



DELHI PUBLIC SCHOOL NEWTOWN
SESSION 2021-22
FINAL EXAMINATION

CLASS: IX
SUBJECT: BIOLOGY

FULL MARKS: 80
TIME: 2 HOURS

(Candidates are allowed additional 10 minutes for only reading the paper. They must NOT start writing during this time.)

The question paper comprises two parts.

Part I is based on Multiple Choice Questions.

Part II is based on Subjective Questions.

Section A is compulsory.

Section B contains five questions out of which you have to attempt any four.

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

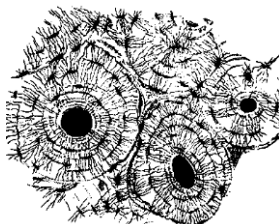
The paper consists of 8 [eight] printed pages.

PART – I

Choose a correct option from the alternatives given below:

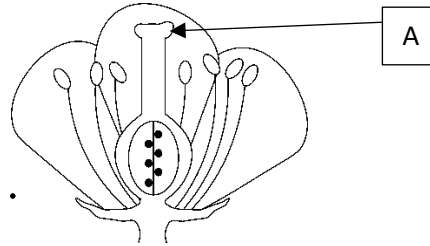
[30]

1. The suicide bags of the cell are _____.
a. Nucleus b. Mitochondria c. Lysosome d. Centrosome.
2. Vacuole in a plant cell contains _____.
a. Cellulose b. Cell sap c. Ribosomes d. Nucleoplasm.
3. These living cells are thickened at the corners.
a. Parenchyma b. Sclerenchyma c. Collenchyma d. Stone cells
4. Identify the tissue given below:-

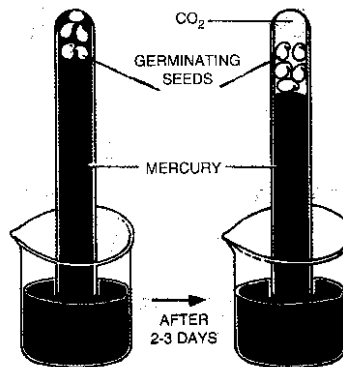


- a. WBC b. Lymph c. Bone d. Adipose
5. The flower in which both male and female reproductive system are lacking is called _____ flower.
a. Unisexual b. Bisexual c. Nueter d. Neuter

6. In China rose, the androecium is _____.
 a. Monadelphous b. Diadelphous c. Polyadelphous d. Absent.
7. The function of the part labelled as A is to _____.

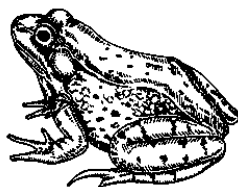


- a. To receive the pollens b. To attract insects for pollination
 c. To produce eggs d. To release the oxygen
8. In *Rhizophora*, germination is _____.
 a. Hypogeal b. Epigeal c. Viviparous d. Similar to that in pea seed.
9. By observing the diagram below, choose the option with the appropriate aim.

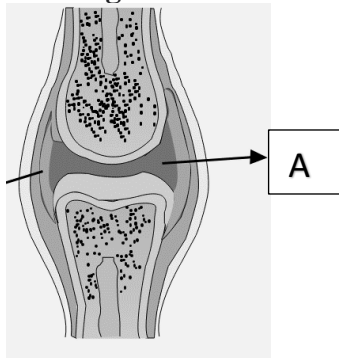


- a. to demonstrate aerobic respiration
 b. To demonstrate anaerobic respiration
 c. To show heat is evolved in respiration
 d. To show CO₂ is released in respiration.
10. To which phylum does coral belong?
 a. Chordata b. Porifera c. Cnidaria d. Annelida

11. The organism shown below has _____ chambered heart.



- a. One b. Two c. Three d. Four
11. Body of _____ is divided into ring-like segments.
a. Jellyfish b. Roundworm c. Flatworm d. Earthworm.
12. Vitamin ____ deficiency causes Rickets.
a. A b. B₁ c. C d. D
13. The part labelled as A in the diagram below is the _____ .



- a. Cartilage b. Synovial fluid c. Periosteum d. Perichondrium.
14. Substrate of pepsin is _____.
a. Protein b. Lactose c. Starch d. Maltose.
15. Bile produced in the liver is temporarily stored in _____.
a. Gall bladder b. Salivary gland c. Stomach d. Tonsils.
16. Trypsin is secreted by _____.
a. Stomach b. Pancreas c. Liver d. Salivary gland.
17. Choose the part that contains blood vessels and nerves.
a. Enamel b. Cement c. Pulp d. Saliva
18. Kwashiorkor is due to the deficiency of _____ in blood.
a. Iron b. Potassium c. Protein d. Copper

19. Iron deficiency in our body causes _____.
a. Rickets b. Anaemia c. Muscular cramps d. Food poisoning.
20. The condition in which skin pigmentation is lost from small or large patches from different regions of the body is _____.
a. Albinism b. Tuberculosis c. Leukoderma d. Cholera
21. The part of the hair that encloses the hair root is _____.
a. Hair shaft b. Hair follicle c. Hair papilla d. Melanin.
22. Glycolysis takes place in the _____.
a. Cytoplasm b. Mitochondria c. Nucleus d. Golgi body.
23. The condition that leads to deficiency of oxygen reaching the tissues is termed as _____.
a. Asphyxiation b. Hypoxia c. Tuberculosis d. Hyperoxia.
24. Amoebic dysentery is caused by _____.
a. *Lactobacillus* b. *Entamoeba histolytica* c. *Corynebacterium*
d. *Mycobacterium*
25. Antibodies are produced in exposure to _____.
a. Sunlight b. Antigen c. Temperature d. Platelets.
26. _____ was the first antibiotic discovered.
a. Streptomycin b. Penicillin c. Ampicillin d. Paracetamol.
27. Red cross Day is on _____.
a. 15th August b. 26th January c. 31st December d. 8th May.
29. _____ is the method of disposal by burning.
a. Incineration b. Composting c. Segregation d. Dumping.
30. _____ is a device used to remove gaseous and particulate air pollutants.
a. Scrubber b. Incinerator c. Compost d. Filter.

PART - II

SECTION A

(Answer all questions)

QUESTION 1

- a) Give technical term for the following:- [5]
- The fluid present in vacuole.
 - The tissue which conducts impulse from receptor to effector.
 - The hardest substance in the body.
 - The part of the seed that develops into shoot.
 - The modified sebaceous glands found in the auditory canal.
- b) Choose the odd one out from the following and give one reason:- [5]
- Horse, Camel, Rabbit, Shark.
 - Vessels, Tracheids, Xylem fibres, Sieve tubes.
 - Striated muscles, Unstriated muscles, Cardiac muscles, Blood.
 - Gliding joint, Pivot joint, Hinge joint, Immovable joint.
 - Nose, Pharynx, Larynx, Stomach

SECTION B

Attempt **any four** questions.

QUESTION 2

- a) Answer the following questions:
- I. Define the following terms:- [2]
- Heterostyly.
 - Malnutrition.
- II. Identify the organelles by their functions listed below:- [3]
- Organelle which controls all activities of the cell.
 - Organelle containing thylakoid.
 - Organelle that synthesizes proteins.
- b) Answer the following:- [5]
- Differentiate between vasodilation and vasoconstriction on the basis of the following points:-
 - Diameter of blood vessels.
 - Amount of blood supply to the skin
 - Amount of loss of heat.
 - What is heatstroke? State the precaution that can be taken against it.

QUESTION 3

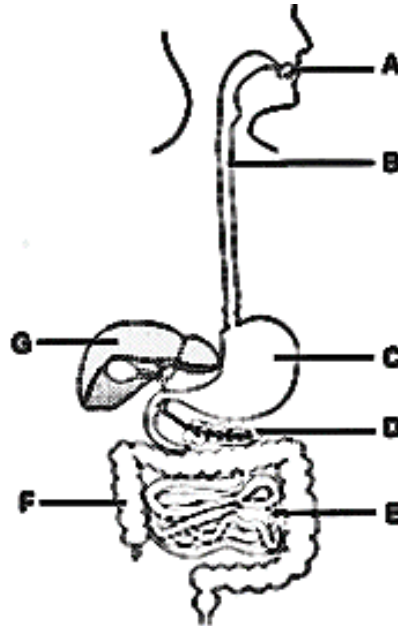
a) Differentiate between the following according to the criterion given in the brackets:-

[5]

- i. Bean and Maize (type of germination)
- ii. Photosynthesis and Respiration (end products)
- iii. Monera and Protista (organization of nuclear material).
- iv. Housefly and Star fish (presence of exoskeleton).
- v. Pandemic and Sporadic disease (meaning).

b) Observe the diagram given below and answer the following questions:-

[5]



- i. State the functions of the enzymes released from C.
- ii. Define the process by which food moves through the part marked as B.
- iii. Name the secretion produced in G. State the function of any one of its components.

QUESTION 4

a) Give reasons for the following statements:-

[5]

- i. *Rhizobium* is very important for agriculture.
- ii. Saliva plays an important role in digestion.
- iii. Mitochondria are called the powerhouses of a cell.
- iv. Bean seed shows epigeal germination.
- v. Respiration is a catabolic process.

b) Complete the table shown below:- (do not copy the table)

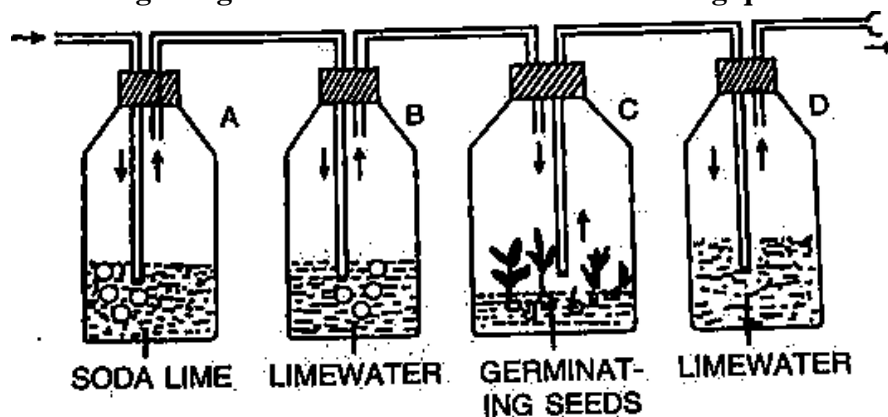
[5]

| Disease | Name of the pathogen | Mode of transmission(Any 1) | Symptoms (Any 1) | Prevention |
|--------------|----------------------|-----------------------------|--|------------|
| Tuberculosis | i. | Through air and dust | vi. | viii. |
| Cholera | ii. | iv. | vii. | ix. |
| Typhoid | iii. | v. | High fever rise in the afternoon, acute headache | x. |

QUESTION 5

a) Observe the diagram given below and answer the following questions:-

[5]



- What is the purpose of keeping soda lime in bottle A?
- What change do you expect in bottle 'D'?
- Name and define the physiological process being studied.
- Represent the physiological process that you named in (iii) above in the form of a chemical reaction.

b) Answer the following questions:-

[5]

- What are the three criteria for a good antibiotic?
- Write the scientific names of any two mushrooms that are widely cultivated in India.
- Why are preservatives like sodium benzoate added to tinned foods?

QUESTION 6

a) Answer the following questions:

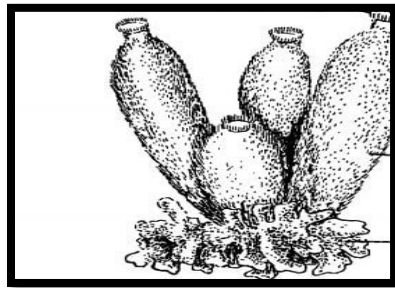
[5]

I. Draw a neat diagram of a neuron labelling all its parts.

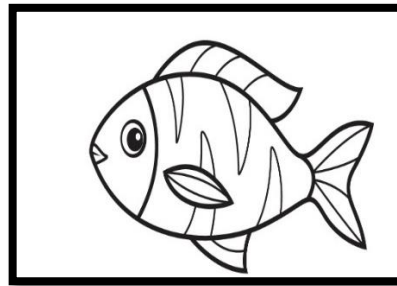
II. Differentiate between parenchyma and sclerenchyma on the basis of the nature of their cells and functions.

b) Identify the organisms labelled as A and B shown below and mention their phylum or class along with two important features of each:-

[5]



A



B