

1. Short answer questions:

- i. What is the name of the thread like structures found in the nucleus of a cell?

- ii. What are chromosomes and genes made of?

- iii. How many chromosomes do humans have in each body cell?

- iv. What is a specie?

- v. What name is given to the differences in characteristics between organisms of the same species?

- vi. What does the word inherited mean?

- vii. What is difference between parent and daughter cell?

Parent cell	Daughter cell

- viii. What is the role of chromosomes in cell division?

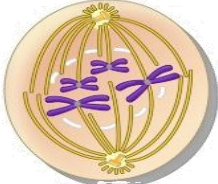
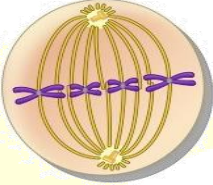
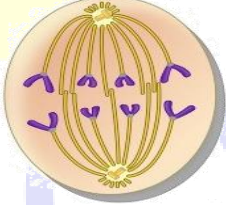
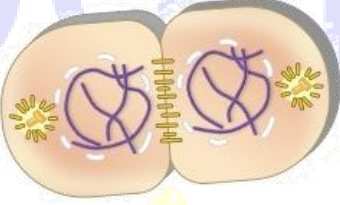
2. Long answer questions:

i. What is the importance of meiosis?

ii. What are the similarities and differences between mitosis and meiosis?

Mitosis	Similarities	Meiosis

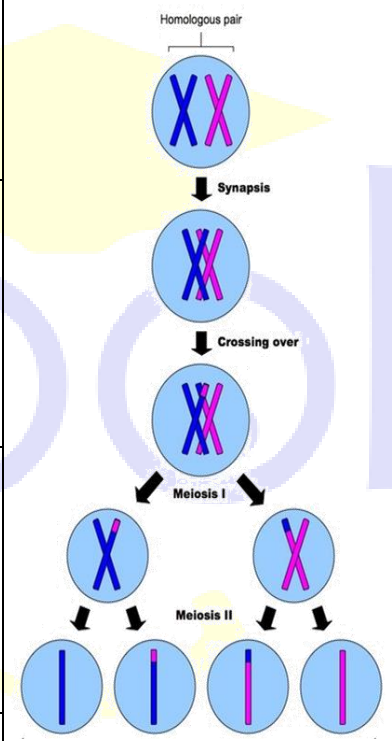
iii. Explain the process of mitosis.

Prophase		
Metaphase		
Anaphase		
Telophase		

iv. Explain the process of meiosis.

Meiosis is a two-step process:

Meiosis I

Prophase I		
Metaphase I		
Anaphase I		
Telophase I		

Meiosis II

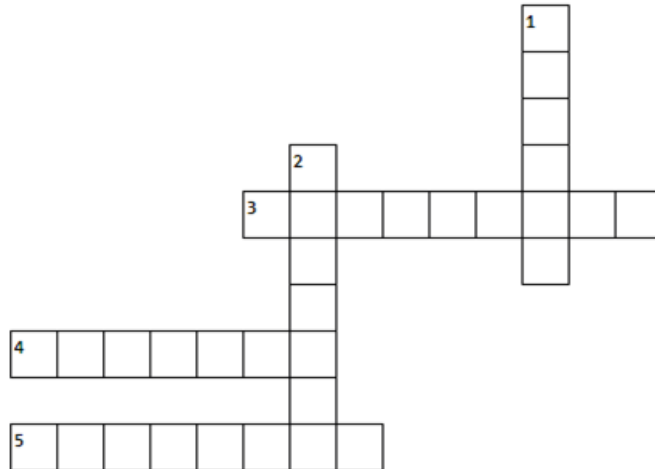
3. Tick the right option.

1. Which of the following is the control center of cell?			
I. Cell membrane	II. Nucleus	III. Vacuole	IV. Cytoplasm
2. In this phase chromosomes condense and the nuclear envelope breaks down;			
I. Metaphase	II. Anaphase	III. Prophase	IV. Telophase
3. Before cell division chromosomes are in the form of threads called:			
I. Chromatin	II. Tetrad	III. Bivalent	IV. Chiasmata
4. In this phase the cell neither divides nor prepares itself for the division.			
I. G1 phase	II. G2 phase	III. S phase	IV. G0 Phase
5. The cell which divides is called;			
I. Parent cell	II. Mother cell	III. Daughter cell	IV. Eukaryotic cell

4. Fill ups

- i. A _____ is the smallest unit of life.
- ii. _____ is the longest phase of cell cycle.
- iii. _____ are structures in the nucleus of cells that contain DNA.
- iv. Mitosis occurs in the _____ cells.
- v. Meiosis occurs in the _____ cells.

4. Crosswords



Across	Down
5. Chromosomes align in center	1. Pair of homologous chromosomes
6. Same number of chromosomes	2. Half number of chromosomes
7. Chromosome separate	

5. Words Search

Find the following word in the words search.

Cell	Variation	Spindle	Genes	Cytoplasm
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S	C	A	T	S	A	L	T	Y
K	Y	A	G	E	N	E	S	N
B	T	E	A	T	H	I	N	G
G	O	O	U	R	C	E	L	L
P	P	N	K	H	E	A	E	I
O	L	I	U	E	E	R	A	R
V	A	R	I	A	T	I	O	N
E	S	P	I	N	D	L	E	S
C	M	B	T	U	I	M	B	T

6. Jumbled Words

- i. CTIONDUPRORE _____
- ii. SOMEMOCHRO _____
- iii. GOTEZY _____
- iv. ETEGAM _____
- v. NESISKICYTO _____
- vi. TATIONADAP _____
- vii. NESISKIKARYO _____
- viii. TICALIDEN _____
- ix. GOUSLOHOMO _____
- x. RENTPA _____

7. Columns

Match the statements

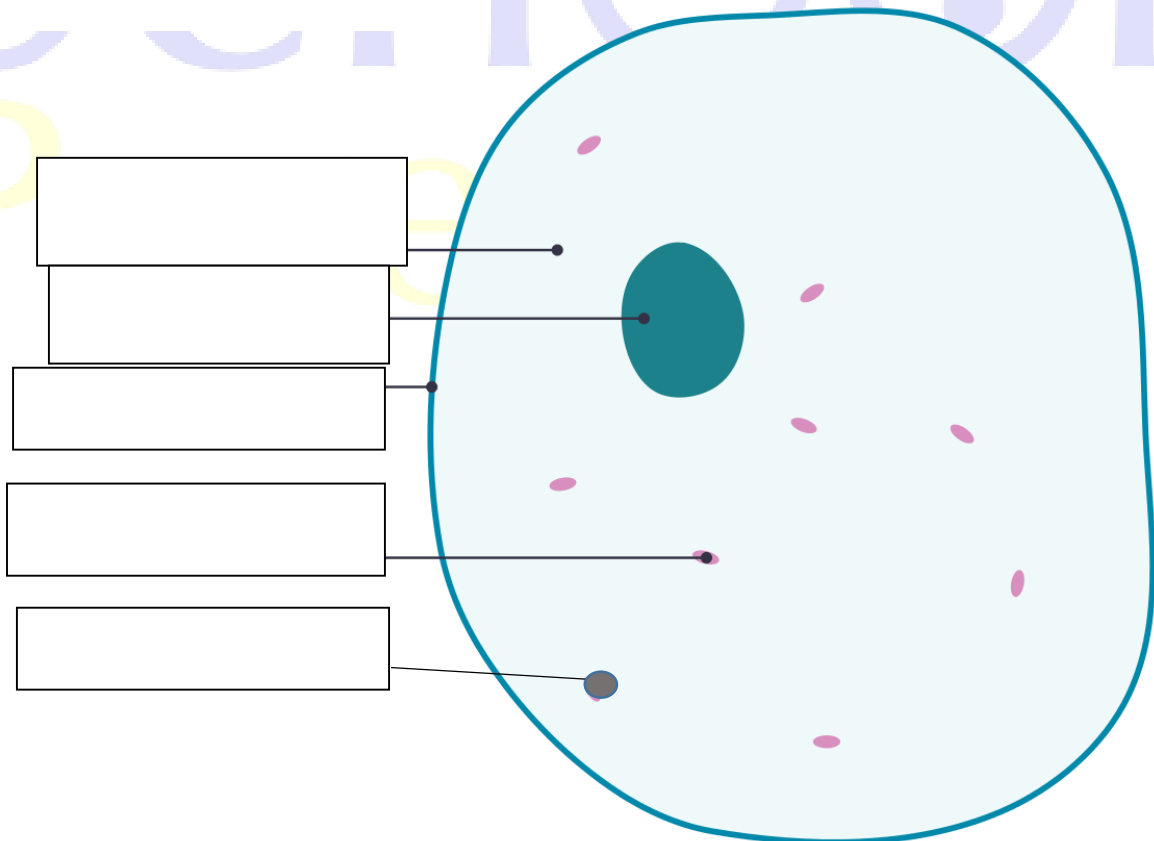
- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Cytoplasm • S phase • G2 phase • Cytokinesis • Karyokinesis • | <ul style="list-style-type: none"> • Protein Synthesis • Jelly like substance • Division of nucleus • DNA replication • Division of cytoplasm |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

8. Write “T” for the true and “F” for the false statement.

- i. The cell membrane is a thin layer that surrounds an animal cell.
- ii. The nucleus is the control center of the cell.
- iii. The cells which are produced as a result of cell division are called daughter cells.
- iv. Humans have 23 pairs of chromosomes.
- v. Formation of spindle fibers take place during metaphase.

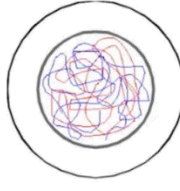

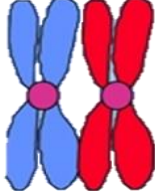


9. Label the diagram.

Structure of an animal cell



10. Drag and Drop

Look at the pictures and write their names in the relevant column.

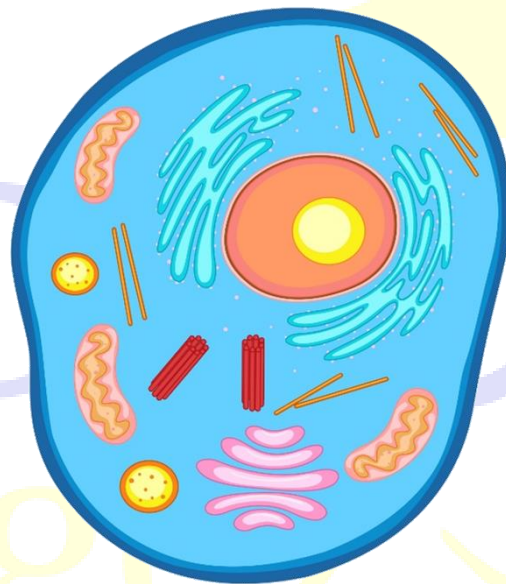
				
Chromatin	Chromosome	Tetrad	Homologous chromosomes	Crossing over

Structure/Stage	Appearance

11. Comprehension

Answer the following questions after reading the paragraph and observe the picture carefully.

Cell division is a vital process in the life of a cell, ensuring growth and reproduction. There are two main types: mitosis and meiosis. Mitosis is like a cell's everyday job, creating two identical "worker" cells. It happens in our body cells, helping us grow and replace damaged tissues. On the other hand, meiosis is like a special task for making babies. It occurs in cells that become eggs or sperm, and the result is four unique cells with half the usual stuff. So, whether it's for everyday tasks or making new life, cell division plays a crucial role in keeping living things going.



I. What is the importance of cell division?

II. How many types of cell division are?

