



SUBJECT -BIOLOGY

CLASS- X ICSE

FULL MARKS-80

TIME: 2HRS

Answer to this paper must be written on the paper provided separately.

You will not be allowed to write during 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-A and four questions from section -B

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

SECTION-A (40- MARKS)

(Attempt all questions from this section)

Question 1.

(15)

Select the correct answer to the questions from the given options. (Do not copy the question.

Write the correct answer only:

(i)The phase comes out after Mitotic Phase is:

(a) G1 phase (b) S1 Phase (c) G1 Phase (d) M1 Phase

(ii) The recessive gene is one that express itself in:

(a)Heterozygous condition (b) Homozygous condition (c) F generation
(d) Y-Linked inheritance.

(iii) Hari is fond of watching fish in an aquarium. So he set up an aquarium in his house along with a number of freshwater fish. He placed a clown fish which

is a saltwater fish. After a few hours the clown fish was found dead and floating on water. This was due to:

(a) Endosmosis (b) Exosmosis (c) Osmoregulation (d) Excretion.

(iv) When guard cells are turgid the stomata must be:

(a) Closed (b) Neither open nor closed (c) Open
(d) Dead.

(v) The solvent used for dissolving chlorophyll while testing a leaf for starch is:

(a) Sodium hydroxide (b) Lime water (c) Water (d) Ethyl alcohol.

(vi) Assertion -A: Nephrons are functional unit of kidney.

Reason: Each kidney consists of a single nephron to carry out function of filtration.

(a) Both A and R are true (b) Both A and R are false
(c) A is true and R is false (d) A is false and R is true

(vii) Neha spent the entire day studying for an examination and skipped both breakfast and lunch. Which of the following hormone would increase in her blood stream:

P-Glucagon Q-Prolactin R- Insulin

(a) P & Q (b) Only R (c) Only P (d) Q & P

(viii) The Cerebral hemispheres in mammals are connected by:

(a) Corpus luteum (b) Hypothalamus (c) Pons Varolii (d) Corpus callosum.

(ix) Theory of origin of species by natural selection was proposed by:

(a) Hugo de Vries (b) Charls Darwin (c) Lamarck (d) Malthus.

(x) The part of the eye that can be donated after the death is:

(a) Sclera (b) Iris (c) Cornea (d) Retina.

(xi) Which of the following is greenhouse gas?

(a) Oxygen (b) Methane (c) Sulphur dioxide (d) Nitrogen.

(xii) The internal factor of a plant is:

(a) Light (b) Growth regulator (e) Moisture (d) Oxygen.

(xiii) in the soil, mostly the soil has:

(a) More concentration of solute in solution (b) More concentrate solution

(c) Less concentrate solution (d) Isotonic solution.

(xiv) Which of the following acts as a stimulus for geotropism?

(a) Light (b) Water (c) Contact (d) Gravity.

(xv) Axon is enclosed in multilayered sheath called:

(a) Myelin sheath (b) Perikaryon (c) Dendrites

(d) Unipolar neuron.

Question 2.

(i) Name the following:

(5)

(a) The Respiratory pigment present in erythrocyte.

(b) The cross between two parents having one pair of contrasting character.

(e) The ear ossicle attached to the tympanum.

(d) One gaseous compound which depletes the ozone layer.

(e) The process of uptake of mineral ions against the concentration gradient using energy from cell.

(ii) Choose the odd one out from the following terms and name the category to which the others belong:

(a) Blinking, knitting without looking, sneezing, yawning, crying.

(b) Lacrimal gland Thyroid gland, Adrenal Gland, Pituitary gland.

(c) DDT, fruit peel, wood, straw.

(d) Bile, Urea, uric acid, Ammonia.

(e) Basophil, eosinophil, monocyte, neutrophil.

(5)

(iii) Match the item given in column A with column B.

(5)

Column I	Column II
a. Meiosis	I. Green plants
b. Clotting of blood	II. S A node
c. Guttation	III. Calcium
d. Photosynthesis	IV. Sperm
e. Pace maker	V. Hydathodes

(iv) Arrange and rewrite the terms in each group in the correct order so as to be in a logical sequence.

(5)

(a) CNS, effector, response, receptor stimulus.

b) Malleus, incus , cochlea, stapes.

(c) Cro-Magnon, *Homo erectus* , *Homo habilis* Neanderthals, *Homo sapiens*.

(d) Guard cells, Epidermal cells, Stoma, Cuticle, Palisade tissue.

(e) Bowman's capsule, Renal arteriole, Loop Henle, Collecting tubule.

(v) State the exact location of the following:

(a) Centromere

(b) Tricuspid valve

(c) Organ of corti

(d) Proximal Convoluted tubule

(e) Thylakoid

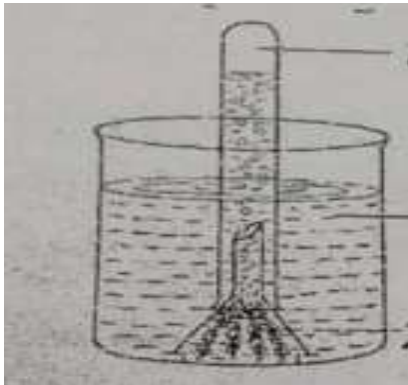
(5)

SECTION-B

(Attempt any four questions from this section)

Question 3.

- (i) What was the cranial capacity of Cro-Magnon? (1)
- (ii) What is the significance of adrenal gland in human? (2)
- (iii) The wall of ventricles is thicker than the auricles. Give a suitable reason. (2)
- (iv) State the difference between Darwinism and Lamarckism. (2)
- (v) The following diagram demonstrate a physiological process taking place in green plant. The whole setup was placed in bright sunlight for several hours. Study the diagram and answer the questions that follow. (3)



- (a) What aspect of the physiological process is being examined?
- (b) label the parts numbered 1, 2, & 3 in the diagram.
- (c) Write a well-balanced Chemical equation for the physiological process in the diagram.

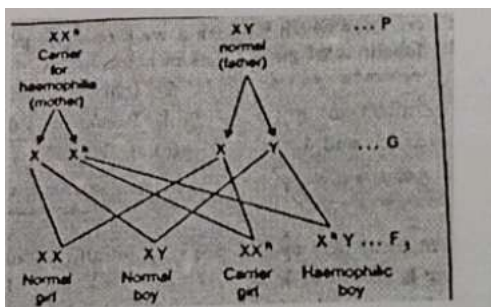
Question 4.

- (i) Expand -TSH (1)
- (ii) How are RBC different from WBC in shape? (2)

(iii) Wooden frames of doors get jammed during monsoon season. Give the reason. (2)

(iv) Mention any two objectives of Swachh Bharat Abhiyan. (2)

(v) Following is the representation of a cross showing inheritance of Haemophilia in human. Study the cross and answer the following questions. (3)



(a) What is the ratio of carrier and Haemophilic offspring? Identify?

(b) What is the ratio of normal boy and Haemophilic boy?

(c) What is the Phenotype ratio of normal and Haemophilic offspring?

Question 5.

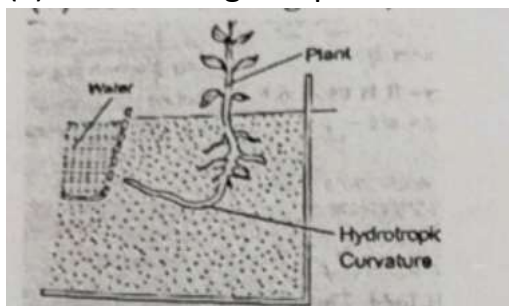
(i) Define Synapse. (1)

(ii) How does the arrangement of neurons in the spinal cord differ from that of brain? (2)

(iii) Differentiate between turgidity and flaccidity. (2)

(iv) The leaflets of *Mimosa pudica* droop on being touched by a finger or an object. Give the reason.

(v) Look at the given picture and answer the questions.



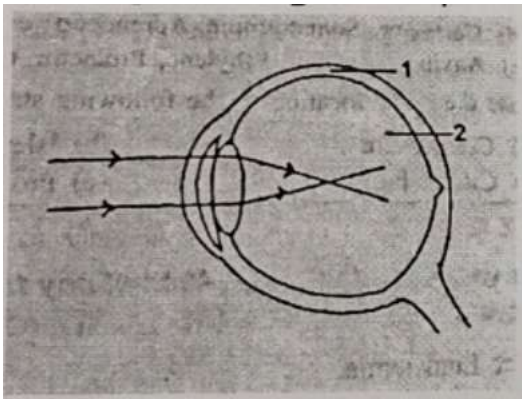
- (a) Name the tropic movement shown by the seeding.
- (b) Name the stimulus responsible for this movement.
- (c) Define the process
(1).

Question 6.

- (i) Define Plasmolysis. (1)
- (ii) In summer season less quantity of urine is produced than in winter.
(2)
- (iii) Mention two ways in which transpiration is beneficial to plants.
(2)
- (iv) Relaxin hormone is released at the time of parturition. Explain.
(2)
- (v) Draw a neat and labelled diagram of reflex arch.
(3)

Question 7.

- (i) Define Leukemia. (1)
- (ii) State the law of independent assortment. (2)
- (iii) List two adaptations found in desert plants to reduce transpiration.
(2)
- (iv) Draw a diagram of Metaphase stage of mitosis having three chromosomes. (2)
- (v) The given diagram Depicts a defect of the human eye.



(3)

Study the same then answer the questions that follow.

- (a) Identify the defect.
- (b) Name the part labelled 1 and 2.
- (c) Give two possible reasons for this defect.

Question 8.

- (i) Define bleeding in plants.
- (ii) Lawn grass is killed if salt is sprinkled on it. Give the reason.
- (iii) Differentiate between afferent and efferent arterioles.
- (iv) What are vestigial organs. Mention the significance of studying these organs in the course of evolution.

(v) Study the picture given below and answer the following questions.



- (a) Write two control measures for the above pollution.
- (b) Name one pollutant that causes the above pollution.
- (c) Mention the impact of this pollution on human health.

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