

## 2009 ICSE biology Question paper

### Question-1

A. Select words from the following list which best describe or match statements(i)-(v):  
(Mitochondria, Chloroplasts, Cell wall, Cytoplasm, Cellmembrane).

- a. Where cellular respiration occurs?
- b. Non-living structure which surround the plant cell.
- c. Which contain chlorophyll?
- d. Very thin layer of all cells.
- e. The major part of the cell excluding nucleus.

B. State the function of the following:

- a. Root hair
- b. Epithelial
- c. Cambium
- d. Stomata
- e. Cortex

C. Define the following:

- a. Diffusion
- b. Plasmolysis
- c. Root pressure
- d. Osmotic pressure
- e. Semi-permeable membrane

D. State whether following statements are true or false:

- a. Photo synthesis occurs in all plants
- b. KDH absorbs necessary for photosynthesis
- c. Starting point of food chain is plant.
- d. Respiration is the only biological process in which oxygen is produced
- e. Oxygen is the energy currency of a ,living cell

E. Choose the odd one out:

- a. RBC, ATP, WBC, Platelet
- b. Auricle, Aorta, Ventricles
- c. Eosinophil, Basophil, leucocytes, Nucleoplasm
- d. Thrombin, Monocot, Fibrin, Vita mink.
- e. Fructose, Sucrose, Glucose, Calcium

F. Give reasons for the following:

- a. As result of ultra filtration along with excretory product certain useful products like glucose, salt etc are also filtered but these are not excreted.
- b. Glucose is absent in the urine of a healthy person.
- c. The urine is slightly thicker in summer than winter.
- d. These are frequent urination in winter than in summer.
- e. All living things must excrete.

G. Complete the following: (5)

- a. The part where fertilization occurs in human female \_\_\_\_\_.
- b. The period of pregnancy is called \_\_\_\_\_.
- c. Gestation period in human female is \_\_\_\_\_ days.

- d. Placenta is \_\_\_\_\_ permeable.
- e. Sperms contain \_\_\_\_\_ number of chromosomes.

H. Name: (5)

- a. A substance that initials an in mule response.
- b. The micro-organism that causes AIDS.
- c. WHO
- d. Chemical substances obtained from certain micro-organism that destroys harmful microbes.
- e. The anti biotic discovered first.

Section-II (40 Marks)

Answer Any Four From This Section

Question-2

A. Write the location and function of the following: (3)

- a. Meristematic tissue
- b. Cardiac muscle
- c. WBC
- d. Ciliated epithelium
- e. Parenchyma
- f. Collenchymas.

B. State the difference between: (4)

- a. Cell and tissue
- b. Bone and cartilage.

C. With reference to the diagram answer the questions (3)

- a. Identify the figure shown alongside
- b. Label the parts 1-3
- c. Where can you see this structure?
- d. What is the function of part-1?

Question-3

A. Give the technical term for loss of water in the form of water droplets from the margin of leaves. (1)

B. Name the respiratory openings found on stems of woody plants. (1)

C. Describe an experiment to prove that transpiration occurs more from the lower surface of the leaf. (3)

D. Describe any three conditions which affect transpiration. (3)

E. Explain briefly transpiration is important for plants. (2)

Question-4

A. Answer the following: (5)

- a. Explain briefly seeds sown deep in the soil fail to germinate.
- b. Give two chemical overall equations representing aerobic and anaerobic respiration.
- c. Do the roots respire? If so, how?
- d. What is the importance of the process of fermentation?
- e. What is anaerobic respiration? Name two organisms respiring anaerobically.

B. The adjoining figure shows an experiment performed on germinating seeds. Study the (5) same and then answer the question that follows:

- a. What is the aim of the experiment?
- b. Write the chemical equation for the process mentioned in (i) above

- c. Draw a neat labeled diagram of the apparatus as it would appear after 24 hours.
- d. The soaked seeds used in the experiment have their seed coats removed give reasons for the same.

Question-5

A. Give below is an incomplete table relating to certain structures found in the human body, their location and function. Study the same and then give the appropriate answer in terms of structure, location and function, for the blanks 1 to 8: (4)

Structure	Location	function
Epiglottis		
3		
5		
yellow spot	1	
4		
the glands on the top of the kidneys		
7	2	
insulates the axon		
6		
8		

B. Write function of the following: (5)

- a. The mucus membrane inside the nasal passage.
- b. The epidermis
- c. Cartilage in trachea
- d. Squamous epithelium of alveoli
- e. Diaphragm` in breathing.

C. Write the kind of animal tissue found lining the respiratory organs. (1)

Question-6

A. Write the difference between (4)

- a. Cerebrum and cerebellum
- b. Sensory neuron and motor neuron

B. (3)

- a. What is a lachrymal gland?
- b. What is meant by power of accommodation of the eye?
- c. Mention the characteristics of the image that falls on the retina of the eye.

C. (3)

- a. Write the four principal tastes and the respective regions of the tongue concerned with their perception.
- b. How is ear protected from dust and bacteria?

Question-7

A. (4)

- a. What are hormones?
- b. Name some endocrine glands.
- c. Why pituitary is called the master gland?
- d. Briefly write about thyroid gland.

B. Name the glands responsible for the following diseases: (3)

- a. Gigantism

- b. Goiter
- c. Cretinism
- d. Diabetes mellitus
- e. Myxoedema
- f. Diabetes insipid .

C. (3)

- a. What are the age restrictions for marriage by law for boys and girls in India?
- b. Name two surgical techniques (one for humane male and another for humane female) that can be used to prevent pregnancy in the female.
- c. Give two advantages of small family,

Question-8

A. Name: (3)

- a. A pollutant largely responsible for acid rain.
- b. The solid particles which pollute the environment.
- c. The source of maximum air pollution in large cities.
- d. The unit used for measuring the relative loudness of sounds.
- e. An organism which helps in nitrogen fixation.
- f. The type of pollution which causes headache, irritation in eye membrane, affects respiratory tract and may also cause cancer.

B. Answer the following: (3)

- a. Noise is regarded as unwanted sound. Give reasons.
- b. Give reason why bio-fertilizers are preferred to chemical fertilizers.
- c. Give two measures for controlling pollution of river water.

C. The figure shows a special type of association between two organisms. (4)

- a. Name the kind of association
- b. Name the organism
- c. How do they benefit each other?
- d. What is the importance of these associations?