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ශ්‍රී ලංකා විද්‍යා කல்විත ත්‍රිකෝණය
Department of Education - Western Province

වර්ෂ අවසාන ඇගයීම - 2023 (2024)
ஆண்டிறுதி மதிப்பீடு - 2023 (2024)
Year End Evaluation - 2023 (2024)

N: 004133

ශ්‍රේණිය
Grade } 07

විෂය
Subject }

SCIENCE

පත්‍ර
විෂය
Paper } I, II

පැය
විෂය
Time } 2 hours

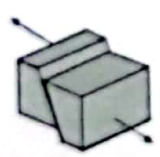

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Index No. }

Answer all the questions in Part I.
First question of Part II is compulsory and answer four other questions along with that question

Part I

• Choose the correct answer from the given answers and underline it.

- (01) Which of the following plant has adventitious roots?
1. Orchid 2. Sweet potato 3. Betel 4. Rampe
- (02) Electricity is produced by a chemical process,
1. by solar cells. 2. by a dynamo. 3. by an ammeter. 4. by a simple cell.
- (03) Which of the following is a colour given by pH paper in the presence of acids?
1. Green 2. Orange 3. Blue 4. Purple
- (04) Choose the pair of vertebrates from the following answers
1. spider, prawns 2. toad, leech 3. bat, turtle 4. python, crab
- (05) Energy stored in an object because of the change of X or the change of Y is known as potential energy. Which of the following pairs of answers matches the blanks X and Y in this passage?
1. position and shape 2. position and motion
3. shape and volume 4. mass and volume
- (06) From the following answer categories, choose the answer that includes fruits and seeds dispersed by wind, water and animals respectively.
1. hora, papaya, chilies 2. vara, coconut, castor
3. lotus, coconut, almond 4. tomato, hora, nagadarana
- (07)  Figure shows one of the ways in which the tectonic plates in the Earth's crust move. Which of the following would be a result of such a movement?
1. Formation of deep gulf. 2. Occurrence of strong earthquakes.
3. Formation of volcanoes. 4. Occurrence of a tsunami.
- (08) A feature that cannot be included in a dichotomous key to distinguish between fish and snail is,
1. Presence/absence of outer shell. 2. Presence/absence of scales.
3. The presence/absence of gills for respiration. 4. Presence / absence of legs.
- (09)  In the presence of a light source, an umbra like the one shown here is obtained when the fingers of the hands are arranged in which of the following ways?



(10) Among the parts included in a microscope, which of the following is not adjustable?
 1. The body tube 2. Base 3. Mirror 4. Objective lenses

(11) Examine the following musical instruments.
 Tabla, Violin, Udakkiya, Flute, Gataberaya, Mandolin, Horanewa

Most of the musical instruments in this list are,

1. Instruments that produce sound by vibration of rods.
2. Instruments that produce sound by vibration of air
3. Instruments that produce sound by vibration of membrane
4. Instruments that produce sound by vibration of strings

(12) The organ that absorbs nutrients most in the human digestive system is,
 1. Large intestine. 2. Anus. 3. Oesophagus 4. Small intestine

(13) Choose the answer that includes only the parts found in a bicycle dynamo.

1. coil of wire, permanent magnet, metal rod
2. coil of wire, electromagnet, plastic rod
3. metal rod, rotating wheel, copper plate
4. zinc plate, permanent magnet, metal rod

(14) Which of the following sentence is correct?

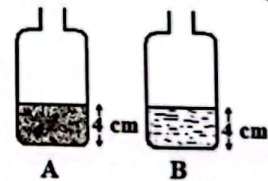
1. Atmospheric pressure is higher in central mountains.
2. The unit called millibar is used to measure atmospheric pressure.
3. The benefits gained by us from the atmosphere is very little.
4. The boundaries of the layers belonging to the Earth's atmosphere can be clearly identified.

(15) Choose the answer that includes a material that conducts heat well and a material that is a poor conductor of heat respectively.

1. paper, air 2. cloth, iron 3. copper, plastic 4. silver, aluminum

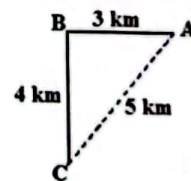
(16) Vessel A has soil to a height of 4 cm and vessel B has water to a height of 4 cm. When the water in B was poured into A, the total height of the soil and water was 6 cm. Thus, which of the following is the correct conclusion that can be drawn regarding the soil in vessel A?

1. Half of it was air.
2. It has no microorganisms.
3. It has abundant clay particles.
4. It has no soil organic matter.



(17) The diagram shows a route taken by a man from A via B to C. Thus the total distance traveled by him is,

1. 4 km 2. 5 km 3. 7 km 4. 12 km



(18) Which of the following is not an organ belonging to the shoot system of a plant?

1. Stem 2. Leaves 3. Fruits 4. Root

(19) A benefit of eating foods rich in fibers is

1. Minimization of infectious diseases.
2. Being able to prevent constipation.
3. Increased absorption of sugar in food.
4. Increased absorption of fat.

(20) Cooling of magma coming out of volcanoes forms

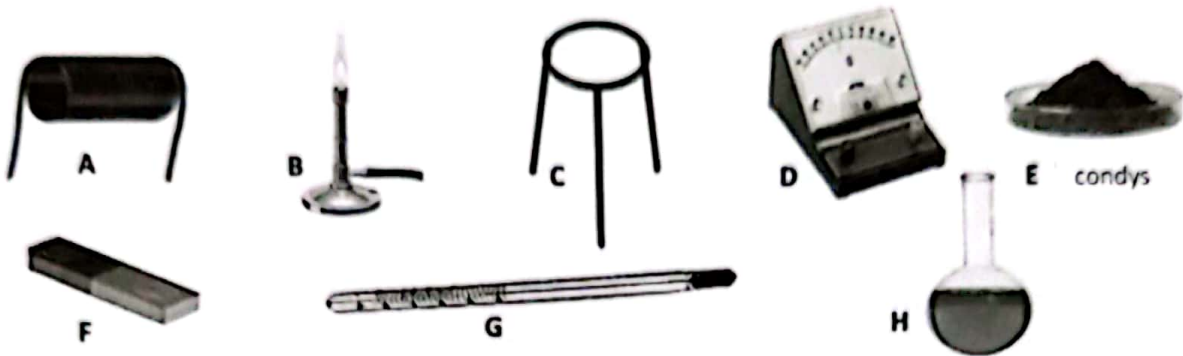
1. Sedimentary rocks.
2. Metamorphic rocks.
3. Igneous rocks.
4. Conglomerate rocks.

(Total: 40 marks)

Part II

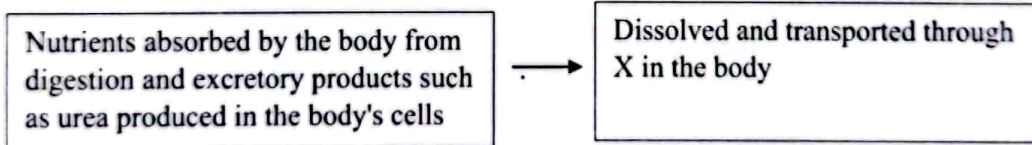
- Answer only 5 questions including first question

(01) (A) Below is a group of equipment and materials required for several activities related to the science subject of grade 7. Answer the questions based on them.



- Among the above equipment and materials, write the English letters related to the equipment / materials related to an activity of producing electricity. (M: 01)
- (a) What is the name given to the method of generating electricity mentioned in i above?(M: 01)
(b) Is it a direct current or an alternating current? (M: 01)
- Write down the English letters related to the equipment/materials that can be used to show how heat is transferred in a liquid. (M: 02)
- Which method of heat transfer can be demonstrated using the equipment / materials you mentioned in iii above? (M: 01)
- Which property of a liquid is used in the equipment G given above? (M: 01)
- Electricity is generated using a lime. Why a milliammeter is used instead of an ammeter to indicate the flow of electricity? (M: 01)

(B)



- What is marked as 'X' in the above ? (M: 01)
- The above diagram describes a function performed by water. What is that function? (M: 01)
- The sugary solution obtained by crushing the flowers of the coconut plant is called sweet toddy. This sweet toddy is used in the production of treacle and jaggery.
 - State separately the method of preparation of treacle and jaggery from sweet toddy. (M: 02)
 - Name another plant other than coconut which is used to obtain treacle and jaggery. (M: 01)
- What is the characteristic of its flowers that confirms that the coconut plant is a monocot plant? (M: 01)
- Stamens are one of the main components of a flower. Draw a rough diagram of the stamen and name its parts. (M:02)

(Total Marks :- 16)

(02) (A) Figure (1) shows diagrams of a light microscope and an electron microscope.

- i. Write two differences between these two microscopes. (M:02)
- ii. Figure (2) shows a line diagram of cheek cells as seen through the microscope. Which is denoted by the numbers in the bracket? (M: 01)

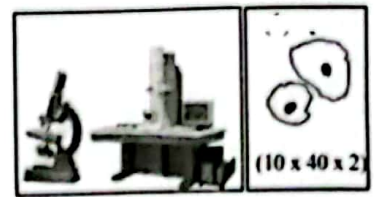


Fig (1)

Fig (2)

- iii. A light microscope has two types of mirrors for focusing light to it. Name one of them. (M: 01)
- iv. What is meant by 'lateral inversion' of an image formed by mirrors? (M: 01)
- v. (a) What type of mirror forms the image that can be taken on to a screen? (M: 01)
- (b) What is the name given to the reflection of a parallel beam of light by the type of mirror you mentioned in (a)? (M: 01)

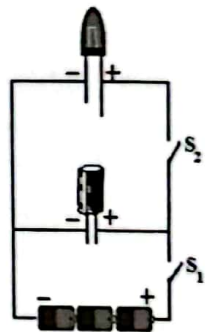
(B) Whip snake, grasshopper and some caterpillars found in the environment are green in colour. Because of this, it is difficult to distinguish those animals in the environment where they live. Thus, they have established their existence in the environment.

- i. What is the name given to the difficulty of distinguishing animals from the environment? (M: 01)
- ii. In addition to the animals mentioned above, name another animal whose colour helps it to survive in the environment. (M: 01)
- iii. The Y body shape of fish helps them to survive in the aquatic environment.
 - (a) What shape is represented by Y in the above statement? (M: 01)
 - (b) How does the shape represent by Y help for the fish? (M: 01)

(Total Marks :- 11)

(03) (A) Shown here is a circuit with a capacitor, an LED, three cells and two switches.

- i. Here switch S_2 is open and only S_1 is closed, what happens to the capacitor when S_1 is left closed for a while? (M: 01)
- ii. What is observed when S_1 is then opened and only S_2 is closed? (M: 01)
- iii. What lead to the observation you mentioned in ii above? (M: 01)
- iv. What is the standard unit for measuring the amount of charge stored in a capacitor? (M: 01)

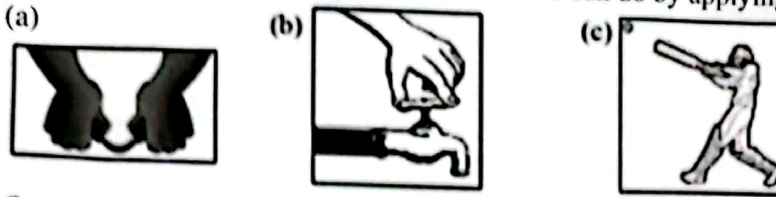


(B) The interior of the earth where we live is divided into three parts namely crust, mantle and core.

- i. Among the above mentioned parts of the earth, which parts have a rocky composition? (M:01)
- ii. Which study helps geologists to learn more about the Earth's interior? (M: 01)
- iii. Name a substance that human get from the crust for power generation. (M: 01)
- iv. The soil contained in the crust is very useful for cultivation. Three soil types are recognized according to the abundance of soil constituents.
 - (a) Which type of soil is most suitable for cultivation? (M: 01)
 - (b) Give a reason why that type of soil is suitable for cultivation. (M: 01)
- v. A student dissolved a soil sample in a beaker of water, then allowed it to stay still. What does he expect to observe by this activity? (M: 01)

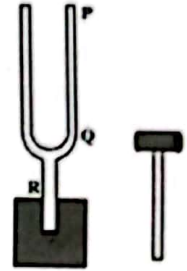
(Total Marks :- 11)

(04) (A) These figures show three types of work that we can do by applying a force.



- i. State separately what is caused by the application of force in each of the above instances. (M: 01)
- ii. Write down the international standard unit of measuring force and its symbol. (M: ½ x 2 = 01)
- iii. The figure shows a tuning fork attached to a piece of wood. Next to it is a wooden hammer used to vibrate the tuning fork.

- (a) At which of the points P, Q, R should the force of the wooden hammer be applied to vibrate the tuning fork? (M: 01)
- (b) Write a simple activity that you can do to show that tuning fork is vibrated in addition to the sound it makes. (M: 02)



(B) Acidity of gastric juice is responsible for proper digestion of food. However, gastritis can occur due to the increase in acidity due to various reasons.

- i. (a) Which medicine is given to relieve gastritis? (M: 01)
- (b) When blue and red litmus papers are added separately to the medicine mentioned by you, which litmus paper will have a colour change? (M: 01)
- ii. Several glands are involved in the human digestive system. One of them is salivary glands.
 - (a) Name another gland except it. (M: 01)
 - (b) What is the name given to the digestion of food by the juices secreted by these glands? (M: 01)

(Total Marks :-11)

(05) (A) An electric motor connected to a solar cell is shown in the figure. The energy transformation taking place here was given as follows.

X \longrightarrow Y \longrightarrow Kinetic energy

- i. Name the two types of energy given above as X and Y. (M: 02)
- ii. If a light bulb is used instead of the motor in this setup, what type of energy is produced instead of the kinetic energy of the above energy transformation? (M: 01)
- iii. The sun is called a 'renewable source of energy'.
 - (a) What is meant by renewable energy sources here? (M: 01)
 - (b) Name two other renewable energy sources except sun. (M: 01)
 - (c) Write down a use of the energy source you mentioned in b. (M: 01)



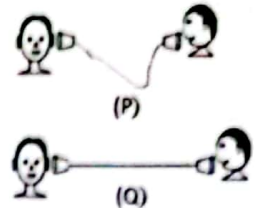
(B) Among the layers into which the Earth's atmosphere is divided, the most useful layer to us is the troposphere. This layer contains the highest percentage of air.

- i. What is the percentage of air in the troposphere? (M: 01)
- ii. Write a benefit we get from the troposphere. (M: 01)
- iii. In which atmospheric layer does the 'Aurora' (borealis, australis) appear in the polar regions of the earth? (M: 01)
- iv. Adding certain substances to the atmosphere can change its composition in a way that is harmful to living beings.
 - (a) What is the name given to such a change in atmosphere? (M: 01)
 - (b) Name a particulate component that affects atmospheric change in this way. (M: 01)

(Total Marks :-11)

(06) (A) The figure shows two situations where two children are talking with the help of a toy telephone made by connecting two cups of yoghurt with a string.

- In which of the two situations P and Q can the other person hear clearly what one person is speaking through the cup of yoghurt? (M: 01)
- What was the reason for hearing the voice well at that time? (M: 01)
- What is demonstrated about sound transmission from the above activity? (M: 01)
- Name a device that transform electrical energy into sound energy. (M: 01)
- The speed at which sound travels in air is much less than the speed of light. Name a natural phenomenon where this can be experienced. (M: 01)



(B) It is very important to have balanced meals in our daily meals.

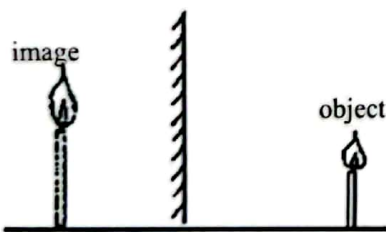
- What is a balanced diet? (M: 01)
- Mention an adverse condition that may arise from not eating a balanced diet. (M: 01)
- Write separately deficiency of which vitamin causes following diseases.
 - Bleeding gums
 - Rickets (M: 02)
- Various tests are carried out to identify the various nutrients contained in the food.
 - What is the chemical used to identify starch? (M: 01)
 - If starch is present, what is the colour obtained? (M: 01)

(Total Marks :- 11)

(07) (A) Mark \checkmark if the following clauses are correct and \times if they are incorrect in brackets.

- Lichens are a biological factor that affects rock weathering. ()
 - Gneiss and granite rocks are known as granite in everyday life. ()
 - Soil erosion during agriculture is very less. ()
 - Limestone which is a sedimentary rock undergoes metamorphism and marble is formed ()
 - It takes millions of years to complete a rock cycle where rocks are metamorphosed into igneous, sedimentary and metamorphic. ()
- (M : 05)

(B) The diagram shows a student's drawing of the reflection of a candle in a plane mirror. Seeing this, his science teacher pointed out that there were two mistakes in the image.



- Write down the two mistakes in the above figure pointed out by the science teacher. (M: 02)
- Images seen by plane mirrors are virtual. What is known as virtual? (M: 01)
- An instrument made of three plane mirrors arranged in a triangle. What is it? (M: 01)
- Other than the device you mentioned in iii above, name another instance where plane mirrors are used. (M: 01)
- Convex mirrors are used as side mirrors of vehicles. What is the reason for this? (M: 01)

(Total Marks :- 11)



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නිවසටම ගෙන්වා ගන්න



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කෙටි සටහන්, වැඩ පොත්, අතිරේක කියවීම් පොත්, සඟරා
සිංහල සහ ඉංග්‍රීසි මාධ්‍යයෙන් ගෙදරටම ගෙන්වා ගැනීමට

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