

**ICSE Board
Class IX Biology
Sample Paper - 4**

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 of questions or for parts of questions are given in brackets [].
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SECTION-I (40 Marks)

Attempt **all** questions from this section.

Question 1

(a) Name the following:

- (i) The membrane surrounding the vacuole.
- (ii) Components of the xylem.
- (iii) An enzyme present in saliva.
- (iv) Slimy secretion of epithelial lining of various organs
- (v) The tissue responsible for the conduction of food in plants. [5]

(b) Complete the following statements:

- (i) Pepsin converts proteins to _____.
- (ii) The condition wherein the androecium matures earlier than the gynoecium is called _____.
- (iii) Removal of hair from the skin of animals during the formation of leather is called _____.
- (iv) The single cotyledon of a maize seed is called _____.
- (v) In 1910, _____ killed the germs of syphilis and sleeping sickness. [5]

(c) State whether the following statements are True or False. Rewrite the correct statement.

- (i) All vertebrates have an endoskeleton.
- (ii) Pancreatic juice does not contain any enzyme.
- (iii) Seeds without endosperm are called dicotyledonous seeds.
- (iv) Molar teeth are used for tearing the food.
- (v) The term 'antibiotic' was discovered by Alexander Fleming. [5]

(d) Choose the correct answer and complete the following statements:

- (i) Human cells contain _____ of chromosomes.
 - (a) 12 pairs (b) 24 pairs (c) 23 pairs
- (ii) _____ is an underground stem.
 - (a) Dahlia (b) Ginger (c) Sweet potato
- (iii) The heat-regulating centre is located in the _____.
 - (a) medulla oblongata (b) hypothalamus (c) cerebellum
- (iv) During snakebite, a person is given _____ injection
 - (a) anti-venin (b) anti-venom (c) anti-diphtheria
- (v) Haemophilia is a _____ disease.
 - (a) metabolic (b) genetic (c) allergic [5]

(e) Choose the odd one out:

- (i) Jejunum, Duodenum, Ileum, Ischium
- (ii) Phenol, Cresol, Formalin, Boric acid
- (iii) Vitamin K, Vitamin B1, Vitamin A, Vitamin D
- (iv) Typhoid, Mumps, Smallpox, Polio
- (v) Mouth, Stomach, Liver, Small intestine [5]

(f) Match the columns:

Column A	Column B
(i) Ptyalin	a. Proteins
(ii) Trypsin	b. Fats
(iii) Lipase	c. Starch
(iv) Lactase	d. Sucrose
(v) Invertase	e. Lactose

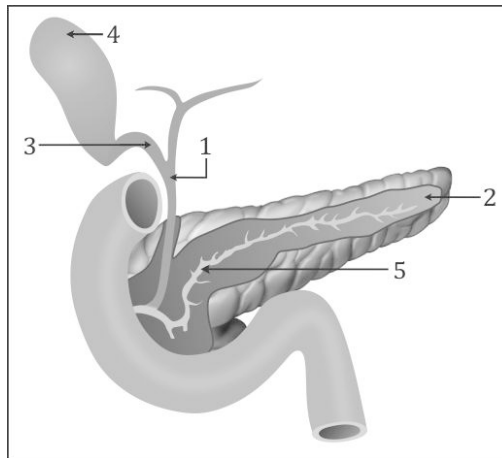
[5]

(g) State one point of difference between the following pairs on the basis of what is indicated in the brackets.

- (i) Tendon and ligament [fibres]
- (ii) Photosynthesis and respiration [end product]
- (iii) Kingdom Monera and Kingdom Protista [Nuclear material]
- (iv) Liver fluke and earthworm [body cavity]
- (v) *Anopheles* and *Culex* [pattern of laying eggs]

[5]

(h) Study the diagram given below and answer the questions based on it.



- (i) Label the parts 1-5.
- (ii) Name the region of the small intestine into which part 5 opens.
- (iii) Name any two enzymes secreted by part 2.
- (iv) Name the fluid that flows in part 1. State the significance of the fluid.

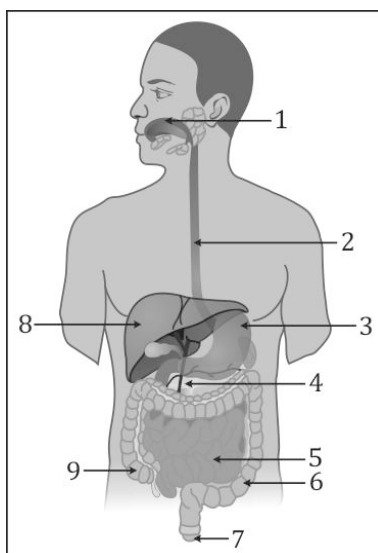
[5]

SECTION-II (40 Marks)

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

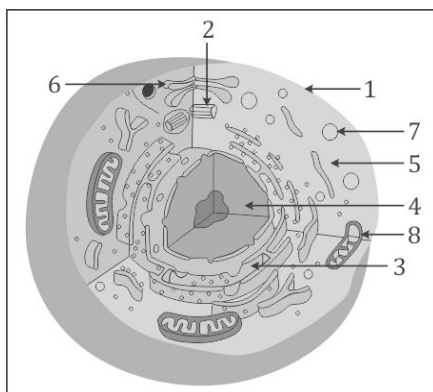
Question 2

(a) The given figure shows the alimentary canal of man. Study the figure and answer the questions based on it.



- (i) Label parts 1-9.
- (ii) What chemical changes take place in part 1 and 5?
- (iii) How does part 9 differ in man and rabbit? [5]

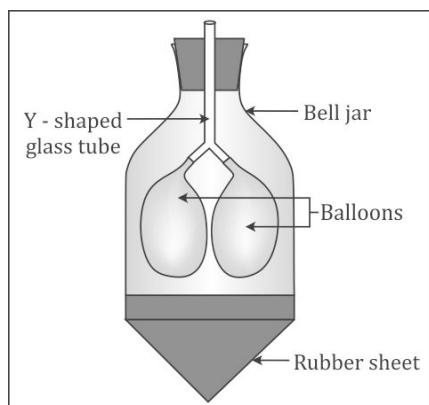
(b) The given figure shows the structure of an animal cell. Study the figure and answer the questions based on it.



- (i) Label parts 1-8.
- (ii) Name the structure which is present in this cell, but absent in a plant cell.
- (iii) What is the function of part 1 in the physiological activity of the cell?
- (iv) Write any one difference between part 1 and the cell wall in terms of permeability. [5]

Question 3

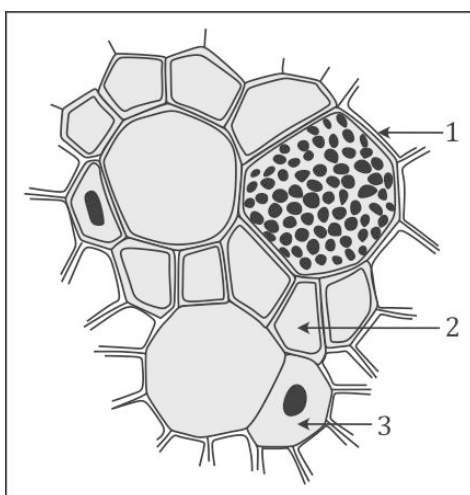
(a) The given figure shows an apparatus which is used to demonstrate the process of respiration.



- (i) What do the following parts in the diagram represent?
- Balloons
 - Rubber sheet
 - Bell jar
- (ii) What will happen to the balloons when the rubber sheet is pulled down?
- (iii) What is the role of the diaphragm during breathing?
- (iv) Which breathing movement is indicated when the rubber sheet is pulled down?

[5]

(b) Study the given figure and answer the questions based on it.



- (i) What does the given figure show?
- (ii) Label parts 1-3.
- (iii) Where is the given structure found in the plant body?
- (iv) What is the function of part 1?

[5]

Question 4
(a)

- (i) Write three functions of the skin.
 (ii) Give any one merit of local defense system. [5]

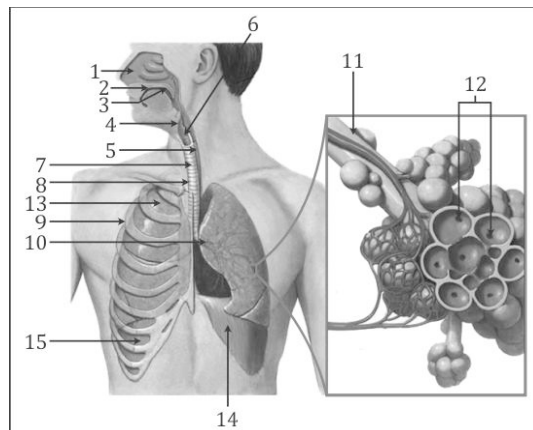
(b)

- (i) What are degenerative diseases? Give two examples.
 (ii) A whale lives in water like a fish but it is a mammal. Justify. [5]

Question 5
(a)

- (i) State the functions of carbohydrates.
 (ii) What is a balanced diet? What is its importance? [5]

(b) The given diagram shows a ventral view of the human thorax. Study the diagram carefully and answer the questions based on it.



- (i) Label parts 1-15.
 (ii) What are the structures used for the protection of the lungs?
 (iii) What is the importance of structure 12?
 (iv) Why is the trachea lined with C-shaped rings of cartilage?
 (v) Name all the parts through which atmospheric air reaches our lungs in the correct sequence. [5]

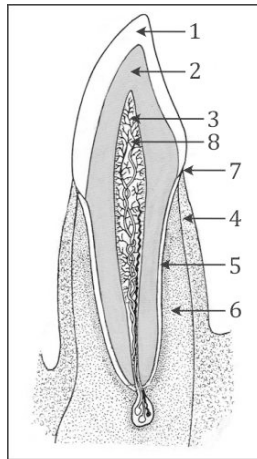
Question 6

(a) Write the role of the following enzymes:

1. Pepsin
2. Trypsin
3. Lipase
4. Rennin
5. Sucrase

[5]

(b) The given figure shows a section of the mammalian tooth.

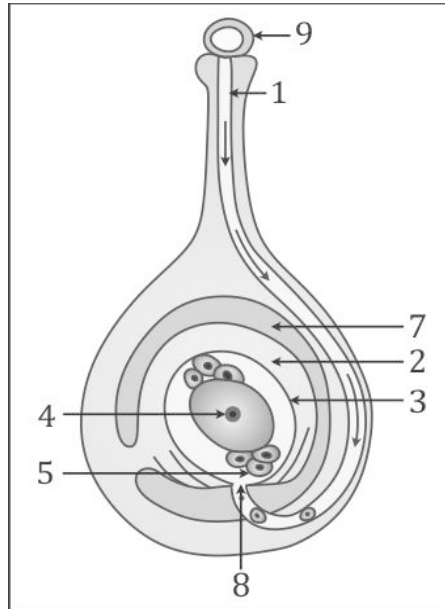


1. Label parts 1 to 8.
2. Which is the hardest part of the tooth?
3. Which part of the tooth is living?

[5]

Question 7

(a) The given figure shows the L.S. of a flower.



- (i) Label parts 1 - 9.
- (ii) Explain the process of formation of part 1.
- (iii) Which of the above parts is a nutritive tissue?

[5]

(b)

- (i) Define antibiotic.
- (ii) State the criteria for a good antibiotic.
- (iii) What are the uses of antibiotics?

[5]