



Sirimavo Bandaranaike Vidyalaya

Science - Part I

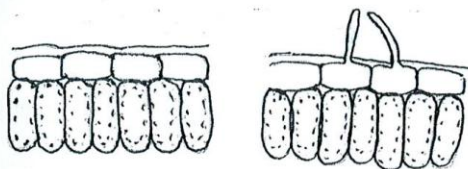
Grade 10

First Term Test – 2013

1 hour

• **Select the most appropriate answer.**

1. The organelle which is not covered by two membranes is,
(i) Nucleus (ii) Chloroplast (iii) Mitochondria (iv) Golgi apparatus
2. The smallest and the simplest group of microorganism is,
(i) Bacteria (ii) Virus (iii) Fungus (iv) Algae
3. The percentage of water in blood plasma of a man is,
(i) 55% (ii) 45% (iii) 92% (iv) 8%
4. Carbon dioxide transports in blood as,
(i) Carbon dioxide gas (ii) Carbonmonoxide
(iii) Carbonate ions (iv) Bicarbonate ions
5. A student observed that a fish opens and closes its mouth frequently. Biological process relevant to this is,
(i) Nutrition (ii) Respiration (iii) Locomotion (iv) Excretion
6. Potassium and Phosphorus ions absorb to root hairs by,
(i) Diffusion (ii) Active absorption
(iii) Transpiration (iv) Evaporation
7. The food produced in leaves transport through phloem as,
(i) Glucose (ii) Sucrose (iii) Starch (iv) Maltose
8. The diagram illustrates two adaptations shown by plants to reduce transpiration. Plants that show these adaptations respectively are,



- (i) Cactus, Plumeria (ii) Pumpkin, Cactus
(iii) Plumeria, Pumpkin (iv) Lime, Cactus
9. Erythrocytes produce and destroy respectively in,
(i) Bone marrow, liver (ii) Lymph nodes, liver
(iii) Bones, liver (iv) Heart, liver
10. Cellulose is not present in the cell walls of this organism.
(i) Algae (ii) Fungus (iii) Angeosperms (iv) Gymnosperms

11. The following characteristics are present in a certain type of cells.
 a - No Nucli.
 b - Cytoplasm is present.
 c - Small pores on cross walls.
- Select the correct type of cell.
- (i) Companion cells (ii) Vessel elements
 (iii) Tracheids (iv) Sieve tubes
12. A student observed black colour fungus on a slice of bread after a few days. This fungus is,
 (i) Mushrooms (ii) Penicillium (iii) Mucor (iv) Alagaricus
13. Select the characteristics present in only birds and mammals.
 A - Respire through lungs.
 B - 4 chambered heart.
 C - Warm blooded.
 D - Live on land.
- (i) Only A and B (ii) Only B and C
 (iii) Only B and D (iv) Only A,C and D
14. Incorrect statement about transportation of substances through a plant is,
 (i) Water and minerals transport through xylem
 (ii) Food transports through phloem
 (iii) Transportation of water and minerals through xylem is referred as translocation
 (iv) Phloem transports food in all directions
15. Organell that produces energy in the cell is,
 (i) Mitochondria (ii) Chloroplast
 (iii) Golgi apparatus (iv) Nucleus
16. This type of cell has the highest percentage in blood among white blood cells.
 (i) Neutrophil (ii) Eosinophil
 (iii) Basophile (iv) Lymphocyte
17. The constituents of blood that should be transfused to a person with burning injuries is,
 (i) Erythrocytes (ii) White blood cells
 (iii) Platelets (iv) Blood plasma
18. The skeletal muscles are in,
 (i) Neck (ii) Tongue (iii) Diaphragm (iv) Digestive track
19. The dormant transportation method of releasing water molecules from a water surface is,
 (i) Diffusion (ii) Osmosis (iii) Mass flow (iv) Evaporation
20. A blood group which does not contain an antigen is,
 (i) A (ii) B (iii) AB (iv) O



Sirimavo Bandaranaike Vidyalaya

Science - Part II

Grade 10

First Term Test – 2013

2 hours

- Answer all the questions.

- (1) (A) A student observed the animals mentioned below in a pit used to produce compost.

Earth worm, beetle, ant, centipede, millipede, frog, snail

- (i) An organism mentioned above has the following characteristics.

- Wet skin
- The body is externally and internally segmented.

To which group does this organism belong? (1 mark)

- (ii) Mention two animals that are not mentioned above belonging to the same group. (2 marks)

- (iii) Name a vertebrate from the above list. (1 mark)

- (iv) State two characteristics of the above (iii) mentioned animal. (2 marks)

- (v) Mention two groups of organisms decay materials. (2 marks)

- (vi) State a terrestrial animal belongs to the group in which the snail is categorized. (1 mark)

- (B) A list of organisms observed by a group of students is mentioned below.

Cycus, coconut, mango, nephrolepis, poganatum, treeferns, liverworts

- (i) Plants are basically classified into two groups. What are they? (2 marks)

- (ii) Select the non flowering plant with seeds from the above list. (1 mark)

- (iii) Which name is given to the above mentioned (ii) group of plants? (1 mark)

- (iv) State another plant belongs to the group mentioned in (ii). (1 mark)

- (v) Name two non flowering plants without seeds. (2 marks)

- (2) Two organelles in living cells are mentioned below.

- (i) Name the diagrams A and B. (2 marks)



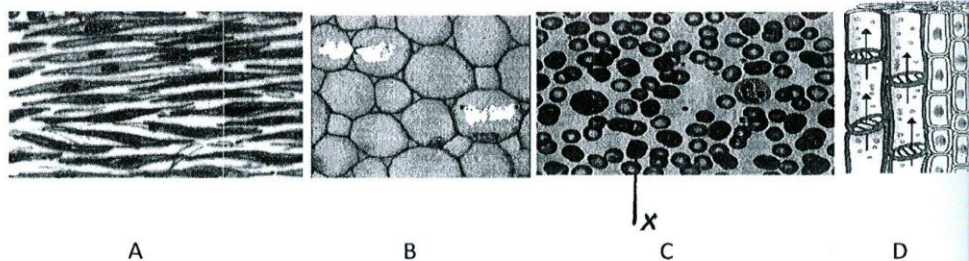
A



B

- (ii) The above diagram depicts two organelles in living cells. Mention main function of the each organelle. (2 mark)
- (iii) State the balanced chemical equation for the chemical reaction occurs in the organelle (B). (2 marks)
- (iv) Mention two types of cells in which the organelle (B) presents mostly in the leaf. (2 marks)
- (v) The first two steps of an experiment that is done to prove the products of the process you mentioned in (ii) is stated below.
- x - Boil the leaf in water.
y - Heat the leaf in alcohol using a water bath.
- (i) Explain the objectives of the each step. (2 marks)
- (ii) Why do you use a water bath in the step Y.? (1 mark)

(3) Some animal tissues and plant tissues are mentioned below.



- (i) Name the tissues A,B,C and D. (2 marks)
- (ii) State a similarity and dissimilarity among B and the collenchyma tissue separately. (2 marks)
- (iii) Write tissues bear only one type of cells from the above mentioned tissues. (2 marks)
- (iv) Name two organs in which the tissue A is placed. (2 marks)
- (v) Mention the main function of the cells x in the tissue C. (1 mark)
- (vi) State two adaptations in the cell x to do the above (v) mentioned function efficiently. (2 marks)

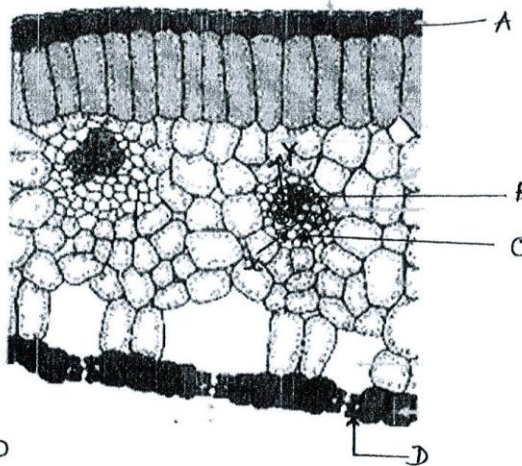
(4) (A) Blood acts as the transportation medium in the human body.

- (i) Mention the constituents of the blood that do the following functions.
 - (a) Produce antibodies to defense the body from diseases. (2 marks)
 - (b) Transport carbon dioxide to the lungs. (1 mark)
- (ii) Name the protein in blood needs to clot it. (1 mark)

(B) Saman came to know that A⁺ blood needed to a friend who was in a hospital.

- (i) What is the meant by + in blood? (1 mark)
- (ii) State two conditions that should consider before transfusing blood to a man. (2 marks)
- (iii) Mention the blood group / groups that a recipient should have when the donor has the blood group A. (2 marks)
- (iv) Write a constituent needs to clot blood. (1 mark)
- (v) Mention a chemical used to avoid clotting blood. (1 mark)
- (vi) What is meant by "universal donor"? (1 mark)

(5) Cross section of a leaf is illustrated below.



- (i) Name A,B,C and D (2 marks)
- (ii) Which substance is mentioned as X. (1 mark)
- (iii) Transportation of which substance is mentioned as the arrow X? (1 mark)
- (iv) Mention a cell which does not have Chloroplasts in the leaf. (1 mark)
- (v) Through which cell does food transport in phloem tissue? (1 mark)
- (vi) Mention dissimilarity among transpiration and guttation? (1 mark)
- (vii) How is transpiration helpful to leaves? State two facts. (2 marks)
- (viii) A statement "Plant clean the environment "was hung on a tree. Explain the accuracy of this statement. (2 marks)