Cell: Chapter Introduction

You began as a single cell. Every living thing is built of cells: how they were discovered, what is inside, how they divide, and the cell theory.

Name: _____ Date: _____ Score: ____ / 18

A. Fill in the blanks

1. The basic structural and functional unit of life is the ____.

2. The word "cell" was first used by ____ in 1665.

3. The outer boundary of an animal cell is the cell ____.

4. The part of the cell that controls its activities is the ____.

5. An amoeba is made of ____ cell.

B. True or False

6. Every living thing is made of cells. True / False

7. Hooke saw living cells in cork. True / False

8. New cells can form from non-living matter. True / False

9. One cell divides to give two cells. True / False

C. Assertion and reason

10. Assertion (A): You began life as a single cell.
Reason (R): A human starts as one cell that divides again and again.

(a) Both A and R are true, and R explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, R is false
(d) A is false, R is true

Answer: _____

11. Assertion (A): Cells are called the building blocks of life.
Reason (R): All living things are built from cells.

(a) Both A and R are true, and R explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, R is false
(d) A is false, R is true

Answer: _____

D. Choose the correct option

12. Hooke observed cells in a thin slice of:

(a) onion
(b) cork
(c) leaf
(d) cheek

Answer: _____

13. Which is unicellular?

(a) amoeba (b) fish

(c) tree (d) frog

Answer: _____

14. Mitochondria are an example of:

(a) a cell wall (b) an organelle

(c) a tissue (d) an organ

Answer: _____

15. After three rounds of division, one cell becomes:

(a) 3 cells (b) 6 cells

(c) 8 cells (d) 9 cells

Answer: _____

E. Short answer questions

16. State the three points of cell theory.

17. Name three parts of an animal cell and the job of each.

F. Match the columns

18. Match each item in Column A with the correct item in Column B.

Column A	Column B	Your answer
1. Robert Hooke	(a) Outer boundary	1 → ____
2. Nucleus	(b) Named the cell	2 → ____
3. Cell membrane	(c) Controls the cell	3 → ____
4. Mitochondria	(d) Release energy	4 → ____

Detailed solutions

1. cell

2. Robert Hooke

3. membrane

4. nucleus

5. one

6. True. Cell theory: all organisms consist of one or more cells.

7. False. Cork cells are dead; Hooke saw their empty walls.

8. False. New cells arise only from pre-existing cells.

9. True. Cell division doubles the number: 1 → 2 → 4.

10. (a) R explains A.

11. (a) R explains A.

12. (b) cork. He looked at cork under his microscope.

13. (a) amoeba. Its whole body is one cell.

14. (b) an organelle. They are organelles inside the cell.

15. (c) 8 cells. 1 → 2 → 4 → 8.

16. All living things are made of cells; the cell is the basic unit of life; new cells arise from pre-existing cells.

17. Cell membrane: boundary that controls what enters and leaves. Nucleus: controls the cell and holds genetic material. Mitochondria: release energy.

18. 1 → (b), 2 → (c), 3 → (a), 4 → (d). Each term matches its role.