**THE PRESIDENT’S OFFICE**

**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

**FORM ONE ANNUAL, NOVEMBER 2021**

**PHYSICS**

**INSTRUCTIONS: Time: 2 Hours**

1. This paper consist of sections A, B, and C.
2. Answer ALL questions in ALL sections.
3. Whenever necessary use the following

* Acceleration due to gravity, g=10m/s2 or 10N/kg
* Density of water, 1g/cm3 or 1000kg/m3

**SECTION A (30 MARKS)**

1. For each of the following items (i) to (x) choose the most correct answer from the given alternatives and write its letter in the table provided below.
2. Physics deals with the relationship between matter and
3. Force
4. Weight
5. Energy
6. Mass

1. A beam balance is used to measure
2. Weight
3. Mass
4. Mass and weight
5. Force

1. Water flows more easily than any other fluid because
2. It is less viscous
3. It is more viscous
4. Has more friction
5. It sticks to the surface
6. The weight of a body in air is 30N and 24N when is immersed in water, its relative density is
7. 1.8
8. 2.25
9. 5
10. 0.56

1. Marks on the side of a ship indicating the limit to which it can legally be submerge when loaded
2. Plimsol lines
3. Submarine lines
4. Floating line
5. Up thrust line

1. Ability of surface of a liquid to behave like a fully stretched elastic skin is called
2. Capillarity
3. Elasticity
4. Surface tension
5. Adhesion and cohesion

1. Adam a form one student want to measure the pressure found in his school water tank. What instrument would advise Adam to use?
2. Barometer
3. Manometer
4. Measuring cylinder
5. Non of the above

1. ……………… is the movement of solvent particles from region of low concentration to the region of high concentration through semi-permeable membrane.
2. Diffusion
3. Osmosis
4. Attraction
5. Surface tension

1. Pressure in a liquid contained in a vessel depend on;
2. Depth of the container
3. Depth and density of the liquid
4. Depth and volume of the container
5. Density of the container
6. A ratio of the density of the substance to the density of water is called
7. Mass per unit volume
8. Relative density
9. Upthrust
10. Density of a substance

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| QUESTIONS | i | ii | iii | iv | v | vi | vii | viii | ix | x |
| ANSWERS |  |  |  |  |  |  |  |  |  |  |

1. Match the items in **LIST A** with the responses in **LIST B** by writing the letter of the correct response in the box provided below

|  |  |
| --- | --- |
| LIST A | LIST B |
| 1. Tape measure 2. Micrometer screw gauge 3. Measuring cylinder 4. Stop watch 5. Voltmeter 6. Hydrometer 7. Barometer 8. Spring balance 9. Beam balance 10. Ammeter | 1. Measures weight of the body 2. Measures mass of the body 3. Measures volume of a liquid 4. Measures energy 5. Measures humidity 6. Measures density of a liquid 7. Measures liquid pressure 8. Measures air pressure 9. Measures length of a table 10. Measures diameter of a wire 11. Measures time 12. Measures voltage 13. Measures electric current |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| LIST A | i | ii | iii | iv | v | vi | vii | viii | ix | x |
| LIST B |  |  |  |  |  |  |  |  |  |  |

1. Complete each of the following statements by writing the correct answer in space provided.
2. ……………. Is the total quantity of matter in a body?
3. ……………..is the SI unit of weight
4. The weight of a body when in water is called ……………..
5. Anything which has got weight and space is called …………………
6. Newton per metre square is the SI unit of …………………..
7. ……………. Is the action of rising and falling of the liquid in a narrow tube.
8. ……………….is an immediate help/care given to an injured person before taken to the hospital for medical treatment.
9. ………………..…. is a special room where scientific experiment are conducted.
10. The process of assigning number to observation or event is known as …………………..
11. Push or pull experienced by an object is called ……………………

**SECTION B**

Answer ALL questions from this section

1. (a) Write any five laboratory rules.
2. ……………………………………………………………………………………….
3. ……………………………………………………………………………………….
4. ………………………………………………………………………………………….
5. …………………………………………………………………………………………
6. …………………………………………………………………………………………

(b)Give any three (3) safety precautions in physics laboratory

1. …………………………………………………………………………….
2. ……………………………………………………………………………..
3. ………………………………………………………………………..

(c)Define first Aid kit………………………………………………………….

………………………………………………………………………………………….

1. (a) By giving four (4)points, how mass differs from weight.

|  |  |
| --- | --- |
| mass | weight |
|  |  |
|  |  |
|  |  |
|  |  |

(b) An object weigh 200N on the earth. What would be its mass on the moon?

(g=10N/kg)

(c)What is apparent weight of a body?.......................................................................

…………………………………………………………………………………………………..

1. (a)Define pressure and give its SI unit………………………………………………………..

…………………………………………………………………………………………………………

(b)State Pascal’s principle of hydraulic pressure……………………………………….

………………………………………………………………………………………………………

(c) A force of 5N is applied to the small piston of a hydraulic press. If smaller piston

has a cross – sectional area of 0.1m2. and the area of large piston is 4m2. Find the

force produced on the large piston.

7. (a)(i)What is floating ………………………………………………………………………..

(ii)State three (3) conditions for a body to float

……………………………………………………………………………………………….

……………………………………………………………………………………………….

……………………………………………………………………………………………….

(b) A body weighs 0.8N in air and 0.5N when completely immersed in water.

Calculate the density of the body and the relative density of the body (Given that

density of water is 1000kg/m3)

8. (a) On the basis of kinetic theory of matter explain :

(i) Why solids have definite volume and definite shape?

…………………………………………………………………………………………………….

(ii)Why gases have no definite volume and definite shape?

……………………………………………………………………………………………………

(b)Write (3)three applications of the following as applied in daily life

(i) Capillarity

…………………………………………………………………………………………….

…………………………………………………………………………………………….

…………………………………………………………………………………………….

(ii) Surface tension

…………………………………………………………………………………………….

…………………………………………………………………………………………….

……………………………………………………………………………………………..

(c) Mention two (2) factors that affects surface tension of a liquid

1. ……………………………………………………………………………………
2. ……………………………………………………………………………………

**SECTION C (20 Marks)**

Answer ALL questions in this section

9. (a) (i)What are warning signs?.....................................................................................

…………………………………………………………………………………………………….

(ii) Draw warning signs which represents the following

* Toxic substance
* Flammable substance
* Electric shock

(b)Mention any three (3) application of physics in everyday life.

1. ………………………………………………………………
2. ……………………………………………………………….
3. ………………………………………………………………..

10. State the following

(i) Archimedes principle ………………………………………………………………………

………………………………………………………………………………………………….

1. Law of flotation ………………………………………………………………………….

…………………………………………………………………………………………………

1. Hooke’s law ……………………………………………………………………………..

……………………………………………………………………………………………….

1. Brownian motion/movement ……………………………………………………………

………………………………………………………………………………………………….

1. Kinetic theory of matter……………………………………………………………………….

……………………………………………………………………………………………………

**THE END**