

FATHER AGNEL SCHOOL, VAISHALI

QUESTION BANK

CLASS-IX

THE FUNDAMENTAL UNIT OF LIFE

Q1) Very short answer type questions (1 mark each):

- a) Plasma membrane is made up of which two components?
- b) What is hypotonic solution?
- c) What is hypertonic solution?
- d) What is isotonic solution?
- e) Cell wall is made up of which component?
- f) What is the intracellular source of digestive enzyme?
- g) What is endocytosis?
- h) Define:
 - 1) Diffusion
 - 2) Plasmolysis
 - 3) Chromatin
 - 4) Chromosomes
- i) Where are genes located?
- j) What are chromosomes made up of?
- k) Which organelles other than nucleus contain DNA?
- l) Which cell organelle controls most of the activities of the cell?

Q2) Short answer type questions (2 marks each):

- a) Draw a diagram of mitochondria and label its parts.
- b) What is cell theory? Who formulated it?
- c) Define osmosis. What are the different types of osmosis?
- d) What would happen if the plasma membrane ruptures or breaks down?
- e) What is Endoplasmic reticulum? Name its types.
- f) What is the full form of DNA and RNA?
- g) What are the functions of nucleus?
- h) Why do the animal cells not have cell wall?
- i) What is cell sap? Give its composition.
- j) What is the significance of pores present on the nuclear membrane?
- k) Why are lysosomes known as the suicidal bags of the cell?
- l) What will happen if:
 - 1) Ribosomes are removed from the cell
 - 2) Golgi apparatus is removed from the cell

Q3) Long answer type questions (3 marks each):

- a) Differentiate between:
 - 1) Diffusion and osmosis
 - 2) Rough endoplasmic reticulum and smooth endoplasmic reticulum
- b) Write a note on Golgi apparatus and the function it performs.
- c) What is membrane biogenesis? How is plasma membrane formed during this process?
- d) What are the functions of Endoplasmic reticulum?
- e) Why plasma membrane is called semi-permeable membrane? Write one function of it.
- f) What is gene and where is it found? Give its function.
- g) Why is mitochondria called the power-house of the cell? Describe its structure and function.

TISSUES

Q1) Very short answer type questions (1 mark each):

- a) What is a tissue?
- b) Name the types of simple tissue.
- c) Where is apical meristem found?
- d) What are the constituents of phloem?
- e) Name the tissue responsible for movement in our body.
- f) Give three features of the cardiac muscles.
- g) What are the functions of areolar tissue?
- h) What is lignin?
- i) What is cutin?
- j) In desert, plants how does the rate of loss of water get reduced?
- k) What is responsible for increase in girth of the stem or root?
- l) Which structure protects the plant body against the invasion of parasites?

Q2) Match the column (A) with the column (B):

Column A	Column B
a) Fluid connective tissue	i) Subcutaneous layer
b) Filling of space inside the organs	ii) Cartilage
c) Striated muscle	iii) Skeletal muscle
d) Adipose tissue	iv) Blood
e) Surface of joints	v) Areolar tissue
f) Stratified squamous epithelium	vi) Skin

Column A	Column B
a) Parenchyma	i) Thin walled, packing cells
b) Photosynthesis	ii) Carbon fixation
c) Aerenchyma	iii) Localized thickenings
d) Collenchyma	iv) Buoyancy
e) Permanent tissue	v) Sclerenchyma

Q3) Short answer type questions (2 marks each):

- a) Write a short note on 'phellogen'.
- b) Describe the function of bones.
- c) Give two functions of collenchymas.
- d) Distinguish between xylem and phloem.
- e) What are different types of tissues in plants?
- f) What is the role of epidermis in plants?
- g) How does cork act as a protective tissue?

Q4) Long answer type questions (3 marks each):

- a) What are involuntary muscles? Where are they found?
- b) What are meristematic tissues? Explain with the help of suitable diagram. Give their classification on the basis of their position in the plant body.

- c) Define simple tissue. Classify and explain its different types with suitable diagrams.
- d) Define complex tissue. Classify and explain its different types with suitable diagrams.
- e) Write the main functions of blood.
- f) Write the functions of the following:
 - 1) Cartilage
 - 2) Tendon
 - 3) Ligament
- g) Differentiate between the following:
 - 1) Blood and lymph
 - 2) Cartilage and bone

Q5) Very long answer type questions (5 marks each):

- a) Write 4 characteristic features of each:
 - 1) Striated muscle
 - 2) Cardiac muscle
 - 3) Nervous tissue
- b) Why are plants and animals made of different types of tissues?
- c) Describe the types of connective tissues along with their functions.
- d) Differentiate between sclerenchyma and parenchyma tissues. Draw well labeled diagram.
- e) Describe the structure and function of different types of epithelial tissues. Draw the diagram for each type of epithelial tissue.