



PROVINCIAL DEPARTMENT OF EDUCATION - NORTH WESTERN PROVINCE

## SECOND TERM TEST - 2019

Grade 07


## SCIENCE

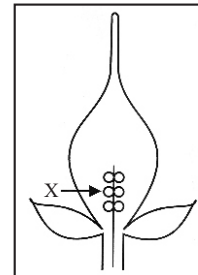
Two Hours

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### Part I

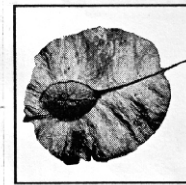
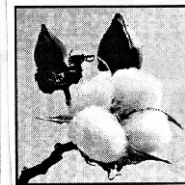
- Answer all questions. Underline the most appropriate answer.

01. What is the basic structural and functional unit of the life ?  
(1) Tissue                      (2) Organism                      (3) Cell                      (4) System
02. Select the correct order of the organisational levels of living body,  
(1) Cells → Tissues → Systems → Organs → Organisms  
(2) Cells → Tissues → Organs → Systems → Organisms  
(3) Cells → Organs → Systems → Tissues → Organisms  
(4) Cells → Systems → Organs → Tissues → Organisms
03. Which is the plant tissue that transports food throughout the plant body ?  
(1) Xylem                      (2) phloem                      (3) cambium                      (4) pith
04. Which is the organ that does not belong to the digestive system ?  
(1) Pancreas                      (2) Oesophagus                      (3) Large intestine                      (4) Larynx
05. Balsam plant was washed well and put in the vessel of red dye solution. Then the cross section of the stem was observed after keeping the plant in solution for several hours. The tissue which is seen in red colour should be,  
(1) Xylem                      (2) Phloem                      (3) Pith                      (4) Epidermis
06. One of a gaseous pollutant that causes air pollution is,  
(1) cement dust                      (2) carbon monoxide  
(3) dust                      (4) lead particles
07. Four capital English letters are placed in front of a plane mirror which letter appears as different form its real nature ?  
(1) A                      (2) T                      (3) O                      (4) P
08. Which optical instrument gives a real, inverted image ?  
(1) Plane mirror                      (2) Convex mirror                      (3) Concave mirror                      (4) Plane glass
09. A transverse section of a flower is given below. The X denotes;  
(1) stigma  
(2) style  
(3) ovary  
(4) ovule
10. The symbol given below is a,  
 (1) a dry cell                      (2) a capacitor  
(3) a diode                      (4) an ammeter
11. Which is the substance that dissolve in water mostly ?  
(1) Laundry blue powder                      (2) sugar                      (3) turmeric powder                      (4) coconut oil



12. Given fruits and seeds are spread by;

- (1) water (2) wind  
(3) explosive mechanisms (4) animals



13. Select the instrument which is produced sound by vibrating membranes,

- (1) Drum, Thabla, Flute (2) Trumpet, Flute, mendelian  
(3) Drum, Getaberaya, Thabla (4) Violin, Sitar, Guitar

14. A dicotomous plant is,

- (1) Cycus (2) Bamboo (3) Kithul (4) Papaya

15. Which is the angle of two mirrors that should be kept to get 5 images ?

- (1)  $45^\circ$  (2)  $60^\circ$  (3)  $72^\circ$  (4)  $90^\circ$

16. The sequence of elements Aluminium and Nickel which exist in earth is,

- (1) in crust and core (2) in crust and mantle  
(3) in mantle and core (4) in core and crust

17. The inner parts of earth can be compared to the replica of a hard boiled egg cut across from top to bottom. The egg yolk is compared to,

- (1) Crust (2) mantle (3) core (4) not mentioned above

18. The form of energy stored in a wound toy car is,

- (1) chemical energy (2) potential energy (3) kinetic energy (4) electric energy

19. What is the layer of the atmosphere that occurs Aurora borealis and Aurora australis ?

- (1) mesosphere (2) stratosphere (3) exosphere (4) thermosphere

20. Diaphragm of the light microscope,

- (1) helps to keep the slide on the stage  
(2) focuses the light to the stage  
(3) changes the distance between slide and objective lens  
(4) controls the light obtained by the specimen

21. The diagram shows,

- (1) the lower epidermal tissue of a plant leaf (2) cardiac muscle tissue  
(3) blood tissue (4) onion peeled cells



22. Chemical energy  $\longrightarrow$  heat energy.

The most appropriate answer for above energy transformation is,

- (1) burning candle (2) lighted electric torch  
(3) heated electric iron (4) bicycle dynamo

23. What is the correct order of cities which show the lower altitude and lower atmospheric pressure ?

- a - Colombo b - Kandy c - Nuwara Eliya  
(1) a and b (2) a and c (3) b and c (4) c and a

24. Which group of animals consists of any invertebrates ?

- (1) sea gull, butterfly, frog (2) prawn, tortoise, sea horse  
(3) sea gull, frog, monitor (4) leech, butterfly, snail

25. 3 statements of a light microscope are given below.

- a) The closest lens to the specimen is objective lens  
b) The body tube can be adjusted by coarse adjustment.  
c) Objective lens is made of convex lens.

The true statements are,

- (1) a and b only (2) a and c only (3) b and c only (4) a, b and c

## Part II

- Answer 5 questions including the first question. First question is compulsory.
- 12 marks are allocated for each question.

01. A) Sayuri visited her uncle's house with her family by car. His house was located at a hill side. They spent more time at a beautiful waterfall and in the evening arrived uncle's house. Uncle was watching television when they arrived. The bulbs at the veranda had lighted up and electric fan was also working.

(1) What are the forms of energy of underlined terms given in the paragraph

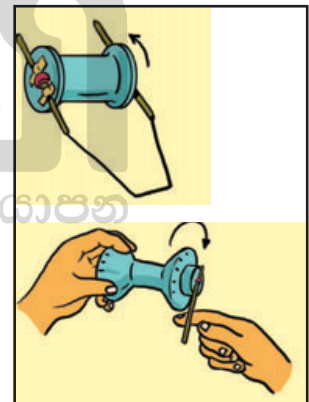
- (a) waterfall .....
- (b) television .....
- (c) bulbs .....
- (d) electric fan ..... (4 m.)

(2) The motor car is running due to the combustion of fuel. Which is the form of energy that stored in fuel ? (1 m.)

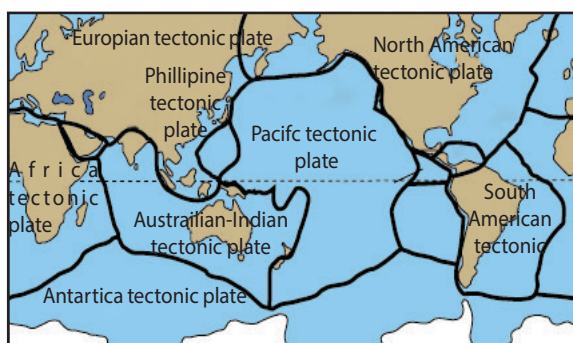
(3) Write the energy transformation that occurs in a waterfall. (2 m.)

B) A student wanted to made a toy cart as given in the figure. But he was unable to find a thread bobbin for it.

- (1) Suggest another material that can be used to make a toy cart instead of the thread bobbin. (1 m.)
- (2) Which is the part of the toy cart that stored energy ? (1 m.)
- (3) How is the energy stored here ? (1 m.)
- (4) Which is the form of energy that stored here ? (1 m.)
- (5) Write a difficulty that you have faced when making this instrument. (1 m.)



02. A



*Tectonic plates of the earth.*

- (1) What is meant by a tectonic plate? (1 m.)
- (2) On which tectonic plate that Sri Lanka is situated ? (1 m.)

- (3) Tectonic plates may move apart relatively each other. Write a result of it. (1 m.)
- (4) An earth quack could occur in moving tectonic plates. How does the tectonic plate move to get that result ? (1 m.)
- (5) A margin of a tectonic plate is located in North - America. What is the name of it ? (1 m.)

- (6) Briefly write the steps of an activity which is done for demonstrating the activity of plate tectonics. (2 m.)

- B (1) What are the materials you used to prepare a 3 dimensional replica of the internal structure of the earth. (1 m.)
- (2) Write 3 steps of the method you followed to make above mentioned model? (3 m.)
- (3) How did you exhibit the internal structure of the model you made? (1 m.)

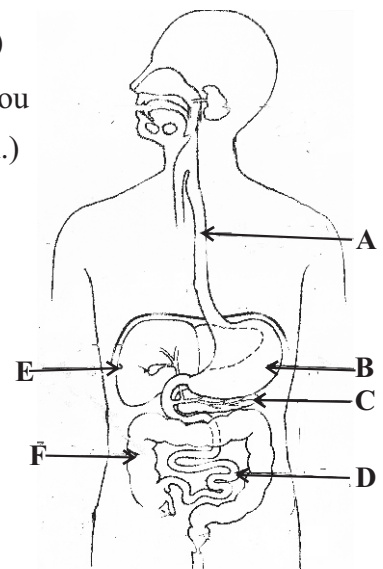
03. A The arrangement of materials of an activity prepared by grade 7 students is given below.



- (1) When direction light form the source of light A, a sharp umbra is formed on D. Which should be the objects B and C? (2 m.)
- (2) One of material should be changed to get a blurred umbra on D.
- (a) Write the letter of that material (1 m.)
- (b) Write a specific property of the material which is replaced (1 m.)
- (3) The student wanted to see the umbra and penumbra of C by removing B. To which direction the material C is moved? towards D or towards A? (1 m.)
- B (1) Write 2 instances where plane mirrors are used. (1 m.)
- (2) Write 2 features of the image formed by plane mirror. (2 m.)
- (3) What is the change observed of the image formed by a concave mirror when bringing the object towards the mirror? (1 m.)
- (4) A type of cured mirrors is used as side mirrors of vehicles.
- (a) Name the type of cured mirrors used here. (1 m.)
- (b) Write 2 features of the image formed by the mirror you mentioned in (a). (2 m.)

04. A A linear diagram of the human digestive system is given below.

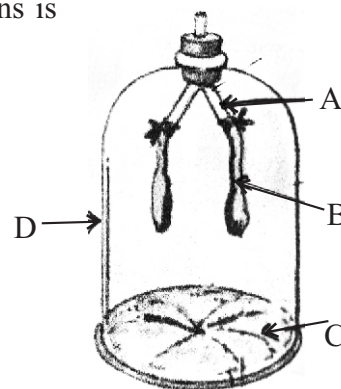
- (1) Name the parts A, B, C, D E and F. (3 m.)
- (2) Which part absorbs water? (1 m.)
- (3) Which is the common cavity for digestive tract and respiratory tract? (1 m.)
- (4) Mechanical digestion takes place at the mouth cavity. How does this process take place? (1 m.)



- B (1) A model for demonstrating the process of human respirations is given below.

What are the organs similar for parts A, B, C and D? (4 m.)

part of the model	part of the respiratory system
A	.....
B	.....
C	.....
D	.....



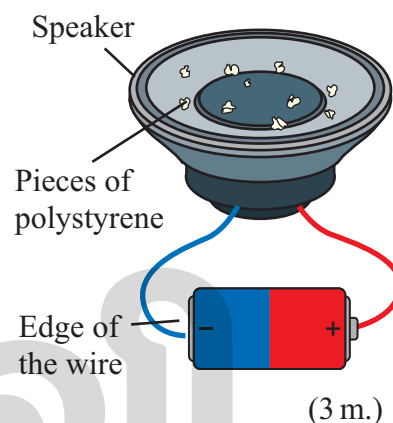
- (2) Write an observation when pulling the rubber membrane downwards. (1 m.)
- (3) Which is the process of respiration, similar to above mentioned (2) observation? (1 m.)

05. (1) A diagram of an activity to demonstrate the way of producing sound is given below.

When connecting wires into the dry cells;

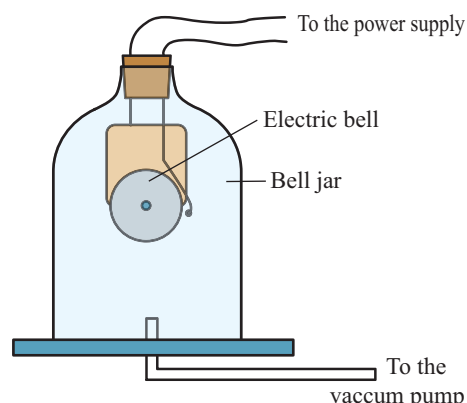
- (a) Write the observation (1 m.)
- (b) Write the conclusion that can be arrived. (1 m.)
- (2) Our vocal sound is produced due to the vibration. What are the structures vibrating there to produce sound? (1 m.)
- (3) Write how the sound of given instruments is produced.

Instrument	How the sound is produced.
Violin	.....
Thabla	.....
Flute	.....



- (4) A diagram shows an activity done for generating sound.

- (a) Write the observation when switch on the electric bell first. (1 m.)
- (b) Write an observation when switch on the electric bell after evacuating the bell jar completely. (1 m.)
- (c) What is the conclusion you arrived. (1 m.)



- (5) A student said that the sound is heard more clearly when knocking down the table after keeping his ear on it. What is the reason for it? (2 m.)
- (6) During thundering sound and the light emit at the same time. But we hear the sound after few seconds of seeing light. What is the reason for it? (1 m.)

06 (1) Name the parts of the light microscope from A to E. (2 m.)

(2) What is the function of D. (1 m.)

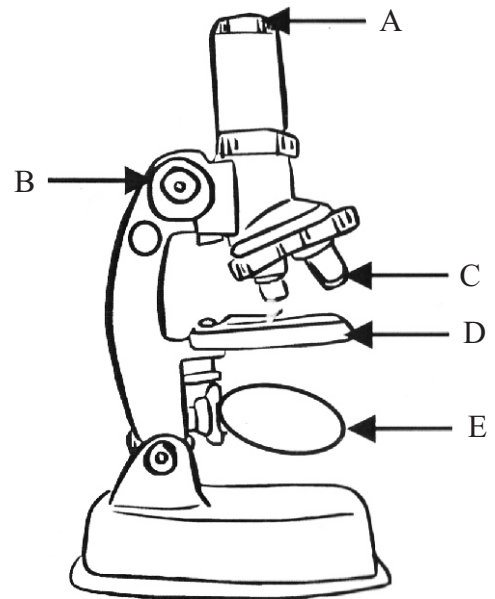
(3) Write 2 facts to be considered in using a light microscope. (2 m.)

(4) Write 2 methods of changing the distance between the objective lens and specimen. (2 m.)

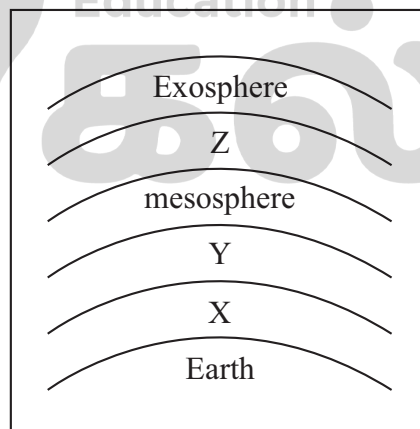
(5) The eyepiece lens is x 15 and the objective lens is x 40 of a light microscope. What is the magnification of it? (1 m.)

(6) Three plant specimens are immersed in vinegar, alcohol and lime water. Classify them as acidic, basic and neutral substances. (3 m.)

(7) Which is the solution that gives colour change of the red limus? (1 m.)



07. A figure of the layers of the atmosphere is given below.



(1) What is the importance of layer x for living organisms. (1 m.)

(2) Name 3 gases which are presence in x layer mostly. (3 m.)

(3) Write an importance of layer y for living organisms. (2 m.)

(4) Which is the coldest layer? (1 m.)

(5) In which layer that the International space station situated? (1 m.)

(6) Which is the layer that exist water vapour as ice clouds? (1 m.)

(7) Write 2 functions of atmosphere. (2 m.)

(8) Which is the type of charges occurred in clouds? (1 m.)



## Answer Sheet - Part I

01. (3) 02. (2) 03. (1) 04. (4) 05. (1) 06. (2) 07. (4) 08. (3) 09. (4) 10. (3)  
 11. (2) 12. (2) 13. (3) 14. (4) 15. (2) 16. (1) 17. (3) 18. (3) 19. (3) 20. (4)  
 21. (1) 22. (1) 23. (2) 24. (4) 25. (1)

## Part II

01. A (1) (a) Kinetic energy  
 (b) Light energy / sound energy  
 (c) Light energy  
 (d) Kinetic energy (4 m.)  
 (2) chemical energy (1 m.)  
 (3) potential energy → kinetic energy (2 m.)  
 B (1) empty tin (1 m.)  
 (2) rubber band (1 m.)  
 (3) by winding (1 m.)  
 (4) potential energy (1 m.)  
 (5) any suitable answer (unable to insert rubber band properly, unable to winding etc...) (1 m.)  
 (Total - 12 marks)
02. A (1) The crust is divided into sections (1 m.)  
 (2) Australian - Indian tectonic plate (1 m.)  
 (3) A deep gulf may occur. (1 m.)  
 (4) Two plates Past each other (1 m.)  
 (5) san Andreas fault. (1 m.)  
 (6) Pressing the orange slowly after cutting it with a knife into several pieces. (2 m.)  
 B (1) clay (1 m.)  
 (2) Make a globe of the size of a line using clay / Paste a seperate coloured layer of clay on the top of the globe. / Paste a different colour of clay layer which is thin much as possible. (3 m.)  
 (3) Observe after cutting that globe. (1 m.)  
 (Total - 12 marks)
03. A (1) B - transparent sheet  
 C - opaque ball (2 m.)  
 (2) (a) B (1 m.)  
 (b) translucent property (1 m.)  
 (3) towards A, opposite to D (1 m.)  
 B (1) In dressing rooms / To construct kaleidoscope etc. - any suitable 2 answers (1 m.)  
 (2) upright, same size to the object. / virtual any suitable 2 answers (2 m.)  
 (3) Magnified image (1 m.)  
 (4) (a) convex mirrors (1 m.)  
 (b) diminish / upright (2 m.)  
 (Total - 12 marks)

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