

SUMMATIVE ASSESSMENT - I - 2021 - 22
GENERAL SCIENCE - Paper - II
(Biological Science)

(English Medium)

Part - A & B

Class : IX]

(Max. Marks : 40)

[Time : 2.45 Mnts.

Instructions :

1. Question paper contains part - A and part - B.
2. 15 minutes are allotted for reading the question paper (part - A & B) in addition to 2.30 hours for writing the answers.
3. Part - A answers should be written in a separate answer book.
4. There are three sections in part - A.
5. Answer all the questions.
6. Every answer should be visible and legible.
7. There is an internal choice in section - III.
8. Part - A & B should be given at the beginning of the exam only.
9. Part - B Should be submitted along with answer book.

Marks : 30]

PART - A

[Time : 2 hrs.

SECTION - I

Note : 1. Answer all the questions.

2. Each question carries 1 mark.

4 x 1 = 4

1. What is the basic structural and functional unit of all living organisms ?
2. Which structure controls the entry and exit of the materials through the cell ?
3. What will happen, if there is no xylem tissue in plants ?
4. Pallavi met with an accident and lost lot of blood. Her blood group is unknown. Which group blood will you suggest for immediate transfusion ?

SECTION - II

Note : 1. Answer all the Questions.

2. Each question carries 2 marks.

5 x 2 = 10

5. What are the differences between prokaryotic cell and Eukaryotic cell ?

[Turn Over

6. What questions will you ask your teacher about meristematic tissue ?
7. What precautions are to be taken while observing the nucleus in cheek cells ?
8. Read the passage given below, and answer the questions.

Red blood cells also known as erythrocytes. They are red in colour because they have red coloured protein called haemoglobin. They live for 120 days in blood.

- i) What is the life span of RBC ?
 - ii) Name the protein present in red blood cells ?
9. Write four daily life situations where diffusion is involved.

SECTION - III

Note : 1. Answer all the questions each question has an internal choice.

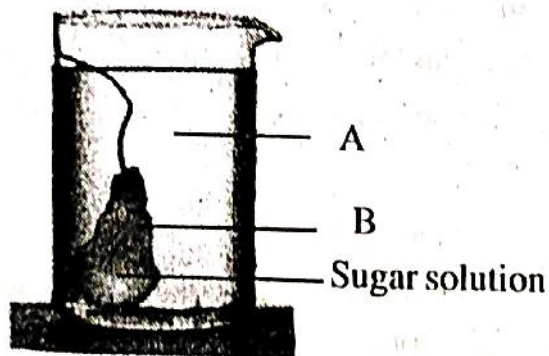
2. Each question carries 4 marks $4 \times 4 = 16$

10. a) Describe the structure of mitochondria. Why is it called power house of the cell ?

(Or)

- b) Differentiate xylem and phloem ?

11. a) Look at the picture of experiment and answer the questions



- i) What is the aim of this experiment ?
- ii) What are your observations in this experiment ?
- iii) What happens if sugar solution is taken in the beaker and normal water in the egg membrane ?
- iv) Define osmosis ?

(Or)

[Contd... 3rd

b) Write the procedure to identify the blood groups with the help of kit.

12. a) **Read the table and answer the given questions ?**

Meristematic tissue	The cells are small and have thin cell wall
Dermal tissue	Covers the plant body and given protection
Ground tissue	Gives support and stores the food
Vascular tissue	mainly comprises of xylem and phloem

- i) Which type of cell walls are present in meristematic tissue ?
- ii) What is the function of dermal tissue ?
- iii) Xylem and phloem are together called _____ tissue
- iv) What are the different types of ground tissue ?

(Or)

b) **Read the following passage and answer the given questions.**

“The plasma membrane provides a definite shape to semifluid contents of the cell. It functions as a mechanical barrier that protects the internal contents of the cell. It is a living flexible membrane and osmosis occurs due to presence of tiny water channels in the plasma membrane. The membrane determines what substances are to be allowed to enter or exit from the cell is called selective permeability.

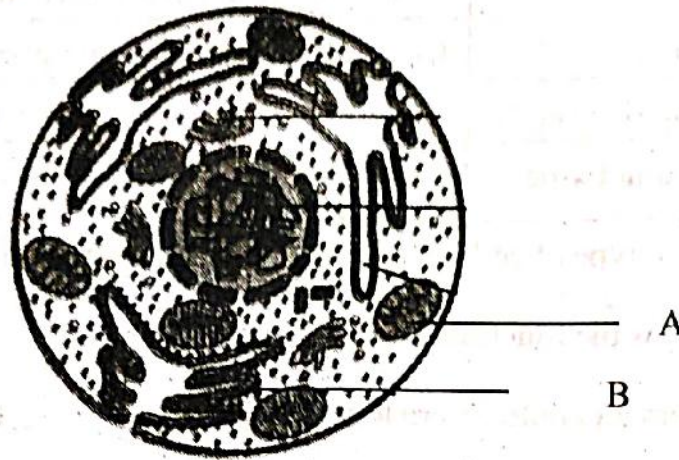
- i) What is a living flexible membrane ?
- ii) Does plasma membrane function as a mechanical barrier ?
- iii) What is selective permeability ?
- iv) What is made up of plasma membrane ?

[Turn Over

13. a) Draw a neat labelled diagram of a neuron ?

(Or)

b) Carefully observe the diagram and answer the questions.



i) Identify the parts A & B ?

ii) What is the function of Part B.

iii) How this cell is different from plant cell ?



16. Ligament : connects bones at joints : : Tendon : _____ []
A) Connects muscle to bone
B) Connects muscle to muscle
C) Stores fat
D) Helps in repair of tissues
17. Cartilage is found in _____ []
A) Tip of ribs
B) Tip of the nose
C) Trachea
D) All
18. In our body waste materials are filtered from blood by the process of []
A) Osmosis
B) Diffusion
C) Transpiration
D) All
19. Plasma membrane allowing only certain materials to pass through it is called []
A) Flexibility
B) Permeability
C) Transpiration
D) Endocytosis
20. What happens if mitochondria is absent in cell ? []
A) Respiration can not take place
B) Photosynthesis cannot take place
C) Digestion can not take place
D) Manufacture of proteins can not take place
21. What will happen to a marine fish when it is kept in fresh water aquarium ? []
A) Fish loses water due to exosmosis
B) Fish swells due to endosmosis
C) Fish swells due to diffusion
D) Nothing will happen

22. Gum is secreted from the dermal layer of some trees. In which of the following plant did you observe this phenomenon in your surroundings ? []
- A) Neem B) Acasia C) Both A & B D) None of these
23. How can you make dried vegetables fresh ? []
- A) By keeping in fresh water
B) By keeping in salt water
C) By keeping in fridge
D) By adding chemicals

V. Fill in the blanks.

24. Smooth endoplasmic reticulum helps in the manufacture of _____
25. _____ tissue conducts transportation of water and salts in plants
26. _____ are called as scavengers of body.
27. Granulocytes : Neutrophils :: _____ : Lymphocytes.
28. The smell of flowers reaches us through the process of _____

VI. Match the following

- | | | |
|---------------------|---------|----------------------|
| 29. Nucleus | [] | A) Shape of the cell |
| 30. Mitochondria | [] | B) Genetic materail |
| 31. Ribosome | [] | C) Photosynthesis |
| 32. Chloroplast | [] | D) Protein synthesis |
| 33. Plasma membrane | [] | E) Respiration |