

PODAR INTERNATIONAL SCHOOL(ICSE)

First Terminal Examination (2021-22)

SCIENCE-Paper 3

Std: IX

Maximum marks: 80

Subject: Biology

Duration: 2 Hours

Answers to this Paper must be written on the paper provided separately.

*You will **not** be allowed to write during the first **15** minutes.*

This time is to be spent in reading the Question Paper.

The time given at the head of this Paper is the time allowed for writing the answers.

*Attempt **all** questions from **Section I** and any four questions from **Section II**.*

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) Choose the correct answer from the four options given below. [5]

(i) A muscular tongue does nothelp in:

- A. speaking
- B. digesting starch
- C. tasting
- D. cleaning the food particles from the teeth after eating

(ii) Which of the following is the function of ascorbic acid?

- A. Regulates oxidationof food
- B. Prevents oxidation of vitamin A
- C. Promotes functioning of capillary walls
- D. Helps in normal clotting of blood

(iii) Elephophilyis the pollination carried out by _____.

- A. rats
- B. dogs
- C. bats
- D. elephants

(iv) When the perianth is green like the sepals, it is described as _____ perianth.

- A. petaloid
- B. sepaloid
- C. polysepalous
- D. gamosepalous

(v) Which of the following epithelium is found in the cornea?

- A. Ciliated columnar epithelium
- B. Cuboidal epithelium
- C. Stratified epithelium
- D. Glandular epithelium

(b) Name the following.

[5]

- (i) The power house of the cell.
- (ii) A wind pollinated flower.
- (iii) An acid present in the stomach.
- (iv) The small granules that are attached to the membranes of the endoplasmic reticulum.
- (v) The green coloured plastids.

(c) The following statements are false. Rewrite the correct form of the statement by changing the underlined word only.

[5]

- (i) Iron deficiency may lead to goitre.
- (ii) Striated muscles are found only in the walls of the heart.
- (iii) Bolus is formed in the stomach.
- (iv) Pellagra is the deficiency of haemoglobin in blood.
- (v) Guard cells are amoeboid.

- (d) Complete the following paragraph by filling in the blanks (i) to (v) with appropriate words: [5]

The inner lining of the _____ (i) _____ has a great number of tiny finger-like projections called villi. The villi enormously increase the inner surface area of the intestine which facilitates the _____ (ii) _____ of digested food. Between the villi are small holes through which the intestinal juice secreted by its _____ (iii) _____ cells is poured into the _____ (iv) _____ of the intestine. Each villus is covered by a single -cell thick _____ (v) _____.

- (e) Give appropriate biological / technical terms for the following: [5]

- (i) The expulsion of the undigested remains of the food from the alimentary canal.
- (ii) The protective covering of the ovule.
- (iii) Complex chemical substance that make up genes.
- (iv) Groups of nectar – secreting cells in most flowers.
- (v) The flower which contains only the carpels.

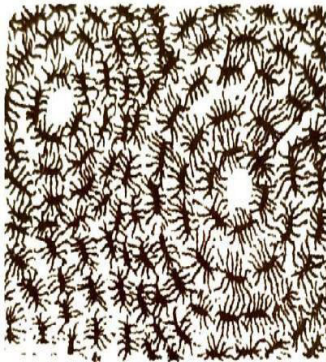
- (f) Explain the following terms: [5]

- (i) Bract
- (ii) Calorie
- (iii) Pylorus
- (iv) Placenta in flowers
- (v) Malnutrition

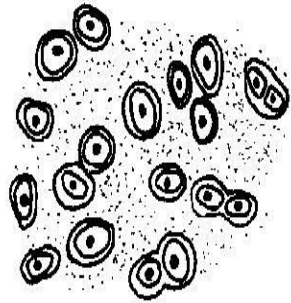
- (g) Choose the ODD one out from the following terms given and name the CATEGORY to which the others belong: [5]

- (i) niacin, tocopherol, thiamine, pyridoxine
- (ii) sucrose, glucose, fructose, galactose
- (iii) enamel, dentine, pulp, epiglottis
- (iv) cyton, dendrons, tendon, axon
- (v) vallisneria, china rose, salvia, pea

- (h) The given diagrams represent animal tissues. Study the same and answer the questions that follow. [5]



A



B



C

- (i) Name the cell labelled as C
- (ii) What are the living cells in A called?
- (iii) Which type of connective tissue is B
- (iv) Which of the shown tissues is non-porous?
- (v) State the location of tissue B in the human body.

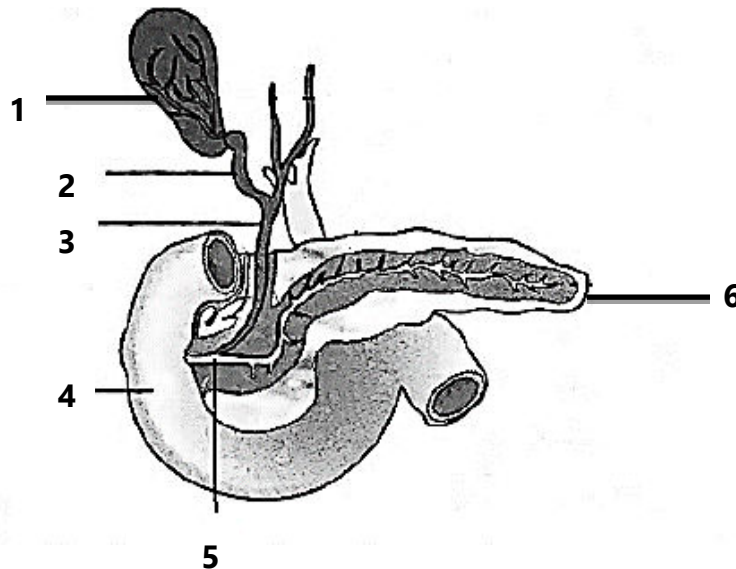
SECTION II (40 Marks)

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

Question 2

(a) Study the diagram and answer the following questions:

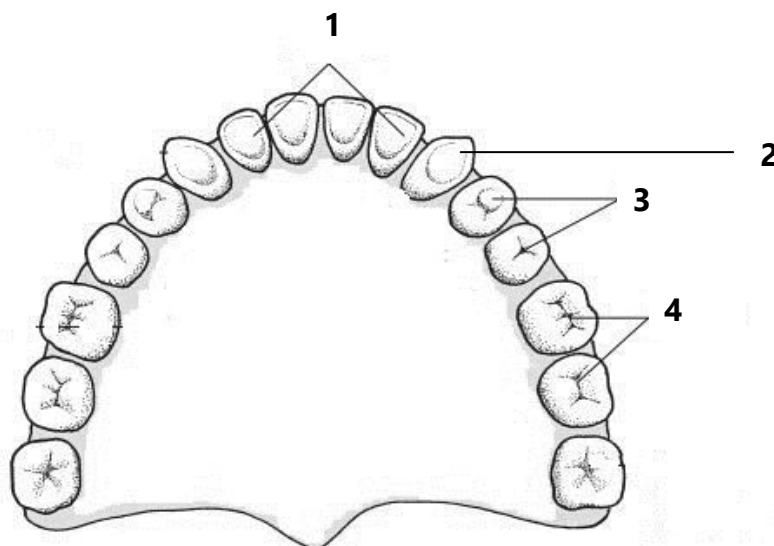
[5]



- (i) Identify the parts labeled from 1 to 6
 - (ii) Which two pigments impart colour to the fluid stored in part 1?
 - (iii) State the location of the part labeled as 6
 - (iv) State one function of the fluid stored in part 1.
- (b) Differentiate between the following pairs on the basis of what is given in the brackets. [5]
- (i) Plant cells and Animal cells (arrangement of cytoplasm)
 - (ii) Areolar tissue and Adipose tissue (function)
 - (iii) Wind-pollinated flowers and Insect pollinated flowers(stigma)
 - (iv) Vitamin A and Vitamin D (deficiency diseases)
 - (v) Colon and Rectum (function)

Question 3

- (a) The figure represents different kinds of teeth. Study it carefully and answer the following questions: [5]

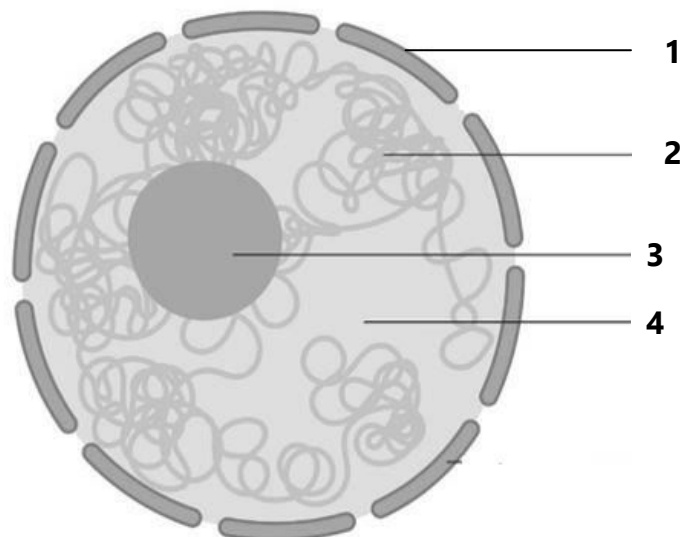


- (i) Identify the type of teeth labelled from 1 to 4.
 - (ii) State the functions of 1, 2 and 3.
 - (iii) How many teeth does anormal adult human have?
 - (iv) Which kind of teeth is also known as bicuspid?
 - (v) What is the last molar on each side in each jaw called?
- (b) Complete the table by filling in the blanks from 1 to 10 with appropriate terms: [5]

Region	Enzymes	Nutrient (substrate)
Mouth	1	2
3	Rennin	4
Duodenum	5	Emulsified fats
	6	Proteins and polypeptides
	7	Starch
Ileum	Maltase	8
	Lactase	9
	10	Proteins and peptides

Question 4

- (a) The figure below represents the structure of a nucleus. Study the same and answer the following questions: [5]

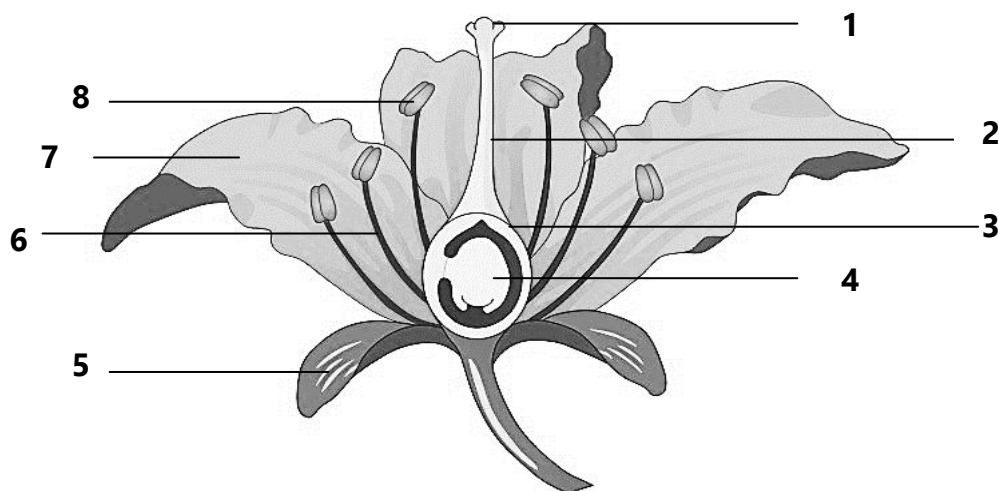


- (i) Identify the parts labeled from 1 to 4
 - (ii) State any three main structural characteristics of the given structure.
 - (iii) Write three functions of the given structure.
- (b) Give suitable biological reasons for the following statements. [5]
- (i) Lysosomes are called suicide bags.
 - (ii) Sclerenchyma cells develop very thick walls.
 - (iii) Saliva aids in maintaining water balance in the body.
 - (iv) Cells generally remain small in size.
 - (v) It is impossible to make an accurate chemical analysis of the protoplasm.

Question 5

(a) Study the diagram and answer the questions below.

[5]



- (i) Identify the parts labelled from 1 to 8.
- (ii) Which of the above parts are non-essential parts of the flower?

(b) Answer the following questions briefly:

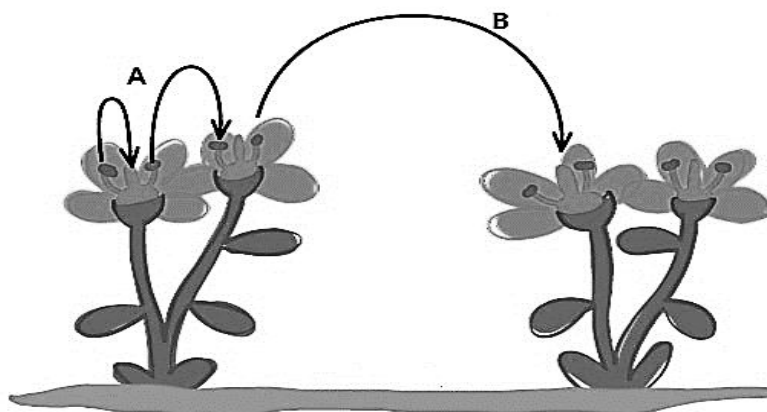
[5]

- (i) State any one function of the cell wall.
- (ii) What is inflorescence?
- (iii) What is a balanced diet?
- (iv) Why is the cardiac sphincter present at the front end of the stomach?
- (v) State one function of xylem vessels.

Question 6

(a) Study the diagram and answer the questions that follow:

[5]



- (i) Identify the type of pollination labelled as A and B.
- (ii) Write any four advantages of A.
- (iii) State any four conditions which favour pollination type B.

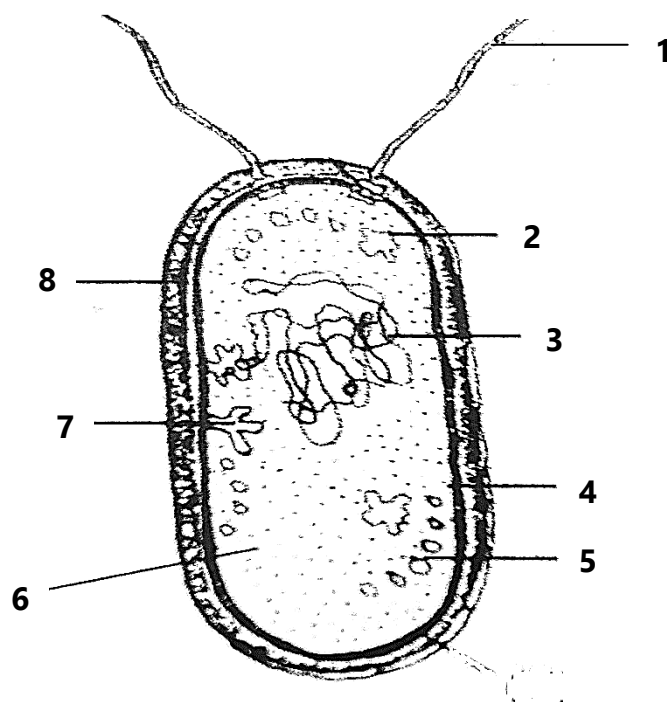
(b) Mention the exact location of the following:

[5]

- (i) Cambium
- (ii) Parotid gland
- (iii) Centrosome
- (iv) Caecum
- (v) Larynx

Question 7

- (a) Study the diagram and answer the questions below. [5]



- (i) Identify the parts labelled from 1 to 8.
 - (ii) Give one function of part 4 and 6.
- (b) Give an example for each of the following: [5]
- (i) A plant that shows the presence of an epicalyx.
 - (ii) A disease caused by deficiency of proteins.
 - (iii) A flower pollinated by birds.
 - (iv) An animal with homodont teeth.
 - (v) A neuter flower.
 - (vi) A macronutrient found in banana.
 - (vii) A polydelphous plant.
 - (viii) An imperfect flower.
 - (ix) A rich source of molybdenum containing food substance.
 - (x) A rich source of calcium containing food substance.

[illegible]