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Provincial Department of Education - NWP

තෙවන වාර පරීක්ෂණය - 7 ශ්‍රේණිය - 2019
Third Term Test - Grade 7 - 2019

Name : Science Time : 2 hours

Part - I

- Answer all questions.
- Each answer scores 1 mark.
- Underline the most appropriate answer.

(1)



Which one of the given animals adapted its body to swim fast,

- (1) Crab (2) Octopus (3) Whelk (Hakbella) (4) Flying Fish

(2) Not a protective behaviour seen among animals.

- (1) Rolling its body by armadillo. (2) Ejaculating black ink by cuttle fish
(3) Shedding skin by snake (4) Breaking down tail by gecko.

(3) Dissolving rocks which are made up of limestone, quartz or iron ores in acidic water is a,

- (1) Physical digestion (2) Chemical digestion
(3) Biological digestion (4) Decomposition

(4) This is happened due to the consumption of same food by several animals.

- (1) Symbiosis (2) Competition (3) Parasitism (4) Interaction

(5) Type of soil more suitable for the growth of plant is,

- (1) Sandy soil (2) Clay soil (3) Loamy soil (4) Silt

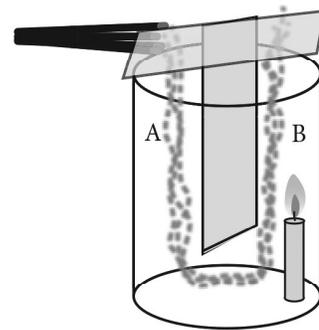
(6) This is not a method that can be applied to minimize the soil erosion in a land with slopes

- (1) Use cover crops (2) Make stone ridges
(3) Make drains (4) Clearing the land by removing trees.

- (7) A sample of soil is mixed well with water and leave to settle down. The substance which floats top most layer of water is,
- (1) Gravel (2) Silt
(3) Clay (4) Decayed parts of animal and plants.
- (8) The country which belongs to the European tectonic plate is,
- (1) Sri Lanka (2) Norway
(3) Japan (4) Egypt
- (9) Ice cloud can be seen in
- (1) Troposphere (2) Exosphere
(3) Mesosphere (4) Stratosphere
- (10) Select incorrect statement out of followings,
- (1) An object can be rotated by applying a force.
(2) Proteins available in a food can be identified by the Biurette test.
(3) Nuclear energy is a renewable energy source.
(4) Hairs get positively charged, when rubbed with a pen tube.
- (11) This is not an example for plant with storage root.
- (1) Carrot (2) Sweet potato
(3) Manioc (4) Kithul
- (12) Parallel venation is shown by,
- (1) Shoe flower (2) Banana
(3) Pawpaw (4) Centella (Gotukola)
- (13) Kinetic energy is available in
- (1) a heap of firewood. (2) streched bow.
(3) a snail in motion (4) a ball stayed on a branch.
- (14) A shadow is formed due to the
- (1) refraction of light
(2) reflection of light
(3) travelling light in a straight line
(4) travelling light through opaque objects.

(15) Method / methods of heat transfer according to the given diagram is,

- (1) Convection
- (2) Radiation
- (3) Conduction
- (4) Conduction and convection.



(16) This is not a unit for measuring temperature

- (1) Kelvin
- (2) Celsius
- (3) Farenheit
- (4) Joules

(17) Force is a vector quantity. It has,

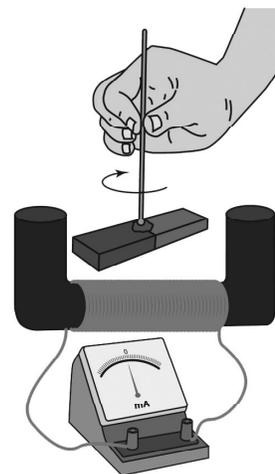
- (1) both a magnitude and a definite direction.
- (2) has a magnitude and no definite direction.
- (3) not a magnitude and has a definite direction.
- (4) not a magnitude and a direction.

(18) Sound shows a lowest and highest speed respectively in

- (1) solid, liquid
- (2) liquids, gases
- (3) gases, solid
- (4) gases, liquid

(19) A bar magnet is rotated to a definite direction as shown in the figure. Which one of the following can be observed in the centre zero galvanometer?

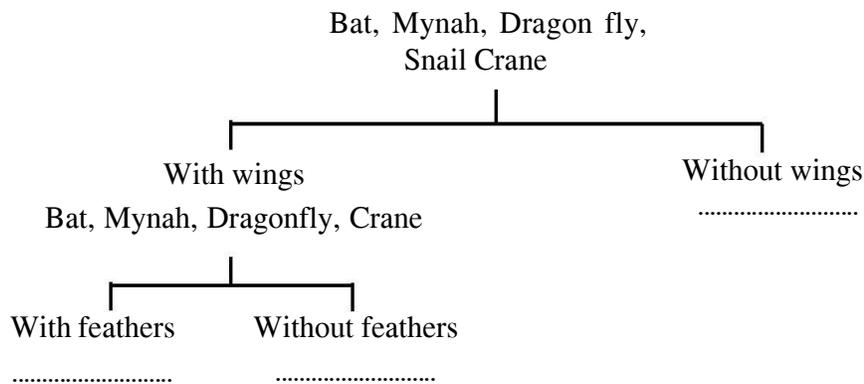
- (1) No deflection of the indicator of the galvanometer.
- (2) Indicator of the galvanometer is deflected to one direction from zero.
- (3) Indicator of the galvanometer is deflected to both direction from zero.
- (4) Indicator of the galvanometer is deflected to one direction from zero and stop at the same place.



(20) The heat of the engine is absorbed by water in the radiator and prevent the engine from heating due to overheat. The property of water used for this is,

- (1) Coolant
- (2) Solvent
- (3) Viscosity
- (4) Floating

(21) Given below is a dichotomous key.



Animals without feathers in above dichotomous key are,

- | | |
|-----------------------|--------------------|
| (1) Mynah, Dragon fly | (2) Bat, Mynah |
| (3) Bat, Crane | (4) Bat, Dragonfly |

(22) Chemical energy \rightarrow Electric energy

Above energy transformation is taken place during.

- | | |
|--|--|
| (1) Generation of electricity from a dry cell. | (2) Rotating a turbine by flowing water. |
| (3) Production of sounds from the television. | (4) Lighting a bulb from solar cells. |

(23) The magnification of objective lens and eye- piece lens respectively are $\times 40$ and $\times 4$ in a compound light microscope. The overall magnification of this is,

- | | |
|--------|---------|
| (1) 10 | (2) 16 |
| (3) 36 | (4) 160 |

(24) During the correct use of compound light microscope, the type of objective lens should be adjusted first is

- | | |
|----------------|--------------------------|
| (1) low power | (2) medium power |
| (3) high power | (4) medium or high power |

(25) An instance where energy is produced by nuclear reactions naturally is,

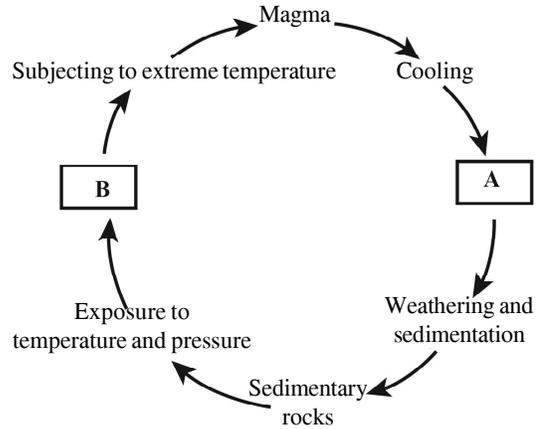
- (1) Production of energy inside sun.
- (2) Weathering of rocks in the earth crust.
- (3) Production of energy at Fukushima nuclear plant in Japan.
- (4) During volcanic eruption.

(1 x 25 = 25 marks)

Part - II

- Answer the 5 questions only.
- 12 marks allocated for each.

01. (A) Continuous process, in which the 3 types of rocks are created, changing from one form to another is known as the rock cycle.



(i) Name the spaces given as A and B in the rock cycle. (01 mark)

A..... B.....

(ii) Name the type of rock which marble and gneiss belong respectively. (01 mark)

(iii) Explain how, a piece of granite differ from a piece of quartz (01 mark)

(iv) The mineral, mica can be found abundantly in some places of Wayamba Province. Name a popular place where Mica can be found. Write one use of it. (01 mark)

Place/ area -

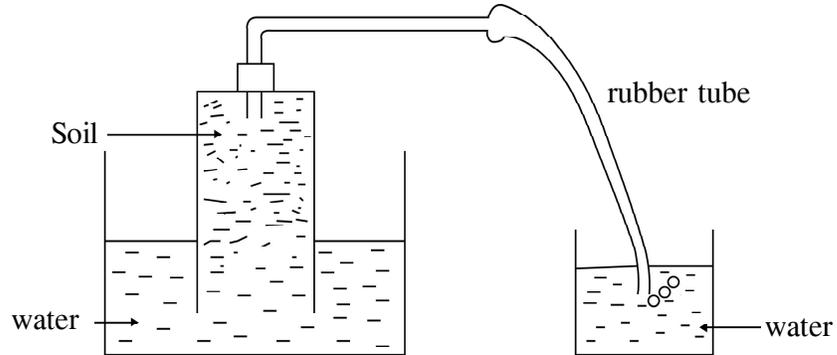
Use -

(v) Soil is formed by weathering of bed rocks for a very long time of period. Name two weathering methods of rock weathering. (01 mark)

.....

(B) (i) Minerals are the solid components of soil. Write 2 types of soil minerals. (01 mark)

(ii) Presence of one of the soil components can be demonstrated using given set up.



(a) Among soil component in soil which one is demonstrated in the above set up? (01 mark)

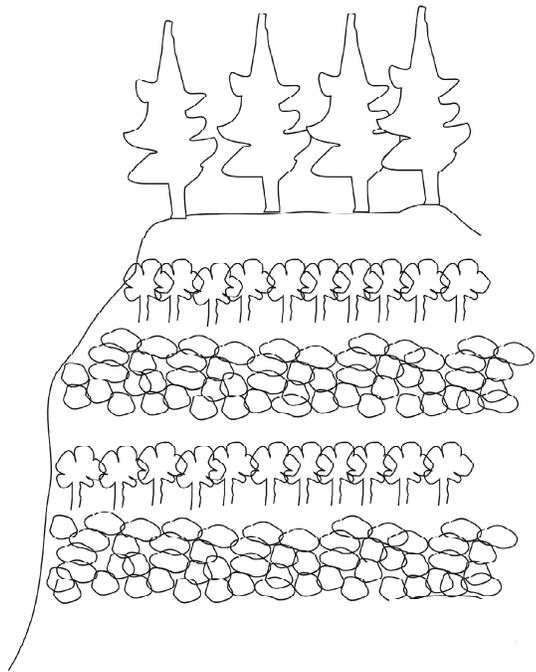
(b) Write a use of above mentioned soil component. (01 mark)

(iii) Name 2 soil organisms which can observe in a sample of soil taken close to a heap of garbage. (01 mark)

- (iv) Cultivation of tea in a slopy area of hill country is shown in the given figure.

Steps applied for prevention of soil erosion are also shown in it.

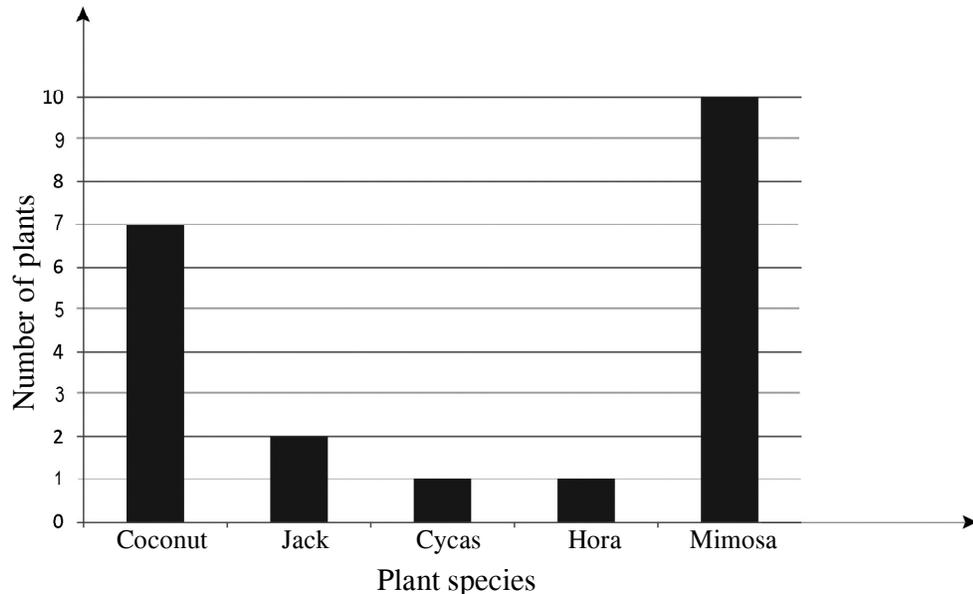
- (a) What is the method of tea cultivation as shown in above. (01 mark)
- (b) According to the above figure, name 2 steps which are applied for prevention of soil erosion. (01 mark)



- (v) The structure of the soil can be changed due to the addition of various pollutants. Write 2 such soil pollutants. (01 mark)

02. (A) After observing plants and animals in the home garden, a column graph is drawn by a student including only some few plants.

Answer to the questions given with the help of graph.



- (i) Name a monocotyledonous plant and a non - flowering plant mentioned in the graph. (01 mark)
- (ii) (a) Name the method of dispersal of fruit of the Hora plant. (01 mark)
- (b) Name an adaptation of the fruit of Hora for that mentioned method. (01 mark)
- (iii) (a) What is the most abundant plant grown in the home garden. (01 mark)
- (b) Write a special feature of the roots of that plant (01 mark)
- (c) Name the group of microorganism living in the roots which help to fertile the soil. (01 mark)

(B) Some observed animals in the home garden are given below.



- (i) Name a vertebrate animal among them. (01 mark)
- (ii) Write an animal which shows camouflage. (01 mark)
- (iii) (a) Name an animal with a streamlined body shape. (01 mark)
- (b) Explain how that shape help for its motion. (01 mark)
- (iv) Mention the protective behaviour of following animals.
 Snail -
 Millepede- (02 marks)

03. Some solutions prepared by a group of students are tested with indicators as shown in give table.

(i) Fill in the blanks in the table.

Prepared Solutions	Turmeric boiled water	Shoe flower extraction	Blue litmus
Lime juice	Yellow	1.	Red
Lime water	2.	3.	4.
Salt water	5.	No change	6.
Vinegar	7.	8.	9.
shampo solution	Orange	Green	10.

(1/2 marks x 10 = 05)

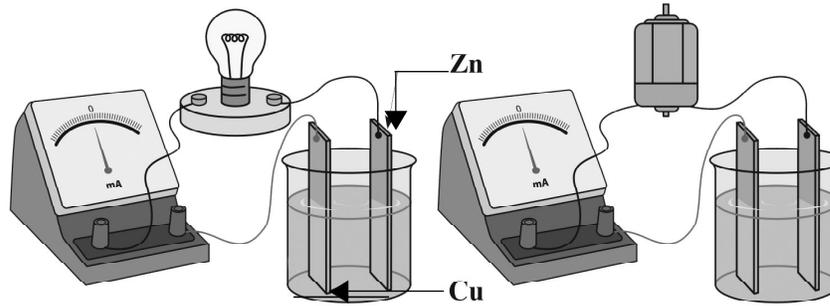
- (ii) Name a strong acid that is used in the laboratory. (01 mark)
- (iii) Name two neutral solutions that used at home. (02 marks)
- (iv) Name a substance which is added to the soil to reduce the acidity in the soil. (01 mark)
- (v) Write the colour when lime water is mixed with methylorange. (01 mark)
- (vi) No colour change when A and B are mixed with phenolphthalein. But blue litmus turns to red with solution A. Then what may be the nature of solution B? (02 marks)

(Total 12 marks)

04. (A) Charges are formed when some substances are rubbed together.

- (i) Name the two types of charges formed by rubbing. (02 marks)
- (ii) Write 2 phenomena associated with static electrical charges. (02 marks)
- (iii) Name the electronic accessory which can store static electrical charges. (01 mark)
- (iv) Draw the symbol of that accessory mentioned in part (iii) (02 marks)

(B) A method of generation of electricity is given below.



- (i) Write the change in the ammeter when bulb is lighted up. (01 mark)
- (ii) Write the change in motor during the deflection of indicator of ammeter. (01 mark)
- (iii) Write an observation near the copper sheet in this experiment. (01 mark)
- (iv) How do you introduce a setup joining several cells together. (01 mark)
- (v) Mention a weakness of this set up. (01 mark)

(Total 12 marks)

05. (A) We do various types of work in our day - to - day life obtaining energy from different sources of energy. Sources of energy are divided into 2 main types.

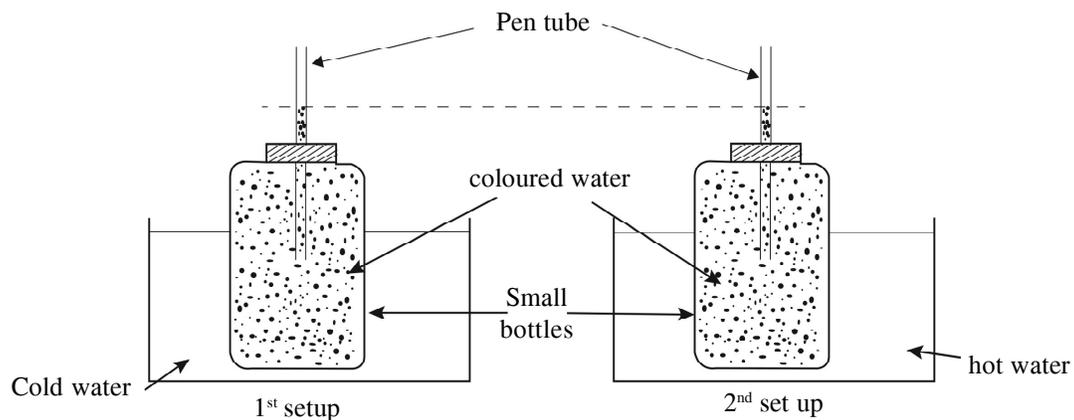
- Renewable sources of energy.
- Non - renewable sources of energy

- (i) What is meant by renewable sources of energy? (01 mark)
- (ii) Classify the following sources of energy as renewable and non - renewable sources. (02 marks)

Nuclear energy, Bio- mass, Geothermal energy, Natural gases.

- (iii) State 2 ways that you can contribute to the sustainable usage of energy sources. (02 marks)

(B) Given below set - up is arranged in the laboratory for an activity.



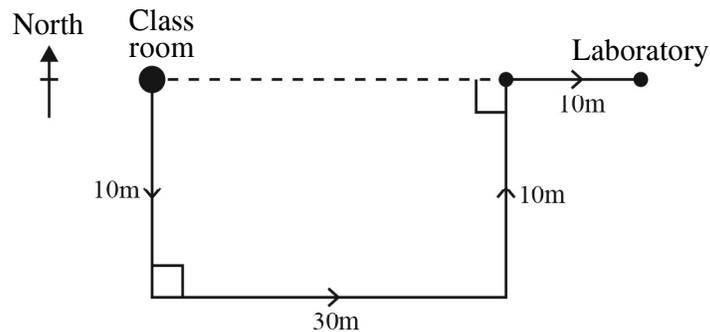
- (i) Write the observations when 2 small bottles with pen tubes are kept in hot water and cold water (02 mark)
- (ii) Write reasons for above observations (01 mark)
- (iii) Name an instrument which is made according to this principle (01 mark)
- (iv) Write 2 liquids which are used in above mentioned (iii) instrument. (02 marks)
- (v) Coloured water is used in small bottles. Explain why? (01 mark)

06. (A) A bee hive is made up of small hexagonal units, as well as living body is made up of small units.
- What is the building unit of living body? (01 mark)
 - Name 2 unicellular organisms (02 marks)
 - Organisational levels of life is given below. Name the spaces given as A and B.
Cell → A → B → System → Organism (02 marks)
 - Write 2 functions of small intestine of the human digestive system. (02 marks)
 - Write a function of the larynx in the human respiratory system. (01 mark)
- (B) The following food items are included in a lunch packet of a student,. A banana fruit is taken as dessert after the lunch.

rice, sprats, an egg, green leaves.

- Name the food items from the above list which contain following nutrients.
Carbohydrate
Protein
Lipids
Vitamins (02 marks)
 - Write the food item which can be identified, if you have provided a solution of iodine. (01 mark)
 - Write a use of food which is rich in fibres. (01 mark)
- (Total 12 marks)

07. (A) A change of position of living and non living objects with the time is named as motion. The following rough sketch shows that a path of a student from class room to laboratory.



- What is the of displacement done by the child from class room to laboratory? (02 marks)
 - Write the SI unit of distance and displacement respectively. (02 marks)
 - Write a difference between distance and displacement. (02 marks)
- (B) Images are formed by mirrors.
- An image is formed when an object is kept in front of a plane mirror. Write the reason for this. (02 marks)
 - Write 2 features of an image formed by a plane mirror. (02 marks)
 - What type of mirror should be used, if it is necessary to get an inverted images? (01 mark)
 - Name the type of mirror which is used as side (rare view) mirrors of vehicles. (01 mark)
- (Total 12 marks)

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Third Term Test - Grade 7 - 2019

Science Answer Sheet

Part - I

(1)	4	(2)	3	(3)	2	(4)	2	(5)	3
(6)	4	(7)	4	(8)	2	(9)	3	(10)	3
(11)	4	(12)	2	(13)	3	(14)	3	(15)	1
(16)	4	(17)	1	(18)	3	(19)	3	(20)	1
(21)	4	(22)	1	(23)	4	(24)	1	(25)	1

Part - II

01. (A) (i) A - Igneous rock B - Metamorphic rock 01
 (ii) Metamorphic rock 01
 (iii) quartz is made by one kind of material (Same chemical composition) 01
 Granite is made 2 or more mineral 01
 (iv) area - Wariyapola / Madampe 01
 Use - making electric / electronic accessories
 (v) Physical / chemical biological weathering 01
 (B) (i) Sand, Clay, Silt 01
 (ii) (a) soil air / air 01
 (b) for respiration of soil organisms 01
 (iii) Millepede, earth worm ants, black ants, or any suitable answer
 (iv) (1) Contour method. 01
 (2) Make stone ridges against the slope 01
 Make drains according to contours 01
 Cultivate according to the contour method
 Use wind breakers
 (v) Polythene / dry cells / chemical fertilizer, E - waste 01 (12)
02. (A) (i) Coconut, Cycas 01
 (ii) (a) air / wind 01
 (b) Wing like structure or relevant answer 01
 (iii) (a) Mimosa 01
 (b) Presence of roof nodules 01
 (c) bacteria 01
 (B) (i) Lizard / crow 01
 (ii) Lizard 01
 (iii) (a) crow 01
 (b) to reduce the air resistance 01
 (iv) Snail - taking body inside to the shell.
 Millepede - rolling body 02 (12)

03. (i)

Prepared	Turmeric boiled water	Shoe flower boiled water	Blue litmus
Lime juice	Yellow	.....	red
Lime water	.....	.....	.....
Salt water	.....	No change	.....
Vinegar	.....	.....	.....
shampo solution	Orange	Green	.....

any relevant answer
1/2 × 10 = 05 marks

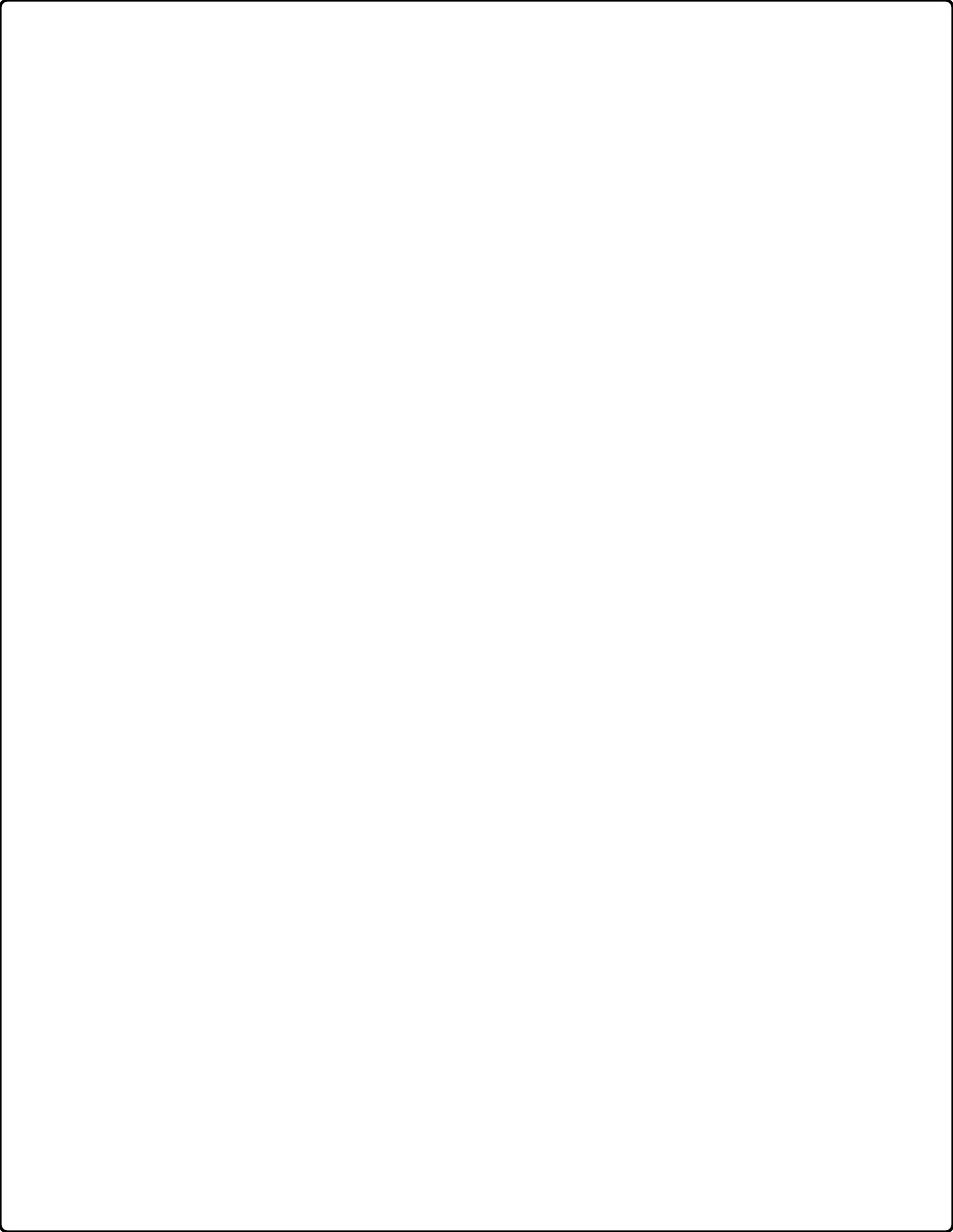
- (ii) Sulphuric / Hydrochloric / Nitric 01
- (iii) distilled water / salt solution / surgical spirit 02
- (iv) burnt lime (Calcium Oxide) 01
- (v) Turmeric 01
- (vi) a neutral solution 02 (12)

04. (A) (i) Positive and negative 02
- (ii) Occurrence of lightning / Tick sound produced during ironing clothes /
Attraction of hair towards the T.V. screen 02
- (iii) Capacitor 01
- (iv) $-|+$ 01
- (B) (i) Movement of the indicator 02
- (ii) motion 01
- (iii) accumulation of air bubbles 01
- (iv) battery 01
- (v) Presence of a liquid inside / Production of electricity is stopped in few minutes. 01 (12)

05. (A) (i) Can be replaced within short time when exhausted / finished 01
- (ii) renewable - Bio - mass, geothermal energy 02
- Non renewable - nuclear energy, Natural gasses 02
- (iii) relevant answers 02
- (B) (i) No change in 1st set - up coloured water is risen up in the 2nd set - up 02
- (ii) expansion of coloured water in 2nd set - up 01
- (iii) thermometer 01
- (iv) Mercury, Ethyl alcohol 02
- (v) Observation can be made clearly 01 (12)

06. (A) (i) cell 01
- (ii) Amoeba / Paramecium / Euglena / Plasmodium 02
- (iii) A - tissues B - organs 02 1 × 2
- (iv) Further digestion of food 02
- absorption of digested food
- (v) taking outer air inside to the lungs 01
- giving out air from lungs to out side
- Production of sound 01
- (B) (i) rice, sprats/ egg, green leaves / egg 02 1/2 × 4
- (ii) Starch 01
- (iii) Prevent from constipation., easy to digest 01 (12)

07. (A) (i) 40m to East 02
- (ii) Distance - (m) Displacement - (m) 02
- (iii) Distance - only a magnitude 02
- Displacement - has magnitude and definite direction 02
- (B) (i) reflection through the plane mirror 02
- (ii) Same size / Virtual / Erect / laterally inverted etc. 02
- (iii) Concave mirror 01
- (iv) Convex mirror 01 (12)



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Third Term Test - Grade 7 - 2019
Science Practical Activity No - 01

Materials required:-

A sample of soil, Two cylindrical containers of equal sized, Bunsen burner or spirit lamp, Test tube holder, Anhydrous copper sulphate, Water, Ruler, Glass rod

Instructions for Teachers:-

- | Group the students into small groups.
- | Give necessary instructions for students.
- | Supply the necessary materials for the students.
- | Instruct them to fill the given table alone.

Activity Sheet for students:-

- | Fill one of the cylindrical container with soil up to a height of 4cm. Fill water to the other container up to a height 4cm. Now pour the water in the cylinder into the soil sample. Measure the level of water filled into the soil sample.
- | Fill 1/4th of the test tube with soil and heat it. Then put anhydrous copper sulphate into the liquid droplets collected at the top end of the test tube.
- | Record your observations in the table given below.
- | Clean all the apparatus that you used and replace them at the proper places.

Activity	Observations	Conclusions
1 Filling water into the cylinder containing soil and measuring the level of water.		
2 Heating the test tube with soil and putting anhydrous copper sulphate.		

Criteria for marking:-

- | | |
|---|-----------------|
| 1. Uses the instruments properly | 03 marks |
| 2. Follows instructions on the activity sheet properly. | 03 marks |
| 3. Writes the observations correctly | 03 marks |
| 4. Writes the conclusions correctly | 03 marks |
| 5. Clean the work station properly | 03 marks |
| | <u>15 marks</u> |

Practical Activity No - 02

Materials required:-

- 1 Coconut water, Rice, Boiling tubes, Tube holders, Pipette, Benedict solution, Iodine Solution, Mortar and pestle, Bunsen burner

Instructions for teachers:-

1. Divide the class into small groups.
2. Give instructions for the safety of the students.
3. Supply necessary materials for the students and instruct them to fill the table alone.

Activity sheet for students:-

1. Put coconut water add equal volume of benedict solution into a boiling tube. Then heat the solution.
2. Grind some rice with water and prepare a pulp. Then put some iodine on to it.
3. Fill the table given below.
4. Clean your work station properly.

Activity	Observations	Conclusions
1 Heating a sample of coconut with benedict solution		
2 Putting iodine into the sample of rice chopped with water		

Criteria for marking:-

1. Handles the instruments properly (03 marks)
2. Follows instructions of the activity sheet properly (03 marks)
3. Follows the steps of the activity properly (03 marks)
4. Writes observations and conclusions properly (03 marks)
5. Work co-operatively and cleans the work station (03 marks)

15 marks)

