ICSE Board
Class X Biology
Sample Paper - 8

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 phase of the cardiac cycle in which the auricles contract.
(ii) A substance which is found in excess in the urine of a diabetic person.
(iii) The energy currency of a cell.
(iv) A cell in a fully extended condition.
(v) The period for which the foetus remains inside the uterus. [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) Cranial nerves arise from the brain.
(ii) Adrenal gland is called the master gland.
(iii) Tubectomy is the surgical method of sterilisation in males.
(iv) The pH of guard cells increases during the day time.
(v) The cerebellum controls the body equilibrium. [5]

(c) Give technical terms for the following:

(i) The relaxation phase of the heart.
(ii) The phenomenon in which dark moth variety survived more than light variety due to natural selection.
(iii) The division of the nucleus.
(iv) The physical appearance of an individual.
(v) The membrane that secretes a protective fluid and protects the foetus. [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. Blinking, Knitting, Crying, Blushing		
ii. Fovea, Iris, Pupil, Pons		
iii. Prostate gland, Seminal vesicle, Cowper's gland, Adrenal gland		
iv. Stomata, Cuticle, Lenticel, Hydathode		
v. AIDS, Colour blindness, Syphilis, Gonorrhoea		

(e) Complete the following statements by choosing the correct word from the brackets:

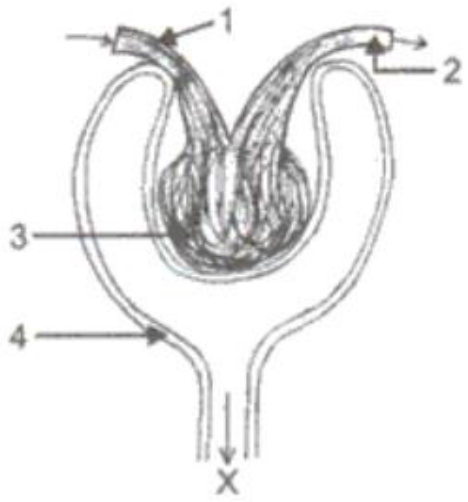
(i) The yellow spot is found in the _____. (eye, ear, heart)
(ii) The malfunctioning of the thyroid gland in infants causes _____. (cretinism, myxoedema, goitre)
(iii) _____ is a mechanical device that is fitted on the cervix to control child birth. (condom, copper-T, diaphragm)
(iv) In flowering plants, food is transported in the form of _____. (glucose, starch, sucrose)
(v) Sperms are produced in the _____. (seminiferous tubules, epididymis, prostate gland) [5]

(f) Define the following:
(i) Alleles
(ii) Isotonic solution
(iii) Speciation
(iv) Parthenocarpy
(v) Tropism [5]

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

(i) Sexually transmitted diseases
(ii) Vestigial organs
(iii) The bones in the human ear
(iv) Methods of absorption by roots
(v) Eye defects [5]

(h) Study the given diagram and answer the questions that follow:



(i) Label the parts 1-4.
(ii) State the structural difference between part 1 and 2.
(iii) Which stage of urine formation takes place in part 3?
(iv) Name the liquid flowing through 'X'. [5]

Section II [40 Marks]

*Attempt any **four** questions from this section*

Question 2

(a) Give scientific reasons:

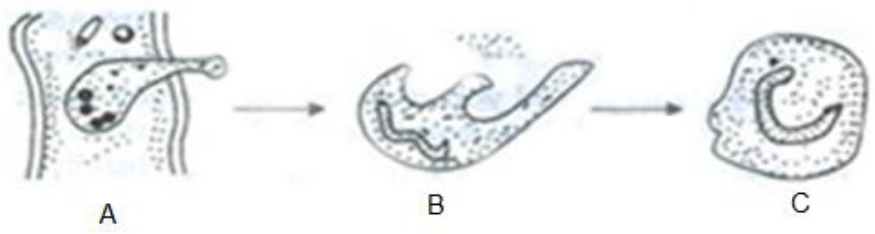
(i) During the hot summer months, the leaves of herbaceous plants wilt at noon.
(ii) Diabetic patients are treated with insulin.
(iii) Sometimes amniocentesis can be misused.
(iv) The site of synthesis and site of action for ethylene are not different.
(v) Meiosis I is considered as a reductional division. [5]

(b) Answer briefly:

(i) State the importance of turgidity in plants (any 2 points).
(ii) Define the term mortality and natality.
(iii) What is root pressure?
(iv) Define osmosis.
(v) Define guttation. [5]

Question 3

(a) Observe the figures A, B and C carefully and answer the questions that follow:



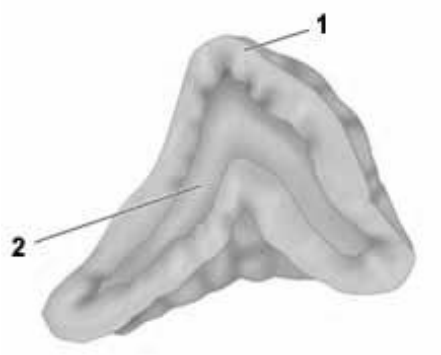
(i) Name the type of blood vessel shown in figure A.
(ii) Write any two characteristics of this type of blood vessel.
(iii) Name the two kinds of blood cells shown in figure A.
(iv) Describe the step by step events shown in the three figures.
(v) Which phenomenon do the figures collectively depict? [5]

(b) State the difference between the following pairs on the basis of what is given in the brackets:

(i) Chromosome and centrosome (location)
(ii) Turgidity and flaccidity (state of the cell)
(iii) Transpiration and guttation (structure responsible)
(iv) Birth rate and death rate (definition)
(v) Auditory nerve and optic nerve (function) [5]

Question 4

(a) The given figure shows an endocrine gland.



(i) Name the gland.
(ii) Write the location of the gland.
(iii) Name two hormones produced by the gland.
(iv) State one function each of the above mentioned hormones.
(v) Label the parts 1 and 2. [5]

(b) Answer briefly:
(i) State the commercial applications of gibberellins.
(ii) What are ear ossicles? State their function.
(iii) What does the peripheral nervous system include?
(iv) What is diapedesis? [5]

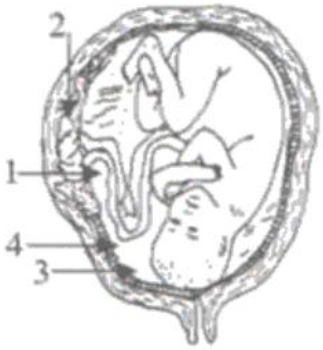
Question 5

(a) Where are the following situated? Write their functions.
(i) Corpus callosum
(ii) Meninges
(iii) Bicuspid valve
(iv) Genes
(v) Thylakoids [5]

(b) Answer the following questions:
(i) State the law of independent assortment.
(ii) Name two sex-linked inherited diseases and write their causes.
(iii) State the significance of meiosis (any 2 points).
(iv) State three advantages of a small family. [5]

Question 6

(a) The given figure represents the human foetus in the uterus.



(i) Label the parts 1-4.
(ii) State the functions of parts 2 and 3.
(iii) Explain briefly the process of respiration of the embryo. [5]

(b) Define the following terms:

(i) Endosmosis
(ii) Placenta
(iii) Ovulation
(iv) Corpus luteum
(v) Ultrafiltration [5]

Question 7

(a) Name the following cells and state their location in the human body:
(i) Living cells without nuclei.
(ii) Cells which are haploid.
(iii) Cells that secrete glucagon.
(iv) Cells that act as insulating layers and also as storage.
(v) Cells that conduct or transmit impulses. [5]

(b) Answer the following questions:
(i) How does planting of trees on the roadside reduce noise pollution?
(ii) The sex of a child depends on the type of sperm. Justify this statement.
(iii) Why does a dog run away if it sees you simply kneeling down from a distance?
(iv) Why is haemophilia more common in males than females?
(v) Why is meiosis called a reductional division? [5]