

FIRST TERM SUMMATIVE ASSESSMENT 2026

STANDARD IX BIOLOGY ANSWER KEY

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1. a) (iii) - (iv) - (i) - (ii)

2. c) Only (ii) is correct.

3. Testosterone, Estrogen.

4. a) X - Portal Vein, Y - Hepatic Vein.

5. A

a) Segmentation.

b) Food is converted into particles.

5. B

i - Pancreatic juice. ii - Amylase. iii - Digestion of protein. iv - Complete digestion of fat.

6. a) P - Osmosis.

Q - Diffusion.

b) From higher concentration to lower concentration.

7. (i) - The uvula prevents food from entering the nasal cavity.

(ii) - The epiglottis helps prevent food from entering the windpipe/trachea.

8. Food reaching the mouth through tentacles undergoes extracellular digestion. Then it enters the cell and intracellular digestion also occurs.

9. A

a) The glucose formed is soluble in water so it cannot be stored, hence it is converted into insoluble starch.

b) Stored as fat in oilseeds and as protein in pulses.

9. B.

In photosynthesis, the process by which plants make food, both breakdown of water (catabolism) and synthesis of glucose (anabolism) occur.

Various digestive processes in the body (catabolism) and synthesis of proteins (anabolism) are necessary for the survival of life.

10. a) Villi.

b) Protein components i.e. amino acids enter the blood through the blood capillaries in the villi, and fat components (glycerol, fatty acids) enter the lymph through the lacteal.

11. Biodiversity conservation (Ex: fish wealth), protects coasts from erosion, prevents tsunamis to some extent, reduces global warming... (any 2)

12. A

a) A- Lymph, B - Tissue fluid.

b) The fluid that oozes out from the blood in blood capillaries into the spaces between cells is called tissue fluid.

A part of the tissue fluid enters the lacteals and is circulated as lymph.

12. B.

a) Spleen, Thymus gland, Bone marrow, Lacteals (any 2)

b) Lymph does not contain red blood cells, white blood cells other than lymphocytes, and proteins.

c) Immunity, substance transport...

13. a) A- Enamel, B - Dentine.

b) Part C fixes the tooth to the gum.

c) Brushing teeth, quitting tobacco/caffeine/alcohol, visiting a dentist if necessary .. (any 2)

14. (i) Active /transport, (ii) Facilitated diffusion.

(iii) Energy is required, (iv) Not required. (v) From higher concentration to lower concentration.

(vi) Glucose, Salts.

15. a) A- Grana, B- Stroma.

b) In A: Light reaction, In B: Dark reaction.

c) Using the energy in ATP, Hydrogen and CO₂ combine to form glucose.

16. If plants disappear, not only food but also oxygen will be lost. Biodiversity depletion will occur, global warming will increase, and we will lose economically important resources like spices, value-added products, medicines, rubber latex, tea, coffee, timber, bio-pesticides. (any 3)

17. A

a) In plants through cell wall, cell membrane, intercellular spaces, plasmodesmata. (any 2)

b) In animals through the cell membrane.

17. B

a) In plants, extracellular fluid, cell wall and its components and air spaces act as the internal environment. In animals, extracellular fluid is the internal environment.

b) Maintaining the components of the internal environment in a stable state is homeostasis.

c) It is necessary for life safety to ensure the chemical composition of the internal environment is not disturbed. Concentration differences of molecules affect substance transport.

18. A

a) A- Liver, B- Stomach.

b) Bile from the liver breaks fat into small particles.

c) HCl kills germs, regulates pH.

Mucus protects the stomach wall.

18. B

a) A- Artery, B- Vein.

b) i) Artery carries blood away from the heart, Vein carries blood toward the heart.

ii) Arterial wall is elastic and thick. Vein has a thin wall.

iii) Veins have valves compared to arteries