urgent message to send to his mother who is far from school.Which means can be the best?
 - A. Landline and mobile phone
 - B. Microphone and telephone
 - C. Megaphone and Mobile phone
 - D. Megaphone and Microphone
 - (ii) What is the usefulness of laboratory rules when carrying out experiments in the Physics laboratory?
 - A. Making students enjoy science
 - B. Helping students conduct experiment freely
 - C. Ensuring safety in the laboratory
 - D. Enhancing communication with other technicians
 - (iii) Why does a piece of steel sink in water but a steel ship floats?
 - A. The density of the steel ship is less than the density of water
 - B. Steel is denser than the steel ship
 - C. Steel ship has the same densiy to that of steel
 - D. The average density of the steel ship is less than the density of water.
 - (iv) Which of the following is a set of effects of forces exerted when you are riding a bicycle?
 - A. Compressional,viscosity and stretching
 - B. Torsional,attraction and couple
 - C. Frictional,couple and pulling
 - D. Attraction,friction and restoring

- (v) A hydrometer is an instrument for measuring the density or relative density of a liquid. What is you supposed to do in order to increase its sensitivity?
- A. Increasing the size of the bulb
 - B. Making the stem narrow
 - C. Reducing the lead shorts in the weighted bulb
 - D. Increasing the length of the stem
- (vi) Which of the following is a set of natural sources of light?
- A. Sun, Star and Fluorescence light
 - B. Sun, Star and Lightning
 - C. Star, Candle and Bioluminescence fly
 - D. Star, Lightning and Wood fire
- (vii) Which method is preferred to use if a student wishes to charge an uncharged body by using a positively charged body in order to make it acquire positive charge?
- A. Friction
 - B. Contact
 - C. Induction
 - D. Heating
- (viii) A stone of mass 5kg is raised to a height of 2m above the ground, the workdone against the pull of gravity is;
- A. 100J
 - B. 10J
 - C. 50J
 - D. 2.5J
- (ix) Which is true about Pascal's principle of transmission of pressure in fluid?
- A. Pressure is equally transmitted in a liquid
 - B. Pressure is the ratio of force to area
 - C. Pressure sometimes depends on the height of the liquid column
 - D. Pressure is affected by the force of gravity
- (x) When charging an object by friction, the particles which are transferred are;
- A. Protons
 - B. Electrons
 - C. Nuclei
 - D. Electrons and protons

ANSWERS

Item	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
Answer										

2. Match the uses of instruments in **List A** with a correct name of the instrument in **List B** by writing a letter of the correct response below the item number in the table provided.

List A	List B
i. An instrument used to determine the density of insoluble granules. ii. An instrument used to determine the volume of irregular substance. iii. An instrument used to measure density of the liquid. iv. An instrument used to transfer specific volume of liquid from one container to another. v. An instrument used to determine the volume of displaced water.	A. Burette B. Density bottle C. Eureka can D. Hydrometer E. Measuring cylinder F. Pipette G. Test tube

Answers

List A	(i)	(ii)	(iii)	(iv)	(v)
List B					

SECTION B(70 Marks)

Answer **all** questions in this section.

3. You are given the following things state the instrument which would be used to measure them;

(i) 2kg of sugar.....

(ii) Width of a book.....

(iii) 2ml of water.....

- (iv) 2N of stone.....
- (v) 5000g of rice.....

4. (a) What is scientific investigation?

.....

.....

(b) In Kibamba ward, there is fire accident occurring for consecutive three months. Fire brigade wants to know the possible causes of the problem and how to fight against. List seven (7) steps to be followed by them during investigation of the problem

- (i).
- (ii).
- (iii).
- (iv).
- (v).
- (vi).

5. (a) Complete the following table

Fire Class	Burning material	Suitable extinguisher
CLASS A	(i).....	(ii).....
CLASS B	(iii).....	(iv).....
CLASS C	(v).....	(vi).....
CLASS D	(vii).....	(viii).....
CLASS F	(ix).....	(x).....

(b) Explain the following

- (i) A laboratories have windows and doors that open outwards.
- (ii) Laboratory floor should not be polished.

- (iii) It is necessary to wear gloves when giving first Aid to bleeding persons.
- (iv) Laboratory should have the large windows.
- (v) Smoking is prohibited in the Laboratory.

6. (a) A rectangular block measures length 4.00cm, width 2.50cm and height 1.0cm.

i. Name the instrument used to measure the sides of the rectangular block

.....

ii. Calculate the volume of a rectangular block.

(b) Explain why laboratory apparatus and chemical containers are labeled with warning signs.

7. (a) Explain the following terms:

(i). Density of a substance

.....

.....

(ii). Relative density of a substance

.....

.....

(b) A stone has a mass of 112.5g. When the stone is totally immersed in water contained in measuring cylinder, it displace water from 50cm³ to 95cm³. Find the density of the stone

8. (a) John and Jamali were arguing to each other about mass and weight. As a form one student how would you help them to differentiate between the two terms? Use five points.

(b) During the experiment, John got wound injured.

(i) What should you do to him so as to reduce pain?

.....

(ii) What was the importance of doing that? (Give 4 points)

- a)
- b)
- c)
- d)

9. (a) State Hooke's law

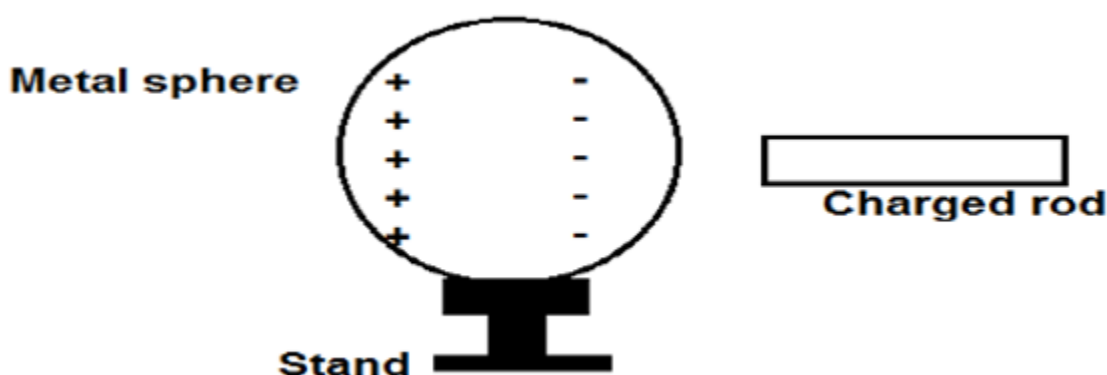
(b) A spring has an unstretched of 15cm and a length of 15.6cm when a load of 3N is put at the bottom of the spring. Find the load when the spring is stretched to 15.8cm.

SECTION C (15 Marks)

Answer question **ten (10)**

10. (a) Draw a well labelled diagram of an instrument that can be used to measure the diameter of a wire.

(b) When a charged rod is held close to a metal sphere placed on an insulated stand, the charge distribution on the sphere is also shown in the figure below.



(i) What are the sign of charges on the rod?

(ii) Describe a simple method to be used to charge a metal sphere.

