

**ICSE Board
Class X Biology
Sample Paper - 7**

Time: 2 hrs**Total Marks: 80****General Instructions:**

1. Answers to this paper must be written on the paper provided separately.
2. You will **not** be allowed to write during the first **15** minutes.
This time is to be spent in reading the question paper.
3. The time given at the head of the paper is the time allotted for writing the answers.
4. Attempt **all** questions from **Section I** and **any four** questions from **Section II**.
5. 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 iron containing pigment in the erythrocytes.
- (ii) The structure which brings urine from the kidney to the urinary bladder.
- (iii) The site of the light reaction.
- (iv) The tissue which conducts manufactured food in plants.
- (v) The fully developed part of the ovary which contains the mature egg. [5]

(b) State whether the following statements are true or false. If false rewrite the correct form of the statement by changing the first word only:

- (i) Spinal nerves are twelve pairs.
- (ii) Insulin is produced by the alpha cells of the pancreas.
- (iii) The enlarged mature follicle bursts to release the egg.
- (iv) According to Lamarck, the parts of the body that are used extensively become larger and stronger.
- (v) The myelin sheath insulates the axon. [5]

(c) Give technical terms for the following:

- (i) The process of squeezing out of the WBCs from the capillaries.
- (ii) The process in which absorption of water requires metabolic energy.
- (iii) The stage where chromosomes lie at the equator of the chromatic spindle.
- (iv) The alternative forms of the same gene.
- (v) The fertilised egg. [5]

- (d) Given below are five sets with four terms each. In each set one term is odd. Choose the odd one out of the following terms and name the category to which the other three terms belong:

[5]

| Set | Odd Term | Category |
|--|----------|----------|
| i. Myopia, Cataract, Hypermetropia, Cretinism | | |
| ii. Blinking, Knitting, Crying, Blushing | | |
| iii. Steroids, Cortisone, Testosterone, Adrenaline | | |
| iv. Phloem, Root hair, Xylem, Cortex | | |
| v. Uterus, Cervix, Fallopian tube, Ureter | | |

- (e) Match the items in Column I with those in Column II:

[5]

| Column I | Column II |
|--------------|---------------|
| Embryo | Corpus luteum |
| Testosterone | Ovary |
| Sperm | Testes |
| Ovum | Leydig cells |
| Progesterone | Uterus |

- (f) Define the following:

- (i) Crossing over
- (ii) Reflex action
- (iii) Centrosome
- (iv) Gestation
- (v) Photolysis

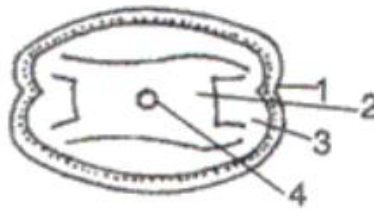
[5]

(g) Give two examples of each of the following:

- (i) Endocrine glands
- (ii) Human ancestors
- (iii) Phytohormones
- (iv) Hereditary traits
- (v) Diseases caused by bacteria

[5]

(h) The figure given below represents a diagrammatic sketch of the internal structure of the spinal cord.



(i) Label the parts 1 – 4.

(ii) State the difference in the arrangement of neurons in the brain and in the spinal cord.

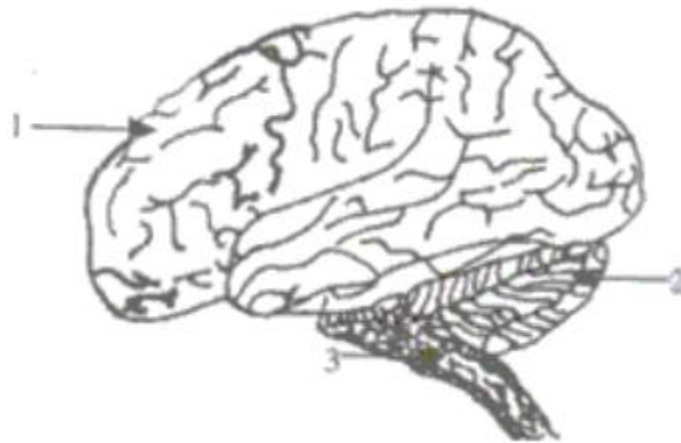
[5]

Section II [40 Marks]

Attempt any **four** questions from this section

Question 2

(a) The given figure shows the human brain.



- (i) Label the parts 1-3.
- (ii) What are receptors?
- (iii) What will happen if part '2' is damaged?

[5]

(b) Answer briefly:

- (i) 'A tiger cannot survive if there are no green plants'. Explain.
- (ii) What are the changes that occur during the mitotic telophase?
- (iii) How would you obtain a deplasmolysed cell from a plasmolysed one?
- (iv) Why are leaves of the xerophytic plants modified into spines?

[5]

Question 3

(a) With reference to photosynthesis answer the following questions:

- (i) What is photosynthesis?
- (ii) Write the balanced chemical equation for photosynthesis.
- (iii) In what form is glucose stored in plants?
- (iv) Name the two phases of photosynthesis.
- (v) What is the function of palisade parenchyma in a leaf? [5]

(b) The given figure represents an experimental set-up to demonstrate a certain phenomenon in plants. The set-up was kept in sunlight for about two hours.



- (i) What is the aim of this experiment?
- (ii) Define the process mentioned in (i) above.
- (iii) What do you observe in the experimental set-up after some time?
- (iv) Is there any control for this experiment? If so, mention it. [5]

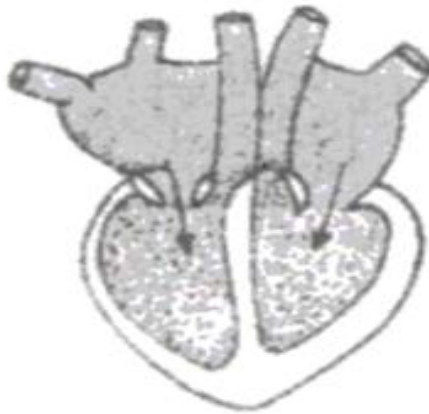
Question 4

(a) Answer briefly:

- (i) Name the hormones produced by the ovary and write their functions.
- (ii) How are identical twins produced?
- (iii) Mention any two functions of gibberellins.
- (iv) Define stomata.
- (v) What are phytohormones?

[5]

(b) The given figure depicts a certain phase of the heart. Study it and answer the questions that follow:



- (i) Identify the phase of the heart.
- (ii) Give two reasons to support your answer.
- (iii) Define double circulation.

[5]

Question 5

(a) The given figure depicts an endocrine gland.



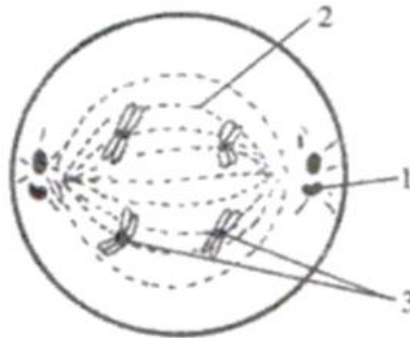
- (i) Name the gland.
- (ii) Name the parts of the gland.
- (iii) What are the hormones produced by the inner part of the gland?
- (iv) Which disease is caused by the hyposecretion of the outer part of the gland?
- (v) Some women are seen with a beard. Give reasons for this phenomenon. [5]

(b) Fill in the blanks as indicated in the brackets:

- (i) Diabetic patient _____. (substance present in excess in the urine)
- (ii) Stomata _____. (gas given out during the day)
- (iii) Spinal cord _____. (function)
- (iv) Cochlea _____. (location)
- (v) Neuron _____. (function) [5]

Question 6

(a) The given figure shows a stage of cell division.



- (i) Identify the stage.
- (ii) Name the parts 1-3.
- (iii) Mention the changes that occur during this stage.
- (iv) Name the next stage. [5]

(b) Give one difference between the following pairs on the basis of what is indicated in the brackets:

- (i) Menarche and menopause. (definition)
- (ii) Mitosis and meiosis. (location)
- (iii) Light reaction and dark reaction. (location)
- (iv) Plasmolysis and deplasmolysis. (tonicity)
- (v) Monohybrid cross and dihybrid cross. (number of characters) [5]

Question 7

(a) Explain briefly:

- (i) The pancreas is both an exocrine as well as an endocrine gland.
- (ii) It is necessary to keep a plant in the dark before doing an experiment on photosynthesis.
- (iii) There is always a struggle for existence among the organisms.
- (iv) In banyan trees, the leaves are coated with a thick cuticle.
- (v) When the temperature is high, the rate of transpiration is also high. [5]

(b)

- (i) Define food chain.
- (ii) Draw a diagram of the experimental set-up to show that O_2 is evolved during photosynthesis. [5]