

**ICSE Board**  
**Class IX Biology**  
**Paper - 5**

**Time: 2 hrs**

**Total Marks: 80**

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**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 innermost layer of the tooth.
- (ii) The opening through which the pollen tube develops.
- (iii) A liquid connective tissue.
- (iv) A parasite in the liver of sheep.
- (v) A step of cellular respiration that occurs in the cytoplasm of the cell [5]

**(b)** Find the odd one out:

- (i) Sycon, Hydra, Sea anemone, Jelly fish
- (ii) Cell wall, Centrosome, Plastid, Ribosomes
- (iii) Vegetable peel, Plastic, Discarded CDs, Metals
- (iv) Cholera, Leprosy, Syphilis, Jaundice
- (v) Horse, Camel, Rabbit, Platypus [5]

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

- (i) Ripe tomatoes are red in colour due to the presence of carotene.
- (ii) In grafting, the plant receiving the bud or the shoot is called the scion.
- (iii) Stone cells are sclerenchyma cells.
- (iv) The stigma of China rose is bilobed.
- (v) Embryo sac consists of eight cells. [5]

**(d)** Select the correct answer from the brackets and complete the following statements:

- (i) Seeds without a distinct region of food storage are called \_\_\_\_\_ seeds.  
(endospermic, non-endospermic)
- (ii) The housefly transmits \_\_\_\_\_ germs. (rabies, measles, typhoid, AIDS)
- (iii) \_\_\_\_\_ is a fat-digesting enzyme. (Lipase, Trypsin, Pepsin, Ptyalin)
- (iv) Ribosomes help in \_\_\_\_\_. (respiration, protein synthesis, secretion, cell division)
- (v) The opening through which water enters into a seed is called the \_\_\_\_\_.  
(micropyle, hilum) [5]

**(e)** Given below is an example of a certain structure and its special function. Based on a similar pattern, fill in the given blanks:

E.g. Chloroplast – Photosynthesis

(i) Ribosome	
(ii) Centrosome	
(iii) Haustoria	
(iv) Epiglottis	
(v) Glenoid cavity	

[5]

**(f)** State two differences for each of the following pairs.

- (i) Prokaryotic and eukaryotic cell
- (ii) Respiration and breathing
- (iii) Parenchyma and sclerenchyma
- (iv) Striated and unstriated muscles
- (v) Sweat and sebum

[5]

**(g)** State the functions of each of the following:

- (i) Larynx
- (ii) Sebum
- (iii) Apical meristem
- (iv) Endosperm
- (v) Granules

[5]

**(h)** Complete the table:

<b>Name of the disease</b>	<b>Causative agent</b>	<b>Preventive method</b>
Filaria		
Pneumonia		
Typhoid		
Tuberculosis		
Gonorrhoea		

[5]

## SECTION-II (40 Marks)

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

### Question 2

**(a)**

- (i) Draw a diagram showing the germination of a bean seed.
- (ii) What is binomial nomenclature? What is the scientific name for human beings?[5]

**(b)**

- (i) State three adaptations of flowers which favour cross-pollination.
- (ii) State two differences between stomata and lenticels. [5]

### Question 3

**(a)**

- (i) Name the causative agent and symptoms of the following diseases:
  - 1. Amoebiasis
  - 2. Whooping cough
  - 3. Polio
- (ii) Describe the role of the diaphragm in breathing. [5]

**(b)**

- (i) Explain the methods of food preservation.
- (ii) State two characteristics of Phylum Coelenterata. [5]

#### Question 4

(a) Name one enzyme which converts each of the following:

1. Fats into fatty acids
2. Starch into maltose
3. Lactose into glucose
4. Trypsinogen into trypsin
5. Emulsifies fats into fatty acids and glycerol

[5]

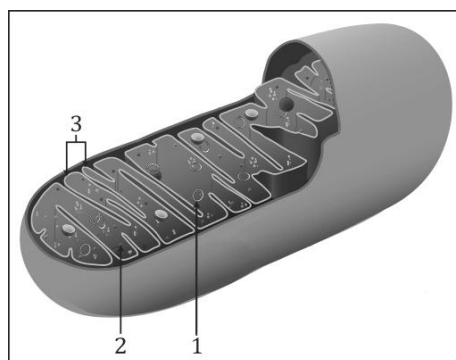
(b)

- (i) State the disadvantages of vegetative propagation.
- (ii) Distinguish between an earthworm and a roundworm.

[5]

#### Question 5

(a) The given figure shows the structure of an organelle. Study the figure carefully and answer the questions based on it.



- (i) Name the organelle.
- (ii) Label parts 1-3
- (iii) Mention one function of the above organelle.

[5]

(b) Answer in one word:

- (i) The phase of respiration that takes place in the mitochondria.
- (ii) An oxygen carrier.
- (iii) A kind of respiration that takes place in the absence of oxygen.
- (iv) Gynoecium with more than one carpel that is free.
- (v) Cells present in the inner lining of the respiratory passage.

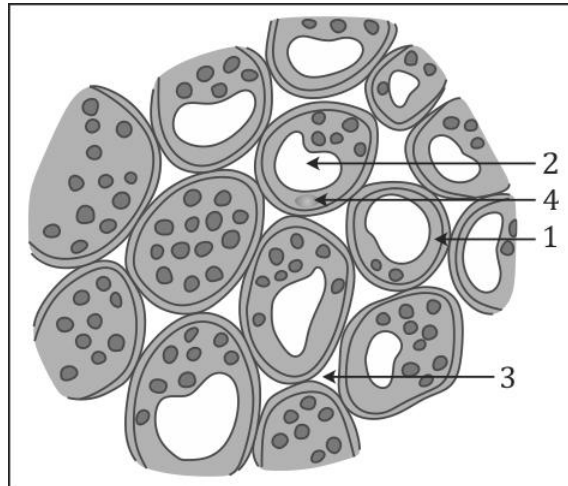
[5]

## Question 6

(a)

- (i) Give any three differences between squamous epithelium and stratified squamous epithelium.
- (ii) Define food chain. State its significance. [5]

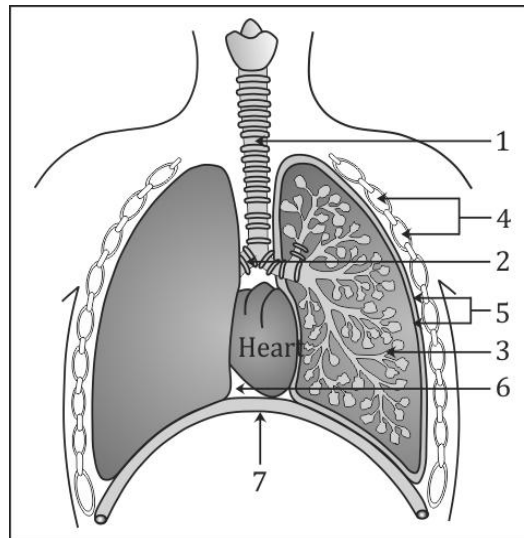
(b) The given figure shows parenchyma tissue.



- (i) Identify parts 1 - 4.
- (ii) Describe the cells of this tissue.
- (iii) Where is the above tissue found?
- (iv) State any function. [5]

### Question 7

**(a)** The given diagram represents the organs of the human thorax.



1: Trachea, 2: Bronchiole, 3: Bronchus, 4: Rib, 5: Pleural membrane, 6: Thoracic cavity, 7: Diaphragm

Study the diagram carefully and answer the following questions:

- (i) What are the functions of parts 1, 5 and 7?
- (ii) Why should the lining of alveoli be moist?
- (iii) What is the position of the diaphragm at the time of inspiration and expiration?[5]

**(b)** Draw a well labelled diagram of a knee joint.

[5]