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<p>මධ්‍යම පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව மேல் மாகாணக் கல்வித் திணைக்களம் Department of Education - Western Province</p>	
<p>වර්ෂ අවසාන ඇගයීම ஆணைமுறி மதிப்பீடு Year End Evaluation</p>	
<p>2022 (2023 March)</p>	
<p>ශ්‍රේණිය Grade</p>	<p>විෂයය Subject</p>
<p>9</p>	<p>Science</p>
<p>පත්‍රය Paper</p>	<p>පැය Hours</p>
<p>I, II</p>	<p>02</p>

Name: -

Index Number: -

Answer all questions in part I.

In part II, first question is compulsory and answer four questions further.

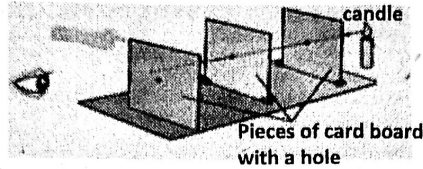
Part I

- The standard unit of measuring pressure is
 1. pa
 2. PA
 3. Pa
 4. pA
- A unicellular fungus is,
 1. Paramecium.
 2. Amoeba.
 3. Spirogyra.
 4. Yeast.
- A simple machine of the inclined plane type,
 1. Hammer.
 2. Ladder.
 3. Sledge hammer.
 4. Pulley.
- The international unit of measuring of weight is,
 1. Newton.
 2. Kilogram.
 3. Gram.
 4. Milligram.
- Light enters the eye through;
 1. Eye lens.
 2. Iris
 3. Pupil
 4. Cornea
- A species of bacteria that is added directly to the soil as biofertilizer is,
 1. *Erwinia uredovora*
 2. *Alternaria*
 3. *Rhizobium*
 4. *Bacillus thuringiensis*
- The red coloured pigment, haemoglobin is contained in;
 1. Blood plasma.
 2. Red blood cells.
 3. White blood cells.
 4. Blood platelets.
- Out of the following which one doesn't show the advantage of sustainable management
 1. Increase in Productivity
 2. Increase in economical value
 3. Increase in high risk in productivity
 4. Increase in quality of soil and water
- Coiling of tendrils in Passion fruit with the support is a,
 1. Hydrotropic movement.
 2. Phototropic movement.
 3. Geotropic movement.
 4. Thigmotropic movement.
- A living fossil is;
 1. The cockroach.
 2. The black ant.
 3. Gecko.
 4. Millepede.
- Not characteristic of an ecosystem;
 1. Unidirectional flow of energy.
 2. Material recycling.
 3. Presence of living-non-living interactions.
 4. Having organisms of only one species.
- A technique used to prevent reverberation is,
 1. Reduction of household items.
 2. Not using curtains for doors and windows.
 3. Installation of perforated ceilings
 4. Smoothing the walls
- Not a characteristic of an image formed by a plane mirror;
 1. Real image.
 2. Being equal to the size of the object.
 3. Being upright.
 4. Having lateral inversion.
- Which of the following structures helps to maintain the balance of the body,
 1. Ear drum
 2. Semi-circular canals
 3. Cochlea
 4. Eustachian tube

15) Which of the following statements is incorrect regarding Tsunami?

1. Emergent water waves form crests and troughs.
2. The amplitude of the waves is less as they approach the sea.
3. The wavelength is longer in the deep sea.
4. The speed of waves is slow in the shallow sea.

16) What is the conclusion of this experiment?

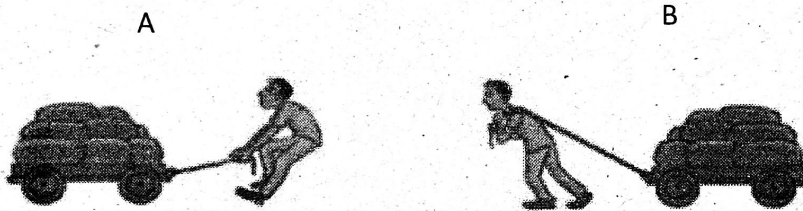


1. The candle flame can be seen through the cardboard holes.
2. Light passes through the holes in cardboards.
3. Light does not pass-through opaque materials.
4. Light travels in a straight line.

17) Rainbows are formed from drops of water,

1. By refraction of light.
2. By reflection of light.
3. By the dispersion of light.
4. By turning of light and travelling further.

18) Given below are two pictures of men A and B pulling carts by applying forces. Select the correct statement about the forces applying by them.



1. Both A and B men pull carts easily
2. Both A and B men push carts uneasily.
3. The man A pulls the cart easily while the man B, pushing the carts uneasily.
4. The Man A pushes the cart uneasily while the man B pulling the cart easily.

19) An act against the green building concept is,

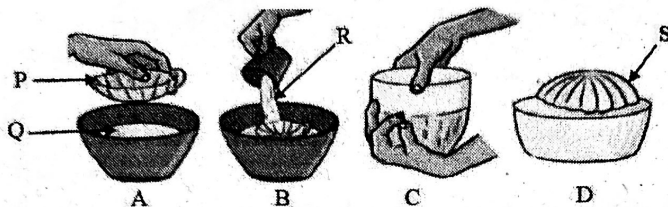
1. Installing as many fans as possible.
2. Using large windows for ventilation.
3. Using sunlight to heat water.
4. Using solar cells to obtain electricity.

20) An example for a human activity that causes earthquake is,

1. Underground nuclear testing.
2. Drilling deep into the earth for oil and minerals.
3. Overweight large-scale constructions.
4. All of the above.

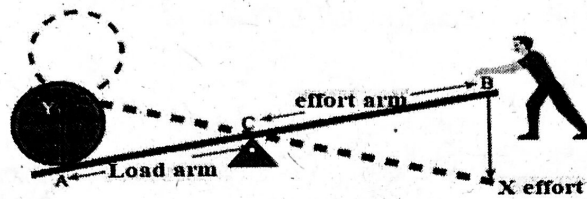
Part II

- Write answers to 5 questions including the **first** question.
1. a) Given below are steps taken to form a model of a fossil.



- I. Name a substance you used as P in A (01)
 - II. Mention substances used as Q and R (02)
 - III. What is done in stage C? (01)
 - IV. What do you get finally as 'S'? What is the substance, it is made of? (02)
 - V. Mention another feature other than fossils to get conclusions on evolution (01)
 - VI. Write two examples for evolutionary evidences found in Sri Lanka. (02)
- b) There are various threats to biodiversity and thus the biodiversity is rapidly being degraded.
- I. Write respectively one human activity and one natural process that causes degradation of biodiversity. (02)
 - II. What is an Ecosystem? (02)
 - III. Write an example for a living-living relationship for food. (01)
 - IV. Write a difference between agricultural and natural ecosystems. (01)
 - V. Name a famous wetland environment in Sri Lanka. (01)
2. a) Compounds are formed by combination of two or more elements.
- I. Name the constituent elements in the compound, copper sulphate. (02)
 - II. A bottle containing sodium was labeled as ${}_{11}^{23}\text{Na}$.
 - a) What is the atomic number of this? (01)
 - b) What does 23 mean? (02)
 - c) Write the numbers of electrons and neutrons in it, respectively. (02)
- b) A pull or a push is known as a force.
- I. Write the main characteristics of a force? (02)
 - II. A force of 100 N acts on an object horizontally in the east direction. If ~~1 N~~ ^{10 N} is represented by 5 cm ~~cm~~, draw and show how the force acts on the object. (02)
3. a) In our daily life, we control pressure as necessary for various activities.
- I. Name the factors affecting the pressure exerted by a solid. (02)
 - II. Write an example of each a situation in which we reduce pressure and increase pressure in our daily life. (02)
 - III. An object of weight 50 N is placed on a table of area 0.5 m². Find the pressure exerted on the table by the object. (03)
- b) Diffuse reflection helps us observe objects in the environment without difficulty.
- I. Write the two laws of reflection. (02)
 - II. Write two characteristics of the image formed by an object placed in front of a plane mirror. (02)

4. a) Strategies used to make the job easy are known as simple machines. Below is an example of a simple machine being used to lift a stone weighing 500 N.



- I. Find the mechanical advantage if the effort applied by the man to lift the stone is 25 N. (02)
 - II. Find the velocity ratio if $AY = 15 \text{ cm}$ and $BX = 75 \text{ cm}$. (02)
 - III. What is the efficiency of this simple machine? (02)
- b) Coconut oil and water do not mix due to their density difference.
- I. Define density. (02)
 - II. If the volume of 200 kg of a solution is 5 m^3 , find its density. (02)
 - III. Name the equipment used to measure the density of cow's milk. (01)
5. a) Plants, water, wood, minerals and rocks are some natural resources.
- I. What is meant by sustainable use of natural resources? (02)
 - II. What is a mineral? (02)
 - III. Name two rocks which consist of only one mineral. (02)
 - IV. What scale is used to measure the hardness of a mineral? (01)
- b) Heart is the main organ in human blood circulation. Heart is an important organ to circulate blood through out the body.
- I. Name two blood vessels associated with blood circular system (02)
 - II. What are the structures that control the direction of the blood towards one side? (01)
 - III. Name two types of food we should have to maintain blood circulatory system healthy. (01)
6. The mixtures that we find in daily life can be categorized as homogeneous mixtures and heterogeneous mixtures.
- I. Define the term mixture accurately. (03)
 - II. What are the things in a mixture known as? (02).
 - III. Write respectively, an example for each of homogeneous and heterogeneous mixtures. (02)
 - IV. Write one separation technique used to separate components in each of the mixtures given below. (04)
 - a) Removal of chaff from rice.
 - b) Extraction of salt from sea water.
 - c) Extraction of cinnamon oil from cinnamon leaves.
 - d) Separation of sugar from-sugar cane juice.
7. Plants are useful for man from birth to death.
- I. Sate one type of plant that can be used for each of the following applications. (04)
 - a) For food
 - b) For medicine
 - c) For spices
 - d) For beauty cultural purposes
 - II. Name one plant that can be used for each the following purposes. (04)
 - a) For carving wooden masks
 - b) To make the wooden frame of Rabana
 - c) To make the handle of umbrella
 - d) for masts of yachts
 - III. What is the main factor that affects decaying of timber?(01)
 - IV. Write two methods of preventing decaying of timber.(02)