



DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2022-2023
FINAL EXAMINATION

CLASS: IX
SUBJECT: BIOLOGY [SET A]

FULL MARKS: 80
TIME: 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.

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

The intended marks for questions or parts of questions are given in brackets [].

This question paper consists of 5 printed pages.

SECTION A (40 Marks)
(Attempt all questions from this section)

Question 1

Select the correct answers to the questions from the given options. (Do not copy the question. Write the correct answer only): [15]

- i. Phylum which has worms with ring like segments on their body:
a. Cnidaria, b. Platyhelminthes, c. Annelida, d. Nematoda.

- ii. Bacteria found in the small nodules of Leguminous plants:
a. *Rhizophora*, b. Rhizoids, c. *Rhizopus*, d. *Rhizobium*.

- iii. The chemical used on the dead seeds to prevent bacterial decay:
a. Dilute Formalin, b. Starch, c. Alkaline Pyrogallol, d. Oil.

- iv. Pollination by birds:
a. Entomophily, b. Anemophily, c. Hydrophily, d. Ornithophily.

- v. A hard porous tissue:
a. Cartilage, b. Bone, c. Areolar, d. Adipose.

- vi. Organelle present in the cell which helps in the formation of acrosome of sperm:
a. Ribosome, b. Golgi Apparatus, c. Plastid, d. Nucleus.

- vii. Enzyme which digests emulsified fat:
a. Trypsin, b. Amylopsin, c. Ptyalin, d. Steapsin.

- viii. A pathogen that causes Amoebic Dysentery:
a. *Entamoeba histolytica*, b. *Euglena*, c. *Paramoecium*, d. *Plasmodium*.
- ix. Pigment present in the skin:
a. Melanin, b. Keratin, c. Bilirubin, d. Albinism.
- x. Glycolysis occurs in:
a. Mitochondria, b. Cytoplasm, c. Ribosome, d. Lysosome.
- xi. Yeast is used in the production of:
a. Ethyl Alcohol, b. Acetic Acid, c. Cheese, d. Curd.
- xii. Pellagra is caused by the lack of _____ in our body:
a. Niacin, b. Pantothenic Acid, c. Riboflavin, d. Thiamine
- xiii. Marasmus is caused due to the deficiency of:
a. Vitamin C, b. Carbohydrate, Fat and Protein, c. Fat,
d. Carbohydrate
- xiv. Gastric Juice contains:
a. HCl and Pepsin , b. Trypsin , c. Pepsinogen, d. Pepsinogen and Pepsin
- xv. Carbon dioxide combines with haemoglobin to form:
a. Carboxyhaemoglobin, b. Carbaminohaemoglobin, c. Oxyhaemoglobin,
d. Carbonhaemoglobin.

Question 2

- (i) Name the following: [5]
a. The volume of air that can be taken in and expelled out by maximum inspiration and expiration.
b. The first produced antibiotic.
c. A monocotyledonous endospermic seed.
d. Kingdom which contains unicellular and prokaryotic organisms.
e. A bacteria which convert ammonium compounds to nitrates.
- (ii) Choose the odd one out and write the correct category to which the others belong: [5]
a. Oesophagus, Stomach, Brain, Intestine.
b. *Clostridium*, *Streptomyces*, *Aspergillus*, *Azotobacter*.
c. Testa, Tegmen, Embryo sac, Cotyledon.
d. Cyton, Glandular Epithelium, Axon, Dendron.
e. Ligament, RBC, WBC, Platelet.

(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. Dendrite, Axon, Axon ending, Cyton.
- b. Ovary, Polar nuclei, Embryo Sac, Ovule.
- c. Ileum, Rectum, Colon, Caecum.
- d. Stratum Corneum, Dermis, Granular Layer, Stratum Malpighi.
- e. Pollen grain, Germination, Fertilisation, Pollination.

(iv) Match the correct answers of Column I with Column II. Please rewrite the correct pairs: [5]

Column I	Column II
a. Bioweapon	a. Galactose
b. Monosaccharide	b. Plastic
c. WHO	c. Antiseptic
d. Non- biodegradable	d. Paper
e. Strong germ killing substances	e. Anthrax
	f. Disinfectant
	g. Geneva

(v) State the exact location of the following: [5]

- a. Erector Muscle
- b. Cardiac Muscle
- c. Red Bone marrow
- d. Meibomian Gland
- e. Synovial Fluid

SECTION B (40 Marks)
(Attempt any four questions from this section)

Question 3

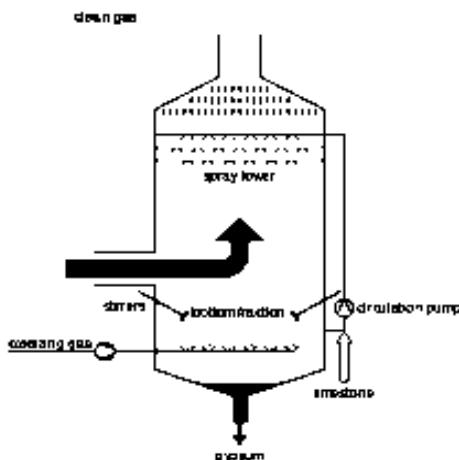
- (i) Define Balanced Diet. [1]
- (ii) Differentiate between leukoderma and albinism on the basis of definition. [2]
- (iii) Mention the two pigments present in bile. [2]
- (iv) State any two important characteristic features of Aves. [2]
- (v) Mention the three criteria of good antibiotics. [3]

Question 4

- (i) Define Antibiotics. [1]
- (ii) Mention any one symptom of cholera and the name of the pathogen which causes it. [2]

(iii) Identify the device given below and mention its function.

[2]



(iv) Define Anaerobic Respiration in plants. Mention the equation. [2]

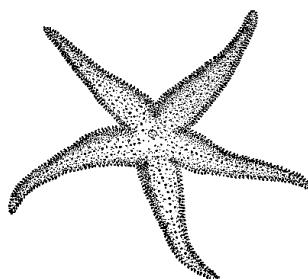
(v) Draw a well labelled diagram of an Animal cell. [3]

Question 5

- (i) Define vaccine. [1]
- (ii) Differentiate between Sterilization and Pasteurization on the basis of definition. [2]
- (iii) What is the optimum temperature required for the germination of seeds?
Why is the temperature, below optimum temperature, not suitable for germination? [2]
- (iv) Why is skeletal muscle also known as striated muscle? Mention one location in human body where we can find this muscle. [2]
- (v) Draw a Neuron and label its parts. [3]

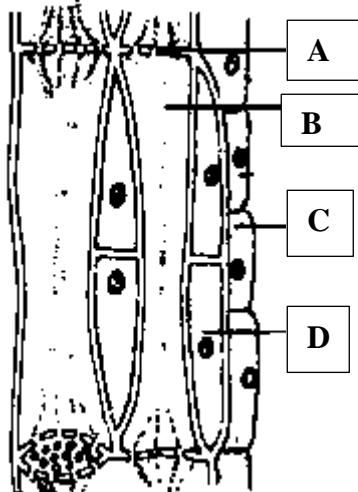
Question 6

- (i) Why do we use Yeast in making wine? [1]
- (ii) Mention the scientific name of white button mushroom. Mention the kingdom to which mushrooms belong. [2]
- (iii) Mention the scientific name of the pathogen which causes Tuberculosis.
Mention one preventive measure of this disease. [2]
- (iv) Differentiate between Pandemic and Sporadic disease on the basis of definition. [2]
- (v) Identify the phylum of the organism shown below and write two characteristic features of the phylum. [3]



Question 7

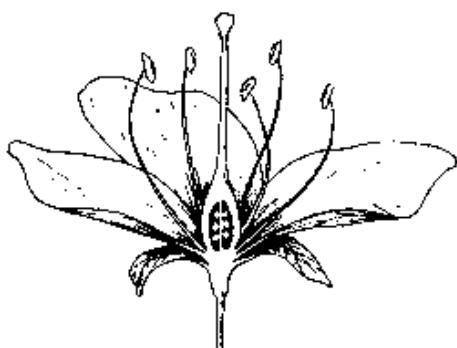
- (i) Name the protein which is present in hair. [1]
- (ii) Mention the name of the deficiency disease caused due to the lack of Vitamin C and name any two sources of food from which we derive Vitamin C. [2]
- (iii) Mention the name of the outer and inner layer of a pollen grain. [2]
- (iv) Give reasons:
a. Insect pollinated flowers have sticky stigma.
b. Stamens of wind pollinated flowers hang out of the flower.
- (v) Observe the diagram and answer the following questions. [3]



- a. Identify the tissue.
b. Label the parts marked as A and B.

Question 8

- (i) What do you understand by the term called 'Dictyosomes'? [1]
- (ii) Mention the name of the hereditary units present in the chromatin thread and what is the full form of DNA? [2]
- (iii) Differentiate between dioecious and monoecious plant on the basis of definition. [2]
- (iv) Mention the major points of cell theory. [2]
- (v) Observe the diagram given below and answer the following questions. [3]



- a. Is this a complete or an incomplete flower? Give reasons.
b. Name the essential whorls of this flower.