ICSE Board Class IX Biology Paper - 3

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 [].

SECTION-I (40 Marks)

Attempt **all** questions from this section.

Question 1

(a) Name the following:

- (i) The fluid present in the synovial joint.
- (ii) The process of fruit formation without fertilisation
- (iii) An albuminous seed.
- (iv) The part of the seed which develops into a shoot.
- (v) A unicellular fungus.

(b) Fill in the blanks:

- (i) ______ is a fruit in which the inflorescence is eaten up.
- (ii) The category of germs which cause rabies, smallpox and mumps is _____.
- (iii) The corolla is made up of _____.
- (iv) The upper part of the embryo axis is _____.
- (v) Pollen is produced in the _____.

(c) State whether the following are True or False. Correct and rewrite the statements.

- (i) Potato tuber has stomata.
- (ii) Body cavity is absent in Platyhelminthes.
- (iii) Mosquitoes have two pairs of wings.
- (iv) Mode of nutrition in mosses is heterotrophic.
- (v) Transpiration takes place through stomata. [5]

(d) State one point of difference between each of the following pairs:

- (i) Cold-blooded and warm-blooded animals.
- (ii) Self-pollination and cross-pollination.
- (iii) Snake and earthworm.
- (iv) Infectious and non-infectious diseases.
- (v) Inspired air and expired air.

(e) The given figure shows the head of an animal.



- (i) Name the animal.
- (ii) Which category does it belong to?
- (iii) Is it a parasite or free-living?
- (iv) Name the disease caused by it.
- (v) State the importance of suckers for the animal.

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(f) Match the following:

Column A	Column B	
1. Ribosomes	a. Cell division	
2. Vacuoles	b. Protein synthesis	
3. Cell membrane	c. Regulates growth of the cell	
4. Centrioles	d. Store excess water	
5. Nucleus	e. Entry and exit of substances in and out of the cell	

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(g) Find the odd one out. Give reasons for your answer:

- (i) Frog, Lizard, Snake, Tortoise
- (ii) Chloroplast, Centrosome, Mitochondria, Cell wall
- (iii) Collenchyma, Sclerenchyma, Parenchyma, Cartilage
- (iv) Lysol, Carbolic acid, Benzoic acid, Formalin.
- (v) Pine, Chlamydomonas, Amoeba, Paramoecium

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(h) Define:

- (i) Saprophytes
- (ii) Fertilisation
- (iii) Blood
- (iv) Vaccination
- (v) Vegetative propagation

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SECTION-II (40 Marks)

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

Question 2

(a) The given diagram refers to an apparatus which is used to demonstrate a physiological process.



- (1) Why is potassium hydroxide solution kept in test tube X and Y?
- (2) Why are boiled peas soaked in disinfectant kept in test tube Y?
- (3) Why has the coloured water risen in tubing 1?
- (4) Name the biological process which causes the coloured water to rise in tubing 1.
- (5) Define the biological process explained through the given experiment. [5]

(b) The given figure shows different kinds of teeth in man.



- (i) Name the different kinds of teeth.
- (ii) Write their functions.
- (iii) Name two minerals present in teeth.

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Question 3

(a) Name and explain the germination that takes place in the pea seed. [5](b) Write the functions of:			
	(i)	Toxoids	
	(ii)	Amylopsin	
	(iii)	Chromoplast	
	(iv)	Parenchyma	
	(v)	Magnesium in the human body.	[5]
Qu	esti	on 4	
(a)			
	(i)	State the functions of the liver.	
	(ii)	What are non-infectious diseases? Give two examples.	[5]
(b)			
	(i)	How does a muscle contract?	
	(ii)	Draw the structure of a mitochondrion.	[5]
Question 5			
(a) Draw a diagram of the structure of a tooth and label the following parts:			
	Ena	mel, Crown, Dentine, Pulp, Cement, Periodontal	[5]

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(i)	State the main functions of Red Cross.	
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(ii) How will you test for the presence of proteins? [5]

Question 6

(a) The given figure shows a type of tissue. Study the figure and answer the following questions:



- (i) Name the tissue.
- (ii) Label parts 1 and 2.
- (iii) State the characteristics of this tissue.

(b) Study the given figure and answer the following questions:



- (i) Label parts 1, 2, 3 and 4.
- (ii) What is the function of part 4?
- (iii) How are the lungs able to expand and contract without any damage to their walls?

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Question 7

(a)

- (i) Write any four points explaining the significance of studying biology.
- (ii) How is yogurt prepared?

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(b) The table below shows the differences between inhaled air and exhaled air:

Components	% Composition of air	
	Inhaled air	Exhaled air
Oxygen	20.7	14.0
Carbon dioxide	0.04	4.0
Water vapour	1.25	3.99
Nitrogen	78.0	78.0

Answer the following questions with respect to exhaled air:

- (i) Why has its oxygen content decreased?
- (ii) Where has the extra carbon dioxide been produced from?
- (iii) Where has the extra water vapour come from?
- (iv) Why is there no change in the percentage of nitrogen?
- (v) What role does the diaphragm play in breathing?

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