BIOLOGY

BOOKS - ICSE

CELL: THE UNIT OF LIFE

Progress Check

1. Name the following

The kind of microscope that consists of a single biconvex lens.

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2. Name the following

The kind of mirror used for throwing light on the object in Hooke's microscope.

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3. What is the maximum magnification that can usually be achieved by

a compound microscope

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4. What is the maximum magnification that can usually be achieved by an electron microscope

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5. Name the following

Any two one-celled organisms.

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6. Name the following

the longest cells in animals

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7. Name the following

Amoeboid cells in humans

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8. Name the following

Shape of white blood cells.

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9. List three categories of substances which are ensured greater diffusion due to large surface/volume ratio of the cells.

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10. Name the part of a cell in which many chemical reactions occur with the help of enzymes.

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11. Name the part of a cell in which a network of chromatin fibres occurs.

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12. Name the part of a cell in which a network of chromatin fibres occurs.

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13. Differentiate between an organ and an organelle

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14. Differentiate between a plant cell and an animal cell pertaining to the presence of plastids.

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15. Cell organelles associated with secretion are

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16. Name the cell organelles concerned

Trapping of solar energy

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17. Name the cell organelles concerned

Synthesis of proteins

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18. Name the cell organelles concerned

Intracellular digestion

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19. Name the cell organelles concerned

Production of ATP

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20. Name the cell organelle/component which is composed of cellulose

Watch Video Solution

21. Name the cell organelle/component which is formed of an irregular network of tubular double membranes

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22. Name the cell organelle/component which is

a clear space with water or other substances in solution

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23. Name the cell organelle/component which is

visible only in cell division stages

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24. Mention if the statement are true or false.

If false, suggest the change in the information underlined.

Prokaryotic cells have larger ribosomes.

25. Mention if the statement are true or false.

If false, suggest the change in the information

underlined.

Eukaryotic cells have mitochondria.

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26. Mention if the statement are true or false. If false, suggest the change in the information underlined.

Amoeba is an example of Prokaryotes.

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27. Mention if the statement are true or false. If false, suggest the change in the information underlined.

Bacteria have no nuclear membrane but possess chloroplasts.

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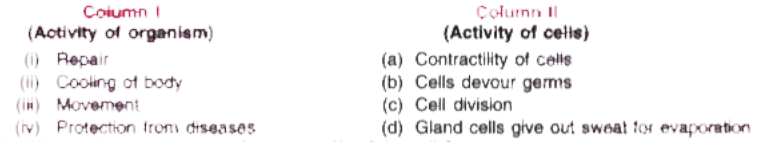
28. Column I lists a few activities of living organisms and column II the activity of cells related to them. Match the items in the two

columns.



Column I (Activity of organism)	Column II (Activity of cells)
(i) Repair	(a) Contractility of cells
(ii) Cooling of body	(b) Cells devour germs
(iii) Movement	(c) Cell division
(iv) Protection from diseases	(d) Gland cells give out sweat for evaporation

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29. Which cell organelle is the key to the life of the cell ?

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30. How do you say that a cell also has a life span and death like an organism ? Give one example.

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31. All organisms excrete. Does an invidiual cell also do it? give one example

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32. Every organism needs food. Does a cell also need it? Explain very briefly.

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Review Questions A Multiple Choice Type

1. Which one of the following cell organelles is correctly matched with its function ?

A. Ribosomes – Synthesis of proteins

B. Mitochondria – Secretion of enzymes

C. Plasma membrane – Freely permeable

D. Centrosome — Carries genes

Answer:

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2. All life starts as

A. an egg

B. a gene

C. a single cell

D. a chromosome

Answer:

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3. Which one of the following is found both in the cells of a mango plant and a monkey ?

A. chloroplasts

B. centrioles

C. cell wall

D. cell membrane

Answer:

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4. A plant cell can be identified from an animal cell by the :

A. absence of centrosome.

B. presence of cell membrane.

C. presence of vacuoles

D. none of the above

Answer:

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5. Plant cell has a cell wall made of:

A. Protein

B. Fructose

C. Cellulose

D. Fatty acids

Answer:

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6. The cell organelle that helps in respiration of the cell is :

A. Mitochondria

B. Lysosome

C. Ribosome

D. Centrosome

Answer:

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Review Questions B Very Short Answer Type

1. Name the part of the cell concerned with the following :

Liberation of energy

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2. Name the part of the cell concerned with the following :

Synthesis of proteins

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3. Name the part of the cell concerned with the following :

Transmission of hereditary characters from parents to offspring

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4. Name the part of the cell concerned with the following :

Initiation of cell division

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5. Name the part of the cell concerned with the following :

Hydrolytic in function

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6. Name the part of the cell concerned with the following :

Entry of only certain substances into and out of the cell.

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7. State whether the statement are true (T) or false (F):

All animal cells contain a cell wall. T/F

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8. State whether the statement are true (T) or false (F):

The cell wall is made of protein. T/F

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9. State whether the statement are true (T) or false (F):

Centrosome occurs in animal cells. T/F

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10. State whether the statement are true (T) or false (F):

Plant cells contain large vacuoles.

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11. State whether the statement are true (T) or false (F):

Protoplasm is the part of the cell which surrounds the nucleus. T/F

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12. State whether the statement are true (T) or false (F):

Genes are located in chromosomes. T/F

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13. State whether the statement are true (T) or false (F):

Anthocyanins are the pigments of flowers, which are dissolved in cell-sap. T/F

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14. How many chromosome pairs are found in human cells ?

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15. What is the name of the chemical substance which constitutes the genes ?

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16. Match the items in column 'A' with those in column 'B'

Column A	Column B
(a) Vacuoles	(i) Intracellular digestion
(b) Nucleolus	(ii) Respiratory enzymes
(c) Lysosomes	(iii) Covered by tonoplast
(d) Anthocyanin	(iv) Dissolved in the cytoplasm
(e) Cristae	(v) Forms RNA

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17. Fill in the blank :

..... consists of membranous sacs and secretes 40 types of digestive enzymes.

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18. Fill in the blank :

..... is surrounded by microtubules, located near the nucleus

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19. Fill in the blank :

Very thin flexible, living membrane which is differentially permeable, is called .....

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20. Fill in the blank :

More than 1000 chromosomes are found in the nucleus of certain .....

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21. Fill in the blank :

..... are hereditary units.

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22. Fill in the blank :

..... is a plastid which stores starch.

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Review Questions C Short Answer Type

1. It is said that the protoplasm cannot be analysed chemically. Why ?

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2. Differentiate between

an organ and an organelle

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3. Do you think the cells of an elephant would be larger than the cells of a rat ? Explain briefly.

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4. Differentiate between the pairs of terms :

Protoplasm and cytoplasm

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5. Differentiate between the pairs of terms :

Nucleolus and nucleus

 Watch Video Solution

6. Differentiate between the pairs of terms :

Centrosome and chromosome

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7. Differentiate between the following :

Cell membrane and Cell wall.

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8. Differentiate between the following :

Animal cell and Plant cell.

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9. Differentiate between the pairs of terms :

Prokaryotes and eukaryotes.

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10. Mention three features found only in plant cells and one found only in animal cells.

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11. Why are the cells generally of a small size ?

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Review Questions D Long Answer Type

1. What is the cell theory ? Who propounded it and when ?

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2. Mention any three differences between a living cell and a brick in a wall.

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3. Name the plastid and pigment likely to be found in the cells of :

petals of sunflower

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4. Name the plastid and pigment likely to be found in the cells of :

ripe tomato

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5. Name the plastid and pigment likely to be found in the cells of :

skin of green mango

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6. Name the plastid and pigment likely to be found in the cells of :

cells of potato.

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7. State the major functions of

Plasma membrane

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8. State the main functions of the ribosome

Watch Video Solution

9. State the main functions of the lysosome

Watch Video Solution

10. State the major functions of Mitochondria

 Watch Video Solution

11. Mention important function of Golgi apparatus.

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12. State the major functions of

Cytoplasm

Watch Video Solution

13. State the major functions of

Asters of centrosome

Watch Video Solution

14. State the major functions of

Chromosomes

 Watch Video Solution

15. State the major functions of

Glycogen granule

 Watch Video Solution

16. State the major functions of Vacuoles

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17. Differentiate between Plant cells and animal cells

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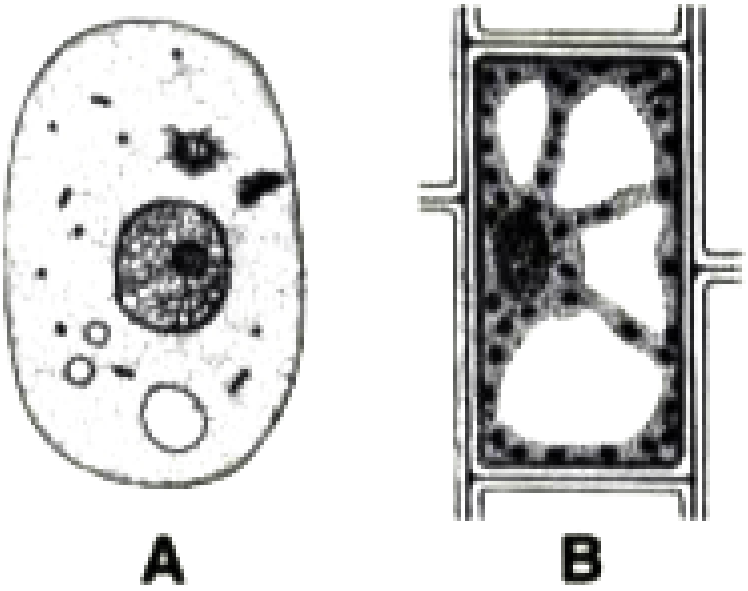
Review Questions E Structured Application Skill Type

1. Given below are the sketches of two types of cells A and B



Which one of these is a plant cell? Give reason in support of your answer.

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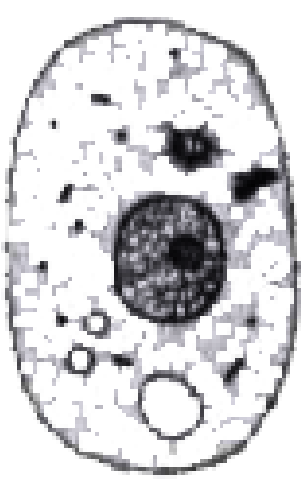
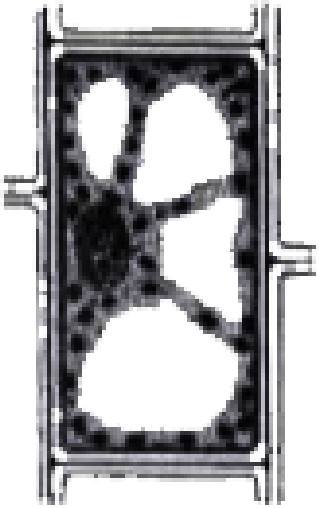
2. Given below are the sketches of two types of cells A and B



A



B

List the cell structures which are common to both the types.

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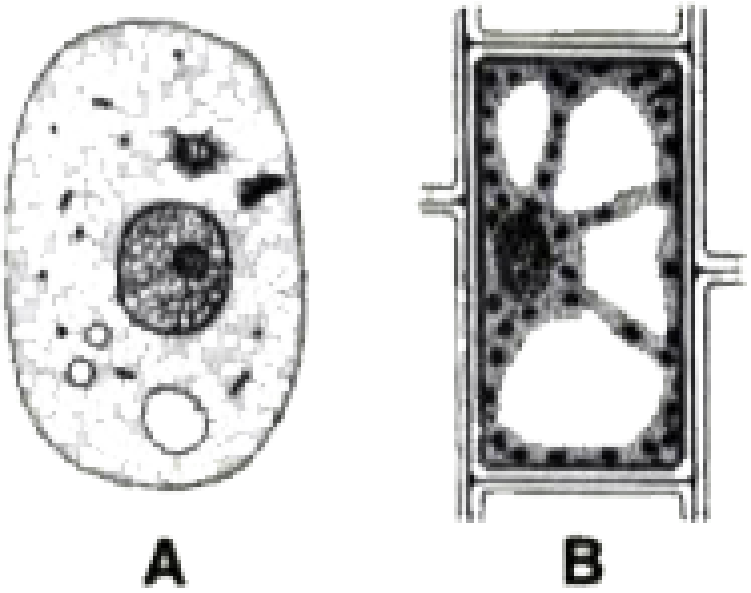
3. Given below are the sketches of two types of cells A and B



Name the structures found only in plant cells and those found only in animal cells.

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