

ICSE CLASS 10th BIOLOGY SAMPLE PAPER
Class – X
Subject – BIOLOGY

(Time – One hour and a half)

(Full Marks – 80)

Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during the first 15 minutes.

This time is to be spent in reading the Question Paper.

The time given at the head of this Paper is the time allowed for writing the answers.

Attempt all questions from Section I and any four questions from Section II.

The intended marks for questions or parts of questions are given in brackets [].

SECTION I (40 Marks)

Attempt all questions from this Section

Question 1

(a) Name the following :

(i) The canal through which the testes descend into the scrotum just before the birth, in a human male child.

(ii) A region of plant body where cell division occurs very actively.

(iii) Part of the human eye which controls the amount of light entering it.

(iv) An instrument used for measuring the rate of transpiration.

(v) A viral disease totally eradicated through mass immunization.

[5]

(b) Mention whether the following statements are true or false. If false, rewrite the correct form of the statement.

(i) The units of light absorbed in photosynthesis are protons.

(ii) Curly hair is a dominant character in human beings.

(iii) Fertilization takes place in the human uterus.

(iv) Red Cross procures and provides blood to the victim of war.

(v) Fermentation results in the production of pyruvic acid.

[5]

(c) Give technical term of the following :

(i) The number of person per square kilometer (km^2) at any one given time.

(ii) The onset of menstruation in a young girl at about the age of 13 years.

(iii) The stage when chromosomes arrange at the equator.

(iv) Providing readymade antibodies from outside for treating certain infectious diseases.

(v) Hereditary disease in which blood does not clot.

[5]

- (d) Given below is a table consisting of a set of items belonging to a common category. Complete the table by filling in the category and the odd one in the blanks.

[5]

SET	Category	Odd one
(i) Glucose, Starch, Cellulose, Calcium		
(ii) Pleura, Pericardium, Meninges, Spinal Cord		
(iii) BCG, Cholera, Rabies, Tuberculosis		
(iv) Adrenalin, Penicillin, Insulin, Thyroxine		
(v) Phenol, Boric acid, Iodine, Mercurochrome		

- (e) (i) Draw a neat labeled diagram of the experimental set up to show that green plants give out oxygen during photosynthesis.

(ii) Differentiate between respiration and photosynthesis.

[5]

- (f) Complete the following statements by choosing the correct alternative from the ones given within brackets.

(i) The space between cell wall and plasma membrane in a uniplasmolysed cell is filled with ----- (Isotonic solution, hypotonic solution, hypertonic solution)

(ii) In mammals the corpus callosum connects ----- (Two optic lobes, two cerebral hemispheres, cerebrum to cerebellum)

(iii) The embryo inside the uterus is protected from jerks and mechanical shocks by ----- (allantois, amniotic fluid, uterine wall)

(iv) Food synthesized in green leaves, is transported through ----- (Phloem, xylem, pith)

(v) Root hair is a ----- (Cillium, cell, extension of a cell)

[5]

- (g) Given below are sets of five terms. In each case rewrite the terms in the correct order so as to be in logical sequence.

(i) Metaphase, telophase, prophase, anaphase, Interphase.

- (ii) Implantation, ovulation, childbirth, gestation, fertilization.
- (iii) Cochlea, tympanum, pinna, auditory canal, ear ossicles.
- (iv) Sperm duct, penis, testis, sperms, semen.
- (v) Water molecules, oxygen, grana, hydrogen and hydroxyl ions, photons. [5]

(h) Explain the following abbreviations :

- (i) UNICEF (ii) DNA (iii) IUD (iv) DPD (v) NADP.
- [5]

SECTION – II (40 Marks)

Attempt any four questions from this section.

Question 2.

- (a) (i) Give one point of difference between RBCs and WBCs with regards to their structure. (ii) What is the life span of the RBCs ?
 - (iii) What do you mean by the term 'double circulation' of blood in mammals ?
 - (iv) What is diastole ?
 - (v) Differentiate between pleura and pericardium on the basis of their location. [5]
 - (b) Write briefly about the following as specified for each in the brackets :
 - (i) Simple goiter (cause and effect)
 - (ii) Antitranspirant (definition and example)
 - (iii) Cretinism (symptoms and cause)
 - (iv) Diabetes insipidus (symptoms and cause)
 - (v) Cochlea (location and importance).
- [5]

Question 3.

- (a) Complete the following table by filling in the blank spaces numbered 1 to 5. [5]

Structure	Function
Yellow Spot	1
2	Filled with cell sap, mostly in plants.

3	Produces male gametes in man.
Organ of corti	4
Grana of chlorophyll	5

(i) Draw a labeled diagram of the human sperm. (ii)

Name the hormones produced by the following glands and give one function in

(b) each case –

1. Thyroid.

2. Pancreas.

3. Adrenal medulla.

[5]

Question 4.

(a) Draw a diagram of the female reproductive system of the human being.

(i) Name its parts.

(ii) Normally after how many days does an ovary release an egg ?

(iii) Where are the sperms released during coitus ?

(iv) What do the sperms do after being released ?

(v) What is the function of uterus ?

(vi) How many days does it normally take from the fertilization of the egg up to the birth of the baby ?

[5]

(b) (i) Describe an experiment to prove that transpiration occurs in a plant.

(ii) What is the difference between temporary and permanent wilting ?

(iii) Why do banyan leaves possess thick layer of cutin ?

[5]

Question 5.

(a) Draw a cross-section of the human eye and on the diagram label each of the following :

(i) the retina

(ii) the cornea

(iii) the ciliary muscles

(iv) the portion of the image of a distant object if the eye is short sighted. [5]

(b) Answer the following :

(i) What are the age restrictions for marriage by law for boys and girls in India ?

(ii) Name two surgical techniques that can be used to prevent pregnancy.

(iii) Give two advantage of a small family.

(iv) Define Birth rate and Death rate.

[5]

Question 6.

- (a) The leaves of a well-watered potted plant were found wilted during a hot sunny day.
- (i) Suggest two reasons which could have caused the wilting of the leaves.
 - (ii) Would the cells of the leaves in the wilted state be flaccid or turgid ?
 - (iii) Explain briefly the meaning of the term mentioned in your answer to (ii) above.
 - (iv) What advantages would the plant have derived from wilting ?
 - (v) What explanation would you suggest if the wilted leaves did not recover even during the night ?

[5]

- (b) Give exact location and function of the following :

- (i) Pinna
- (ii) Ear ossicle
- (iii) Fovea
- (iv) Cochlea
- (v) Eustachian canal.

[5]

Question 7.

- (a) (i) Name an animal with nineteen pair of chromosome.
- (ii) With reference to the cell division explain the following terms :
Chromatid , Centromere, Haploid.
- (iii) Name the type of cell division that occurs during :
- 1. Growth of shoot.
 - 2. Formation of pollen grains.
 - 3. Repair of worn out tissues.

[5]

- (b) Give reasons for the followings :

- (i) Salt and sugar are used in preventing food.
- (ii) The brain surface is highly convoluted with ridges and grooves.
- (iii) People living in hilly region usually suffer from simple goiter.
- (iv) Root hairs become flaccid when fertilizers are added to the moist soil around it.
- (v) It is harmful to use a pin or any sharp object to remove the wax from the ear. [5]