

# Southern Provincial Department of Education

## Year End Test - 2017

Science  
Grade 7

Name / Index No. ....

Time - 2 hours

### I Paper

- Answer all questions
- Underline the most suitable answer
- After answering, attach paper I and the answer script relevant to the paper II and submit

(01) Which of the following plant has climbing roots?

- (1) betel                      (2) pandanus                      (3) kirala                      (4) rampe

(02) Out of the following answers, select the answer which does not suit the plant stem with its function.

1. 'Heeressa' stem does photosynthesis
2. Sugarcane stem stores food
3. Runner stem of sweet potatoes does vegetative reproduction
4. Carrot stem stores food

(03) When pH papers are put into a solution in the laboratory, it gave the colour relevant to the pH value 3. What can be this solution?

- (1) a basic solution                      (2) an acidic solution  
(3) a neutral solution                      (4) none of the above

(04) The tissue shown in the figure is,



- (1) Cardiac muscle tissue
- (2) nervous tissue
- (3) blood tissue
- (4) epidermal tissue of a plant

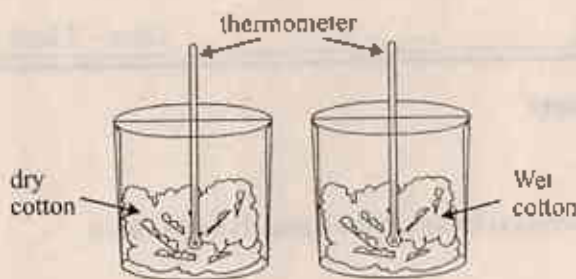
(05) This food is rich in vitamin A

- (1) Manioc                      (2) Carrot  
(3) Cabbage                      (4) Potatoes

(06) The answer which contains that animals who show camouflage is,

- (1) leaf insect, moth, cockroach
- (2) grasshopper, moth, ratsnake
- (3) butterfly, caterpillar, grasshopper
- (4) leaf insect, dragonfly, caterpillar

(07) Which property of water is tested by this activity?



- (1) Solvent property
- (2) transportation
- (3) acting as a medium
- (4) coolant property

(08) Images made by convex mirrors always are,

- (1) Upright
- (2) can be taken onto a screen
- (3) larger than the object
- (4) equal to the object

(09) What is the energy transformation taken place when a stone is shot using a catapult?

- (1) Kinetic energy  $\longrightarrow$  Potential energy
- (2) Potential energy  $\longrightarrow$  Kinetic energy
- (3) Kinetic energy  $\longrightarrow$  Chemical energy
- (4) Chemical energy  $\longrightarrow$  Kinetic energy

(10) Select the accessory that produces electricity using a chemical process.

- (1) Solar cell
- (2) dynamo
- (3) dry cell
- (4) condensor

(11) Consider the statements given below.

- (a) Static electric charges are generated when certain materials are rubbed against other materials.
- (b) Lightning is a phenomena that occurs due to static electric charges.
- (c) Electric charges can be stored in a condensor.

Select the correct statement / statments out of the above statments

- (1) Only a
- (2) Only b
- (3) Only c
- (4) a, b, c all

(12) What is the accessory shown in this diagram



- (1) Diode
- (2) Condensor
- (3) dry cell
- (4) solar cell

- (13) When a specimen is observed through the compound microscope, the lens closer to the eye is,  
 (1) lower power objective lens  
 (2) eyepiece  
 (3) high power objective lens  
 (4) mid power objective lens
- (14) Out of the layers in the atmosphere, the layer without clouds is,  
 (1) troposphere  
 (2) thermosphere  
 (3) stratosphere  
 (4) Mesosphere
- (15) When solid ice is converted into liquid water [Ice (solid)  $\rightarrow$  Water (liquid)]  
 (1) heat is absorbed  
 (2) heat is released  
 (3) temperature is decreased  
 (4) temperature is increased
- (16) The body temperature of a healthy person is  $37^{\circ}\text{C}$ . What is the value of this temperature in kelvin scale?  
 (1) 37 k  
 (2) 273 k  
 (3) 310 k  
 (4) 373 k
- (17) The answer which contains only renewable energy sources is,  
 (1) dried cowdung, paddy chaff, wind, sun  
 (2) dried cowdung, geothermal energy, coal, paddy chaff  
 (3) petrol, coal, biomass, tidal power  
 (4) sun, coal, dried cowdung, geothermal energy
- (18) What is the remedy that can be applied to avoid the soil erosion in lands with slopes?  
 (1) make stone ridges longitudinal to the slope  
 (2) cut deep pits here and there  
 (3) Weeding the land.  
 (4) grow savandera plants
- (19) Select the answer which shows the transmission of sound in the ascending order through solid, liquid and gaseous media,  
 (1) Solid < air < liquid  
 (2) Solid < liquid < air  
 (3) Liquid < solid < air  
 (4) Air < liquid < solid
- (20) Cricketers wear white colour suits due to,  
 (1) losing radiated heat very fast by white surfaces  
 (2) it is more suitable to wear white clothes in countries like Sri Lanka which gets more sunlight  
 (3) White colour garments are more noticeable than black colour garments  
 (4) absorbing radiated heat slowly by white surfaces

(Marks -  $2 \times 20 = 40$ )

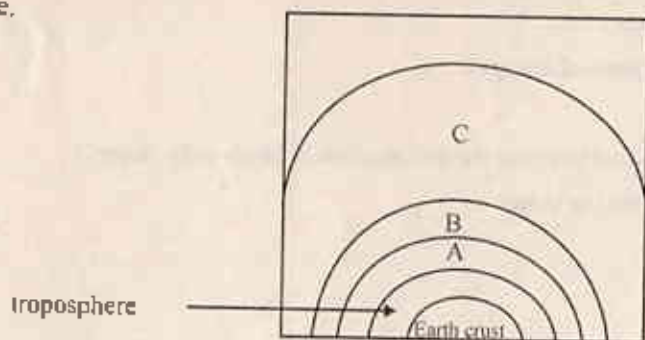
## II Paper

- Question no. 1 is compulsory
- Answer question no 1 and 4 more questions.

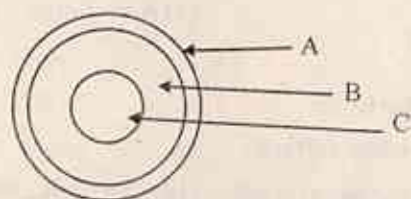
(01) Several organisms present in the environment are divided in to two groups as shown in the table.

A	B
Dolphin	Star fish
Bat	Butterfly
Frog	Crab
Fish	snail
Lizard	earthworm

- (i) What can be the criteria used to include animals into the above two groups.
- (ii) Name two animals out of the animals present in group A that belong to the same group.
- (iii) What is the group that they belong.
- (iv) Write an external feature that can be used to separate frog and lizard
- (B) (i) The diagram below shows how the atmosphere is divided into layers. Name the parts shown as A, B, C here.

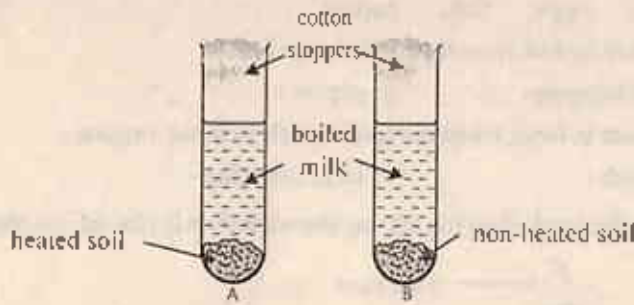


- (ii) A cross section of an avacado is shown below. When it is compared with a cross section of the earth, name the areas of the earth, which corresponds with A, B, C shown in the diagram



- (iii) Write the letter relevant to the area of the earth which has tectonic plates that move relatively to each other.

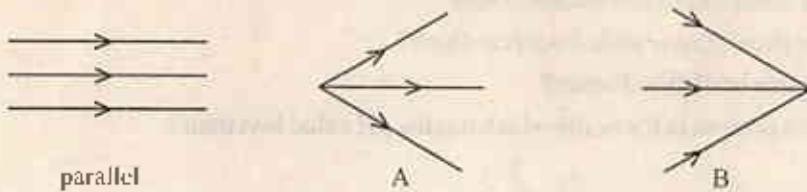
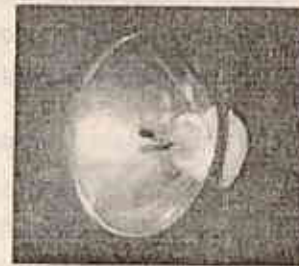
(C) An activity done in the laboratory is shown below



- (i) What can be observed after sometimes of adding boiled milk into these test tubes?
- (ii) What can be concluded using the observation obtained in part (i) above?
- (iii) What is the reason for washing the two test tubes with boiled water and fixing cotton stoppers?
- (iv) Name the chemical you obtained from the laboratory to show that soil contains water.
- (v) Name the laboratory instrument used to observe microorganisms present in milk.

(02) The diagram below shows a solar heater

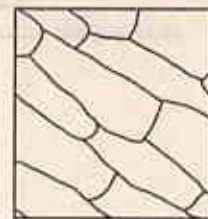
- (i) What kind of mirror is the mirror present in this?
- (ii) What can you say about the time taken for lighting the matchstick when the size of this mirror (diameter) is increased?
- (iii) The diagrams below show three types of light beams.



Write the most suitable names for introducing the light beams A and B

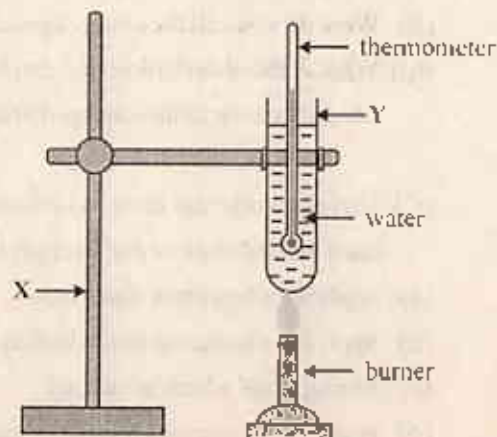
(B) A rough diagram of a microscopic view of a peel of lower epidermis of rhoeo leaf is shown below.

- (i) It was noted that the magnification of the eye piece as  $\times 5$  and the magnification of the objective lens as  $\times 40$ . What is the magnification of the microscope.
- (ii) What can you say about the resolving power of the naked eye and the resolving power of the hand lens.



(C) In a certain activity done in the laboratory, the set-up was prepared as shown in the diagram below, and water in Y was heated till it boiled

- (i) What is the thermometer reading when water is boiling?
- (ii) What is the name used to introduce the definite temperature that water boils.
- (iii) Name the instruments x and y



(03) (A) Food obtained by a student for his breakfast are shown below.

a glass of milk, string hoppers, eggs, fish, papaw

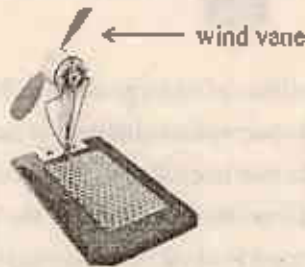
(i) mention the nutrients obtained by him from the food shown below.

a. eggs -                      b. string hoppers -                      c. papaw -

(ii) write the processes taken place in food, when the food travels in these organs

a. mouth -                      c. stomach -                      e. large intestine -

(B) (i) Write the observations you obtained when the set - up shown below is placed in a place where there is enough sunlight.



(ii) Write the energy transformation taken place here.

(iii) What happens if a torch bulb is placed instead of the wind vane?

(iv) Solar energy is used for running vehicles also. Mention 2 advantages obtained by it.

(04) (A) In a certain laboratory experiment, few mililiter of solution prepared by boiling red colour shoe flower was added to a test tube with lime juice.

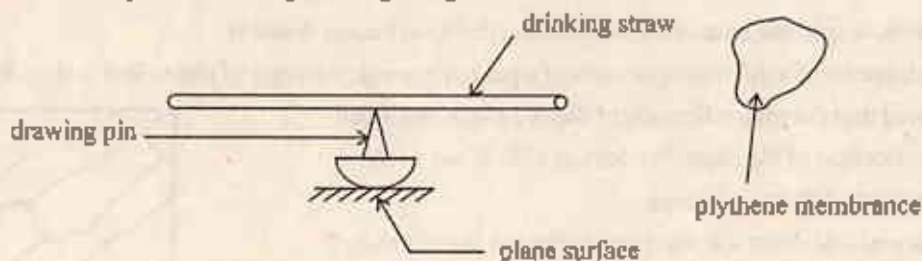
(i) What is the clear observation you obtained here?

(ii) As what does the shoe flower boiled water act here?

(iii) What is the pH value of distilled water?

(iv) Name a substance present in the home which has the pH value less than 7.

(B) Answer the questions using the diagram given below



(i) What should be done by you to charge the drinking straw?

(ii) What do you call the charges generated in that way.

(iii) What is the observation that can be seen when another drinking straw which was charged as above is brought closer to this charged drinking straw.

(C) Various works are done in various instances due to applying a force. Write the specific work done in each instance below due to applying the force.

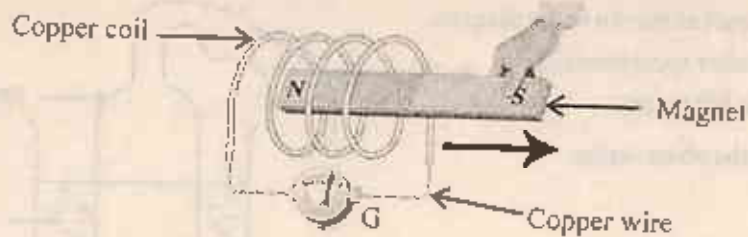
(a) applying a force to a water tap

(b) applying a force to a ball which is at rest (kicking the ball)

(c) hitting a ball which is moving

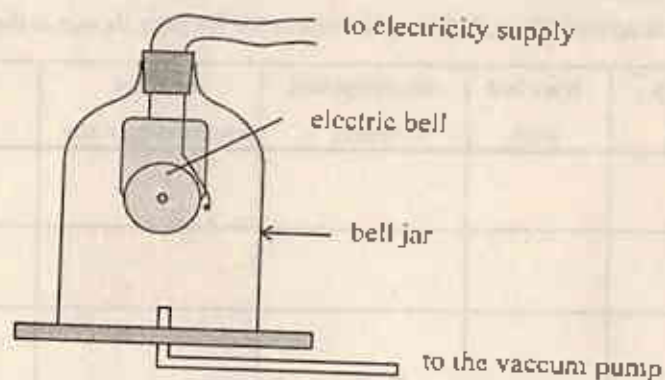
(d) applying a force on a tempered clay ball.

(05) (A) This diagram is relevant for an activity done in the laboratory.



- (i) What is the instrument shown as G
- (ii) What observation can be seen in (G) when the bar magnet is moved here and there through the copper coil?
- (iii) What change can be seen in (G) when the bar magnet is moved speedily
- (iv) One student said that the reason for the change observed in the instrument G is due to producing electricity in the circuit. If so, how is electricity produced in this circuit?
- (v) Mention another instance that this principle is used.

(B) This diagram shows an activity done in the laboratory related to sound.

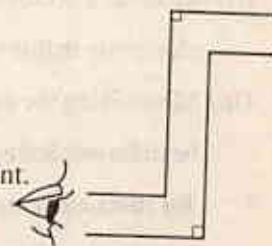


- (i) What is the function done by the vacuum pump in this activity?
- (ii) Explain your idea about the ringing of the electric bell in the instances below.
  - a) When air is in it -
  - b) When air in the bell jar is completely evacuated -
- (iii) Write your conclusion according to the observations obtained in part (ii) above.
- (iv) The sound emitted by dolphins can be heard more intensely when a person is under water. But the same sound emitted by them is heard very lightly when he is out of water. explain the reason for this.

(06) (A) This apparatus was prepared for a person who is in a war tank, to observe what happens outside the war tank.

- (i) What do you call this instrument?
- (ii) Draw in the diagram how pieces of plane mirrors are localised in this instrument.

(Copy this diagram in your answer sheet)

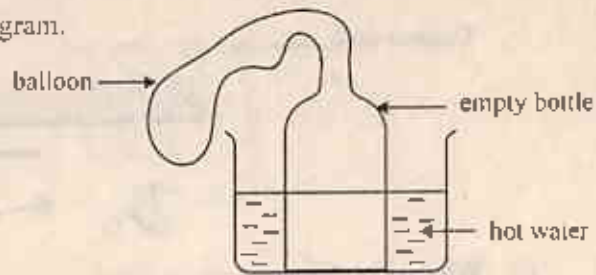


- (iii) Draw in the same diagram the path of light rays when images are observed through this instrument.

(B) An empty bottle to which a balloon is fixed is immersed in a hot water vessel as shown in the diagram.

(i) What can be observed after sometimes of immersing the bottle in hot water?

(ii) Explain the reason for the observation obtained in part (i)

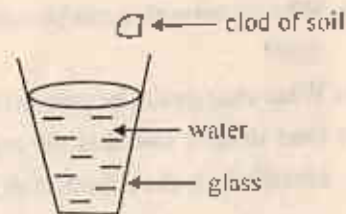


(C) An activity done by a student in the classroom is shown below.

(i) What is the clear observation that can be seen first when a dry soil clod is dropped slowly in to the glass of water as shown in the diagram?

(ii) Which component present in soil is the reason for the observation in part (i)

(iii) How the component you mentioned in part (ii) is important for soil organisms?



(07) (A) Copy the table below in your answer sheet. If these plants have the features shown in the table, mark (✓)

Plant	has a tap root	branched stem	has compound leaves	seeds are dispersed by water	flowering plants
Coconut					
Kottamba					
Cycas					

(B) Shown below are some examples for rocks and minerals found in the environment.

Quartz, granite, gneiss, limestones

(i) select a mineral out of the above examples and write it's name.

(ii) What is the rock that contributes for making marble which is a metamorphic rock?

(iii) Write an example for an igneous rock out of the above examples.

(C) Shown below is an alternative method of producing electricity.

(i) What is the source of energy used here to produce electricity?

(ii) Mention a problem arise in producing electricity in this way.

(iii) Minimizing the usage of plastic has been forwarded as an important proposal for sustainable usage of energy sources.

Explain the reason for proposing it.

