

GREENLAWNS SCHOOL, WORLI

TERMINAL EXAMINATION: 2024-25

BIOLOGY

Std: IX

Marks: 80

Date: 23/09/2024

Time: 2 hrs

Answers to this paper must be written on the paper provided separately. You will **not** be allowed to write during the first **10** 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.

Section A is compulsory. Attempt any four questions from **Section B**.

SECTION A

(Attempt **all** questions from this section)

Question 1

Choose the correct answers to the questions from the given options.

[15]

(Do not copy the question, write the correct answer only.)

(i) A single unit of perianth is called:

- | | |
|-----------|--------------|
| (a) Petal | (c) Epicalyx |
| (b) Tepal | (d) Sepal |

(ii) Which is **NOT** a skin derivative?

- | | |
|---------------------|--------------------|
| (a) Sweat gland | (c) Salivary gland |
| (b) Sebaceous gland | (d) Mammary gland |

(iii) Which of the following is an adaptation that encourages Self-pollination?

- | | |
|-----------------|---------------|
| (a) Herkogamy | (c) Dichogamy |
| (b) Heterostyly | (d) Homogamy |

(iv) Which of these is **NOT** spread by drinking contaminated water?

- | | |
|---------------|-------------------|
| (a) Cholera | (c) Chicken pox |
| (b) Dysentery | (d) Hepatitis - A |

(v) Which statement is true about the hilum of a seed?

- (a) Scar of attachment of ovule to ovary wall
- (b) Pore for water to enter the embryo
- (c) Gives rise to the upper stem
- (d) None are correct

(vi) The vaccine useful in developing immunity against tuberculosis is:

- | | |
|---------|----------------|
| (a) DPT | (c) Covishield |
| (b) BCG | (d) MMR |

(vii) Which is a biodegradable waste?

- | | |
|--------------------|------------|
| (a) Animal excreta | (c) Metals |
| (b) Plastics | (d) Glass |

- (viii) **Assertion (A):** Ostia are the openings in the body wall of sponges through which water enters inside the body.
Reason (R): Osculum is a mouth-like structure on the top of the sponge's body through which water is thrown out.
- (a) Both A and R are true (c) A is true and R is false
 (b) Both A and R are false (d) A is false and R is true
- (ix) **Fats are solvent for the following vitamins:**
- (a) A,B,C,D (c) A,C,E,K
 (b) A,B,D,E (d) A,D,E,K
- (x) **Assertion (A):** Leather obtained from the hides of animals is actually the epidermis of the skin.
Reason (R): Dermis is tough and flexible which is made up of a thick layer of connective tissue with elastic fibres.
- (c) Both A and R are true (c) A is true and R is false
 (d) Both A and R are false (d) A is false and R is true
- (xi) **Which of the following is a characteristic of Gymnosperms?**
- (a) Cone is absent (c) Fruits are formed
 (b) Seeds are naked (d) Flowers are present
- (xii) **Which of the following is symptoms of Filariasis?**
- (a) Transmitted through the bite of the Culex mosquito
 (b) The tiny worms lie in the lymphatic system and connective tissues of human body
 (c) Legs become swollen due to blockage of lymph circulation.
 (d) All of these
- (xiii) **What is the result of a diet lacking iron?**
- (a) Bleeding gums (c) Weak bones and teeth
 (b) Poor wound healing (d) Deficiency of haemoglobin in blood
- (xiv) **In hypogeal germination plumule comes out of ground due to elongation of:**
- (a) Epicotyl (c) Cotyledons
 (b) Hypocotyl (d) Both (a) and (b)
- (xv) **An oviparous mammal:**
- (a) Whale (c) Elephant
 (b) Flying fox (Bat) (d) Platypus

Question 2

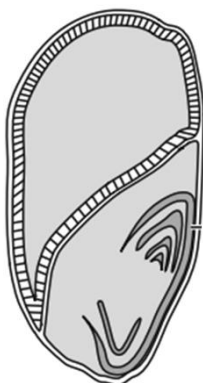
(i) **Name the following:**

[5]

- (a) Tip of the flower stalk.
 (b) Modified sweat glands found in auditory canal of ear.
 (c) The disease synonymous to inflammation of liver.
 (d) Any substance which is discarded after primary use or is worthless.
 (e) A malnourished disease caused due to deficiency of proteins in diet.

(ii) Given below is the diagram of a longitudinal section of Maize grain. [5]

Read the information and fill in the blanks:



Maize grain is monocotyledonous and endospermic. The endosperm and the embryo are separated from each other by a thin epithelial layer.

In the maize grain, the (a) _____ and (b) _____ are fused together to form a protective layer. The outermost layer of the endosperm is rich in protein and is called the (c) _____ layer. The embryo consists of a single cotyledon called (d) _____. The plumule is enclosed in a protective sheath called (e) _____.

(iii) Arrange and rewrite the terms in each group in the correct order so as to be in a logical sequence beginning with the term that is underlined. [5]

- (a) Cotyledon, Testa, Radicle, Tegmen, Hypocotyl.
- (b) Amphibians, Pisces, Mammals, Reptiles, Aves.
- (c) Central cell, Nucellus, Ovule, Egg cell, Micropyle, Embryo sac, Synergids.
- (d) Petal, Sepal, Stamen, Pistil.
- (e) Annelida, Cnidaria, Mollusca, Nematoda, Echinodermata.

(iv) Read the explanations given below and name the structure: [5]

Example: The largest gland in the human body that secretes bile.

Answer: Liver

- (a) Region of the epidermis of skin whose cells can actively divide to produce new cells.
- (b) Carry the male reproductive cell of plants and transfer it to the female reproductive cells.
- (c) Hair-like projections found in Bryophytes that help in absorption of water and nutrients.
- (d) Provides nourishment to the embryo of the seed.
- (e) Found in echinoderms that help in locomotion.

(v) Differentiate between the following on the basis of what is given in brackets: [5]

- (a) Folic acid and calciferol (deficiency diseases)
- (b) Agricultural and industrial waste (sources)
- (c) Helminths and viruses (diseases caused)
- (d) Maize and bean (size of embryo)
- (e) Retinol and ascorbic acid (function)

SECTION B

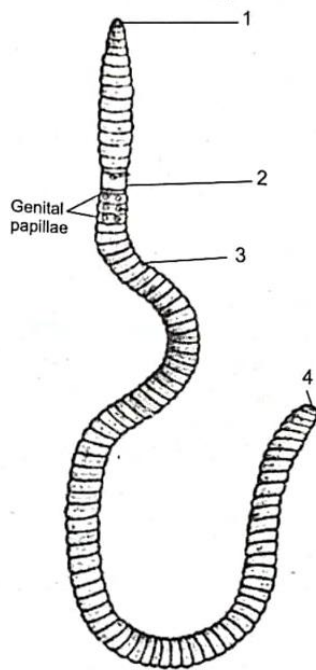
(Attempt **any four** questions from this Section.)

Question 3

(i) Explain the following terms: [3]

- (a) Incineration
- (b) Endemic diseases
- (c) Gamosepalous

(ii) Study the figure given below and answer the following questions:



- (a) What is the scientific name of this organism? [1]
- (b) Name the phylum to which it belongs. [½]
- (c) Give two characteristics features of this organism. [2]
- (d) Label parts 1 to 4. [2]
- (e) What is the function of part 2? [½]
- (f) Give the economic importance of this organism. [1]

Question 4

(i) Given below is a table for nutrient, their function and deficiency diseases. [5]

Rewrite the table and complete it:

Nutrient	Function	Deficiency diseases
Iodine	Component of thyroxine	(a)
Phylloquinone	(b)	Haemorrhage
(c)	Normal functioning of RBCs	Pernicious anaemia
Vitamin E	(d)	Muscle weakness
(e)	Increases growth and appetite	Beriberi

(ii) Give one example of each: [3]

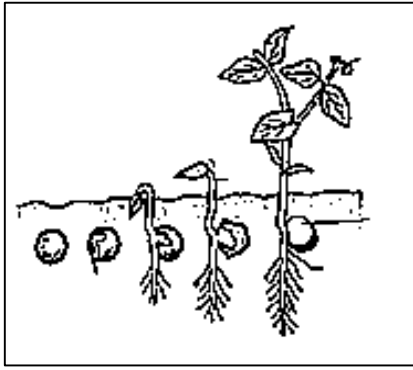
- (a) Neuter flower
- (b) A flower pollinated by elephant
- (c) Herkogamy condition

(iii) Suggest any two steps for control of mosquitoes. [2]

Question 5

- (i) Explain any two conditions necessary for germination. [2]
- (ii) Write a short note on – Vasoconstriction. [2]
- (iii) State any two drawbacks of the old two kingdom classification. [2]

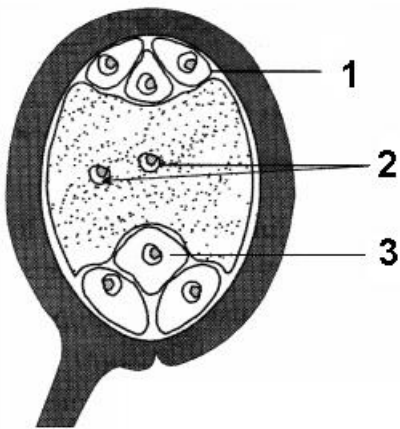
(iv) Given below is the diagram of a process seen in plant. Study the same and answer the questions that follow:



- (a) Identify the process shown. [½]
- (b) State the difference between the two types of germination on the basis of position of cotyledons. [1]
- (c) Draw a neat and labelled diagram of a dicot seed. [2½]

Question 6

(i) Study the given figure carefully and answer the questions that follow:



- (a) Label the parts 1, 2 and 3. [1½]
- (b) What will happen when one sperm nucleus unites with part 3? [1]
- (c) What will happen when the other sperm nucleus unites with part 2? [1]
- (d) Draw a neat and labelled diagram of a mature pollen grain. [1½]

(ii) State the characteristic feature of stigma in: [2]

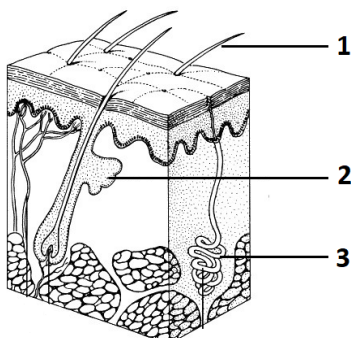
- (a) Anemophilous flowers
- (b) Entomophilous flowers

(iii) State functions of the following: [3]

- (a) Stratum corneum
- (b) Meibomian glands
- (c) Nail matrix

Question 7

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



- (a) What gives part '1' its colour? [1]
- (b) Give the function of part '2'. [1]
- (c) State any two common problems related to '2'. [2]
- (d) What is the composition of the secretion of part '3'? [1]

(ii) What are scrubbers? How do they work?

[2]

(iii) 'Carbohydrates are the principal energy sources in our body. These include sugars.

[3]

Disaccharides require digestion to get absorbed into the body.'

(a) What is the general chemical formula of Disaccharides?

(b) Name a Disaccharide made up of glucose and galactose.

(c) What is sucrose made up of?
