



BIOLOGY

BOOKS - ICSE

THE CELL

Exercises Tick The Most Appropriate Answer

1. The term cell was coined by

A. Matthias Jakob Schleiden.

B. Robert Hooke.

C. Theodor Schwann.

D. Rudolf Carl Virchow.

Answer:



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2. The cell wall is made up of

A. proteins.

B. fats.

C. cellulose.

D. vitamins.

Answer:



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3. Which of the following holds hereditary characters in an organism?

A. nucleus

B. chloroplast

C. mitochondrion

D. ribosome

Answer:



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4. Which of the following helps in cell division?

A. centrosome

B. ribosome

C. plasma membrane

D. lysosome

Answer:



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5. In a cell, proteins are formed with the help of

A. nucleus.

B. Golgi bodies.

C. mitochondria.

D. ribosome

Answer:



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6. Supply the specific scientific terms for the following:

stalked particles on the inner membrane of a mitochondrion.

A. matrix.

B. cisternae

C. cristae.

D. vesicles.

Answer:



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7. Name the organelle which is often called as the power house of the cell.

A. chloroplast

B. mitochondrion

C. centrosome

D. cell wall

Answer:



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8. Which of the following organelles is called the 'suicide bag' of the cell?

A. nucleus

B. tonoplast

C. ribosome

D. lysosome

Answer:



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9. The green pigment is present in

A. chromoplasts.

B. amyloplasts.

C. chloroplasts.

D. leucoplasts.

Answer:



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10. The membrane surrounding the vacuole is called

A. plasma membrane

B. nuclear membrane.

C. tonoplast.

D. cell wall.

Answer:



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Exercises Match The Columns

1. Match the following columns

- | | |
|--------------------------|---|
| 1. leucoplast | a. transport of material |
| 2. endoplasmic reticulum | b. making food |
| 3. Golgi bodies | c. storage of starch and proteins |
| 4. chloroplast | d. makes the cell turgid |
| 5. vacuole | e. synthesis of cell wall in a plant cell |



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Exercises True Or False

1. The size of a cell is usually measured in centimetres.



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2. The nuclear membrane encloses a colourless, dense fluid called nucleoplasm.



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3. Golgi bodies form a network of tubes which run throughout the cytoplasm.



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4. Chromoplasts are the kitchen of the cell.



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5. Vacuoles are filled with a fluid called nucleoplasm.



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Exercises Answer The Following In Short

1. What are the structural and functional units of life?



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2. Why is the cell membrane called a selectively permeable membrane?



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3. What is chromatin network?



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4. Why are mitochondria known as "the powerhouse of the cell"?





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5. What are ribosomes?



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6. Why is papaya yellow, spinach green and the edible part of a watermelon red?



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Exercises Answer The Following In Detail

1. Why was the invention of a microscope important for the study of living beings?



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2. Define unicellular and multicellular organisms. Give example.



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3. Differentiate between cell wall and cell membrane.



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4. List the functions of mitochondria.



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5. Nucleus is the most important part of a cell.

Explain this statement.



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6. Which structure of a plant cell is non-living and what are its functions?



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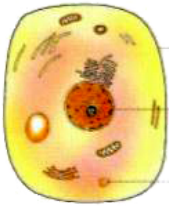
7. Differentiate between Plant cells and animal cells



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Exercises

1. Identify and label the diagrams given below.



a. _____



b. _____



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Think And Answer

1. Why are cells called the building blocks of life?



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2. Lysosomes are called



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3. is the powerhouse of the cell.



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Check Your Progress True Or False

1. A _____ is a device used to see very small objects such as cells.



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Check Your Progress Fill In The Blanks

1. A cell is the basic _____ and _____ unit of life.



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2. Robert Hooke observed _____ cells under a microscope.



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3. Cells show diversity in _____, _____ and _____



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4. One _____ is one-thousandth of a millimetre.



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5. Cell wall is absent in



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6. Mitochondria are the carriers of heredity.



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7. The nucleus is separated from surrounding cytoplasm by a nuclear membrane, which is?



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8. Every species is characterized by a fixed number of chromosomes.



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9. Centrosome is



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10. Lysosomes are also called the powerhouses of a cell.



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Test Yourself

1. The cell was discovered by

A. Robert Brown

B. C. Linnaeus

C. Robert Hooke

D. C .Darwin

Answer:



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2. Each cell has a

A. Nucleus

B. Cell wall

C. Chloroplast

D. All the above

Answer:



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3. The animal cell is surrounded by a membrane called

A. Cell wall

B. Cell membrane

C. Cytoplasm

D. Nuclear membrane

Answer:



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4. Organelles are present in

A. Cytoplasm

B. Vacuoles

C. Nucleus

D. All the above

Answer:



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5. Which of the following organelles is called the 'suicide bag' of the cell?

A. Nucleus

B. Lysosome

C. Chloroplast

D. Ribosome

Answer:



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6. How you can define the term 'cell'?

A. Cell

B.

C.

D.

Answer:



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7. Define the following:

Nucleus



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8. Define the following:

Cytoplasm



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9. Define the following:

Protoplasm



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10. Define the following:

Cell membrane



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11. Define the following:

Microscopic organisms.



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12. Give three examples of unicellular organisms



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13. Mention the functions of the following:

Cell membrane



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14. Mention the functions of the following:

Chromosomes



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15. Mention the functions of the following:

Vacuoles



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16. Mention the functions of the following:

Cytoplasm



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17. Why are the following important to a plant cell?

Cell wall



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18. What is the most important function of chloroplast?



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19. Why are the following important to a plant cell?

Mitochondria



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20. Why are the following important to a plant cell?

Nucleus.



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21. Which of the following are found exclusively in plant cells, exclusively in animal cells, and in both?

nucleus, centrosomes, Golgi bodies, leucoplasts, cell coat



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22. Draw an outline diagram of an animal cell. Label its different parts.



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23. Mention at least four differences between plant cells and animal cells.



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24. What features are possessed by both plant cells and animal cells?



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25. Name two structures that are found only in plant cells and are absent in animal cells.



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26. State the functions of the following cell organelles

1. Golgi bodies
2. Endoplasmic reticulum
3. Nucleus



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27. Give the structure of Mitochondria found in cell along with proper diagram.



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28. Unscramble the following words:

SUNECUL_____



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29. Unscramble the following words:

RAMBENME _____



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30. Unscramble the following words:

PALCOTMYS _____



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31. Unscramble the following words:

SAMPLOTROP_____



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Test Yourself Fill In The Blanks

1. Fill in the blanks using the words given below:

Chloroplast, Cytoplasm, Nucleus, Microscope,
Cell membrane, Plant, Mitochondria, Robert

Hooke

The _____ is the control centre of the cell.



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2. Fill in the blanks using the words given below:

Chloroplast, Cytoplasm, Nucleus, Microscope, Cell membrane, Plant, Mitochondria, Robert Hooke,

The instrument used to see tiny objects is called a _____



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3. Fill in the blanks using the words given below:

Nucleus, Chloroplast, Cytoplasm, Microscope, Cell membrane, Plant, Mitochondria, Robert Hooke,

_____ is called the kitchen of a cell



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4. Fill in the blanks using the words given below:

Nucleus, Chloroplast, Cytoplasm, Microscope, Cell membrane, Plant, Mitochondria, Robert Hooke,

The _____, _____ and _____ are parts of a cell.



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5. Fill in the blanks using the words given below:

Chloroplast, Cytoplasm, Nucleus, Microscope, Cell membrane, Plant, Mitochondria, Robert Hooke,

Energy is produced in _____



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6. Fill in the blanks using the words given below:

Chloroplast, Cytoplasm, Nucleus, Microscope,
Cell membrane, Plant, Mitochondria, Robert
Hooke,

The term cell was given by _____



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7. Fill in the blanks using the words given
below:

Chloroplast, Cytoplasm, Nucleus, Microscope,
Cell membrane, Plant, Mitochondria, Robert

Hooke,

Cell wall is present in _____ cells.



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Test Yourself True Or False

1. Cells must have a nucleus to live. []



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2. Only the nucleus of a cell represents the protoplasm. []



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3. Most cells are microscopic. []



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4. All living organisms are made of cells. []



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5. Cells must have a nucleus to live. []



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6. Every cell has cytoplasm. []



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7. All cells in a multicellular organism can live independently.



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8. What is the outermost layer of an animal cell?



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Test Yourself Match The Statements

1. Match the statements in Column A with those in Column B :

| Column A | Column B |
|----------------|--|
| 1. Cell | (a) Plants |
| 2. Nucleus | (b) Tiny structures inside cells |
| 3. Cell wall | (c) Unit of living body |
| 4. Chloroplast | (d) Boss of the cell |
| 5. Cytoplasm | (e) Contains green pigment |
| 6. Organelles | (f) Jelly-like substance between cell membrane and nucleus |

11. Answer the following questions :



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Theme Assignment

1. Find the odd one out, giving reason :

Nucleus, cytoplasm, cell organelles, cell division



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2. Find the odd one out, giving reason :

Nuclear membrane, nucleolus,
mitochondria, chromatin



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3. Find the odd one out, giving reason :

Chloroplast, chlorophyll, centrosome, granum



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4. is the powerhouse of the cell.

A. Lysosome

B. Chloroplast

C. Mitochondrion

D. Golgi body

Answer:



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5. Fill in the blanks using the words given below:

Chloroplast, Cytoplasm, Nucleus, Microscope, Cell membrane, Plant, Mitochondria, Robert Hooke

The _____ is the control centre of the cell.

A. nucleus

B. mitochondrion

C. cytoplasm

D. lysosome

Answer:



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6. Centrosome helps in

- A. producing energy
- B. cell division
- C. photosynthesis
- D. protein synthesis

Answer:



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7. Which cell organelle controls most of the activities of a cell?



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8. Differentiate between cell wall and cell membrane.



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9. Who discovered a cell?



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10. Crossword Puzzle

Across

5 Single -celled organisms (11)

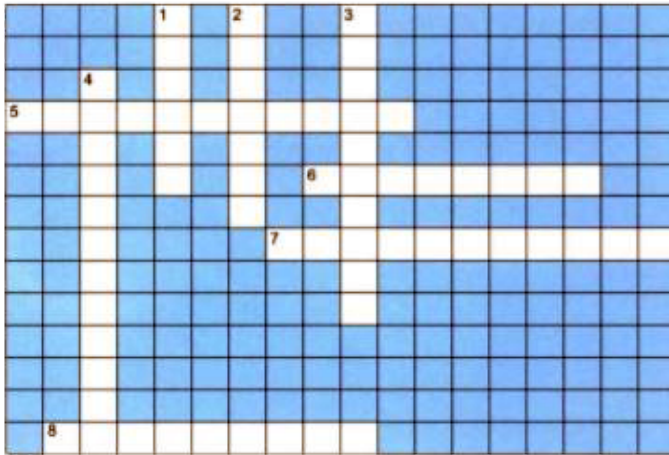
6. Structure outside the cells membrane in plants cells (4,4)

7. Kitchen of the cell (11)

8. Smallest known cell (10)

Down

1. Example of a single - celled organism (6)
2. Control centre of the cell (7)
3. Tiny structures present inside cytoplasm (10)
4. Powerhouse of the cell (12)



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11. Name the vascular tissues found in plants



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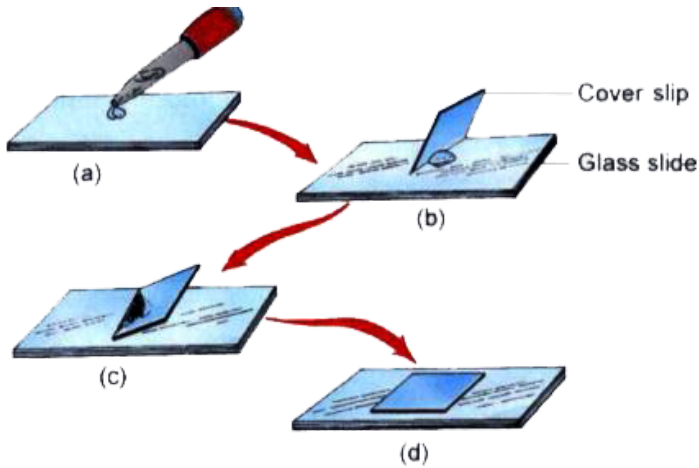
12. Name simple permanent tissues of plant



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13. Gently put the object to be observed in the drop of water on the slide with help of a brush (objects . If transparent are first stained with

a proper chemical and then observed . This is



done to obtain suitable contrast to facilitate ease viewing .)



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14. Hold the cover slip over the object in such a manner that it touches the edge of the drop

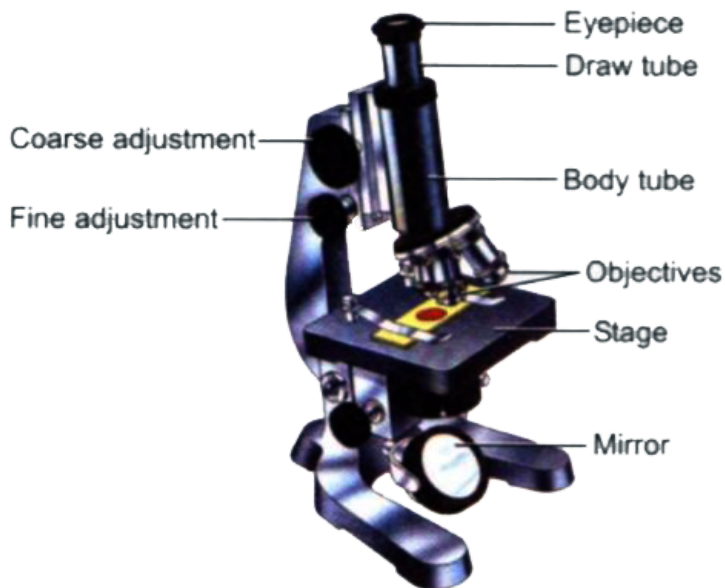
of water .Gently lower the cover slip onto
water



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15. Dry the extra water that may come out from under the cover slip with the help of a blotting paper take care that the slide thus

prepared is clear and dry .



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