5. The Fundamental Unit of Life

J. Include	amental onit of file
Q 1 Name two major functional regions of a cell.	Mark (1)
Q 2 Every multi-cellular organism has come from a single cell	l. How? Mark (1)
Q 3 Who discovered the nucleus in the cell?	Mark (1)
Q 4 Who discovered the cell?	Mark (1)
Q 5 What substances form cell membrane and cell wall?	Mark (1)
Q 6 Name two-cell organelles, which have DNA apart from m	ucleus. Mark (1)
Q 7 Name the cell organelles that are found only in plant cell.	Mark (1)
Q 8 Name the cell organelle that is found only in animal cell.	Mark (1)
Q 9 Name the cell organelle in which cristae are present?	Mark (1)
Q 10 On what factors do shape and size of cell depend?	Mark (1)
Q 11 Who coined the term protoplasm?	Mark (1)
Q 12 What are chromosomes? Where are they present in the c	ell? Marks (2)
Q 13 Why is the plasma membrane called a selectively perme	eable membrane? Marks (2)
Q 14 Why is the cell called the structural and functional unit of	of life? Marks (2)
O 15 What are multicellular organisms? Give examples.	

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Marks (2)

Q 16 What are unicellular organisms? Give examples.	Marks (2)
Q 17 Who presented the cell theory for the first time? What w	as it? Marks (2)
Q 18 Who discovered free-living cells and how?	Marks (2)
Q 19 Name the non - living parts of a cell.	Marks (2)
Q 20 Which cell organelle is known as the kitchen of the cell?	Why? Marks (2)

Q 21 Fill in the vacant columns:	
Cell organelles	Functions
Mitochondria	
	Protein synthesis
Golgi apparatus	
	Suicidal bags of the cell

Marks (2)

Q 22 What will happen if the organisation of a cell is damaged due to certain physical or chemical reasons? Marks (2)

Q 23 Write the technical term for the following:

i. An organism whose body consists of many cells.

ii. Sum total of chemical processes taking place in a cell.

Marks (2)

Q 24 Fill in the missing words in the given table:

Plastids	Salient Feature	Function
Chloroplasts		
	Coloured	Helps pollination
Leucoplasts	Colourless	

Marks (2)

Q 25 How do substances like CO_2 and water move in and out of the cell? Marks (3)

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Q 26 Explain the terms. a) Endocytosis b) Plasmolysis

Marks (3)

Q 27 Write any four differences between the plasma membrane and cell wall. Marks (3)

Q 28 Define- a) Diffusion b) Osmosis

Marks (3)

Q 29 When and how the cells were discovered?

Marks (3)

Q 30 Name the living parts of a cell.

Marks (3)

Q 31 Why are Mitochondria known as power house of the cell? Marks (3)

Q 32 What are the types of plastids? Write their names and fuctions. Marks (3)

Q 33 a) Why is the shape and size of the cells different?

b) Who coined the term protoplasm?

c) Name the cell organelle which controls the various activities of the cell.

Marks (3)



Q 34

a) Name the given cell organelle.

b) State any of its two important functions.

Marks (3)



Q 35 a) Name the labelled part (A).

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Berniedddd	
b) What is its chemical composition.c) Why is it known as the selectively permeable?	Marka (2)
0.36 Differentiate between prokaryotic and eukary	Marks (5)
Q 50 Differentiate between prokaryote and cukary	Marks (5)
Q 37 Differentiate between diffusion and osmosis.	Marks (5)
Q 38 How does an Amoeba obtain its food?	Marks (5)
Q 39 Draw five different types of cells from Huma	n body Marks (5)
Q 40 How will you relate nucleus with DNA?	Marks (5)
Q 41 Write one fuctions of each of the following c a) Plasma membrane b) Mitochondria c) Lysosomes d) Endoplasmic reticulum	ell organelles.
e) vacuoles	Marks (5)
Q 42 a) Draw a diagram of a prokaryotic cell and l i) cell wall ii) nucleoid iii) ribosomes.	abel the given parts:
b) Complete the given table illustrating the differen	nces between the prokaryotic and eukaryotic cells.
	Marks (5)

Q 43 a) What is the name given to the thread shaped structures in the nucleus? Why is it important? b) Draw a diagram of the nucleus to show the given parts:

i) nucleolus

ii) nuclear pore

iii) nuclear envelope

Marks (5)

Prokaryotic cell	Eukaryotic cell
Size of the cell small	Size of the cell large
Presence of single chromosome	
	Membrane bounded organelles present

Q 44 a) Name a cell organelle other than nucleus having DNA.

b) Give the full form of DNA and RNA.

c) Give two functions of mitochondria.

Marks (5)

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Most Important Questions

Q 1 What are the tenets of cell theory?

Q 2 Why is the cell called the unit of structure and function in a living organism?

- Q 3 Is an elephant cell longer than the cell of a rat? Why?
- Q 4 Explain why do the smaller cells have better efficiency?
- Q 5 How do the new cells arise from the pre existing cells?
- Q 6 What is the meaning of division of labour? Is it different from cell to cell?
- Q 7 What do you mean by a selectively permeable membrane?
- Q 8 Write the composition & function of the cell wall.
- Q 9 Define the process of Diffusion.
- Q 10 What is the process of Osmosis?
- Q 11 Differentiate the terms:
 - (i) Hypotonic
 - (ii) Isotonic
 - (iii) Hypertonic
- Q 12 What is that process by which amoeba acquires its food?
- Q 13 Draw the figure of an onion peel showing cells
- Q 14 Classify the living organism on the basis of number of cells they have.
- Q 15 Draw the figure of various types of cells present in a human body.
- Q 16 Give the composition and structure of a unit membrane.

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Q 17 In the given figure of an animal cell as observed under an electron microscope.



- (i) Name the parts labeled 1 to 10.
- (ii) Which parts are concerned with the following functions.
 - (a) Release of energy
 - (b) Protein synthesis
 - (c) Transmission of hereditary characters from parents to there offsprings.
- (iii) Mention any two structures, found only in plant cell not in animal cell.
- Q 18 How does the new cell arise from pre existing cells?
- Q 19 What is the meaning of division of labour? Is it different from cell to cell?
- Q 20 What are unicellular organisms? Give examples.
- Q 21 What are multicellular organisms? Give examples.
- Q 22 Every multi cellular organism has come from a single cell. How?
- Q 23 How do substances like CO2 and water move in and out of the cell?
- Q 24 Why is the plasma membrane called a selectively permeable membrane?

Q 25 On what factors do shape and size of a cell depend?

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Q 26 If the nucleus is removed from the cell what will happen to the cell?

Q 27 Write the main functions of a vacuole.

Q 28 Write differences between a plant cell and an animal cell.

Q 29 What are the differences between cell wall and cell membrane?

Q 30 How is cytoplasm different from nucleoplasm?

Q 31 Is there any difference between prokaryotic and eukaryotic cell? Justify.

Q 32 Differentiate between chromoplast and leucoplasts.

Q 33 Explain that mitochondrion is the "Power house" of the cell.

Q 34 How will you relate nucleus with DNA?

Q 35 What are chromosomes? Where are they present in the cell?

Q 36 Explain the structure of Mitochondria.

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