CBSE

TISSUES WS 1

Class 09 - Science

Section A

1. Cell theory was given by **[1]**

   a) Haeckel
   b) Virchow
   c) Hooke
   d) Schleiden and Schwann

2. The technical term for the “Group of similar cells performing a specific function” is**:** **[1]**

   a) Tissue
   b) Cell
   c) Organ system
   d) Organ

3. Living cells were discovered by **[1]**

   a) A.V. Leeuwenhoek
   b) Robert Brown
   c) Robert Hooke
   d) R. Virchow

4. The basic building units of an onion bulb, are called _____. **[1]**

   a) scales
   b) cells
   c) roots
   d) tissues

5. Cell arises from the pre-existing cell was stated by **[1]**

   a) Virchow
   b) Purkinje
   c) Robert Hook
   d) Robert Brown

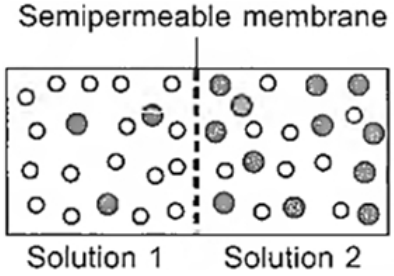
6. The number of lenses in a compound microscope is: **[1]**

   a) 1
   b) 4
   c) 3
   d) 2

7. The statement 'cells arise only from pre-existing cells' was given by: **[1]**

   a) Louis Pasteur
   b) Schwann
   c) Schleiden
   d) Rudolf Virchow

8. Study the given figure carefully. In which direction the net movement of water will take place? **[1]**



[Key : O Water molecule; ® Solute molecule]

   a) From solution 1 to solution 2
   b) Both From solution 1 to solution 2 and

From solution 2 to solution 1

c) From solution 2 to solution 1 d) No movement will take place

9. Match the following with the correct response**:** **[1]**

(a) Robert Brown	(i) Cell
(b) Purkinje	(ii) Nucleus
(c) Robert Hooke	(iii) Cell theory
(d) Schleiden	(iv) Protoplasm

a) (a) - (iii), (b) - (ii), (c) - (iv), (d) - (i) b) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)

c) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii) d) (a) - (i), (b) - (iii), (c) - (ii), (d) - (iv)

10. Match the following with the correct response given below**:** **[1]**

(1) Largest cell	(A) Mycoplasma
(2) Smallest cell	(B) Bacteria
(3) Single cell	(C) Amoeba
(4) Prokaryotic cell	(D) Ostrich egg

a) 1-A, 2-C, 3-B, 4-D b) 1-C, 2-B, 3-D, 4-A

c) 1-B, 2-D, 3-A, 4-C d) 1-D, 2-A, 3-C, 4-B

11. Which of the following is incorrect for Cell theory? **[1]**

a. All organisms are made up of cells.

b. All living organisms are made up of eukaryotic cells only.

c. Cells arise from pre-existing cells.

d. The outermost covering of all living cells is the cell wall.

a) (a), (b) and (c) are incorrect b) (a) and (b) are incorrect

c) All of these d) (b) and (d) are incorrect

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a) B and C b) A and D

c) All of these d) B and D

13. What is microscope? **[1]**

14. Why is virus an exception of cell theory? **[1]**

Section B

15. **Fill in the blanks:** **[2]**

(a) Organism consisting of more than one cell, wherein the differentiated cells perform specialized functions in the organism is called a _____ organism. **[1]**

(b) The unicellular organism is an organism having only _____ cell. **[1]**

16. What is the functional unit of life ? Define it. **[2]**
17. How can you calculate the magnification of a microscope? **[2]**
18. How is a bacterial cell different from an onion peel cell? **[2]**
19. Why is light microscope called a compound microscope? **[2]**
20. Who discovered cells, and how? **[2]**
21. Why is cell called the structural and functional unit of life? **[2]**
22. Why is the cell called the structural and functional unit of life. **[2]**
23. Who discovered cell, and how? **[2]**

Section C

24. **State True or False:** **[4]**

(a) There is a division of labor in multicellular organisms. **[1]**

(b) In 1665, Robert Hooke first discovered and named the cells. **[1]**

(c) The cells of the human body have different shapes and sizes. **[1]**

(d) There are some organisms that are single-celled but can live their own. **[1]**

25. **Read the passage and answer any four questions:** **[4]**

Leeuwenhoek discovered the free-living cells in pond water for the first time. Robert Brown discovered the nucleus in the cell. A single cell may constitute a whole organism as in Amoeba. These organisms are called unicellular organisms. On the other hand, many cells group together in a single body and assume different functions in it to form various body parts in multicellular organisms. The shape and size of cells are related to the specific function they perform. Each living cell has the capacity to perform certain basic functions that are characteristic of all living forms. Each kind of cell organelle performs a special function, such as making new material in the cell, clearing up the waste material from the cell and so on.

i. Cells were first discovered by:

a. Robert Hooke
b. Leeuwenhoek
c. Schleiden
d. Virchow

ii. Which of the following is a unicellular organism?

a. Fungi
b. Plants
c. Chlamydomonas
d. Animal

iii. Who suggested that all cells arise from pre-existing cells?

a. Robert Hooke
b. Leeuwenhoek
c. Schleiden
d. Virchow

iv. Which of the following is an incorrect statement?

I. Each living cell has the capacity to perform certain basic functions
II. There is a division of labour in multicellular organisms
III. Each kind of cell organelle performs a special function

IV. All activities inside the cell do not interact with the environment.

a. (I) and (II)

b. (II) and (III)

c. (III) and (IV)

d. Only (IV)

v. Identify the given cell.

a. Blood cell

b. Nerve cell

c. Ovum

d. Fat cell

Section D

Question No. 26 to 30 are based on the given text. Read the text carefully and answer the questions: **[5]**

Most of the eukaryotic cells possess sausage shaped colourless organelles that are essential for living of aerobic organisms. Each organelle is covered by a double membrane envelope. The inner membrane is folded inwards to increase the internal surface. Partially embedded in the membranes of these infoldings are tennis racket shaped structures.

26. What is the name of the organelle?

a) Mitochondrion

b) Chromoplast

c) Golgi apparatus

d) Dictyosomes

27. The infoldings of the inner membrane are called

a) Cisternae

b) Karyosomes

c) Sterna

d) Cristae

28. What are the functions of the organelle?

a) Translation of coded information

b) Formation of lactic acid from pyruvate

c) Breakdown of glucose to pyruvate

d) Carrying out Krebs' cycle of respiration

29. Why is it called powerhouse of the cell?

a) It bears oxysomes or elementary particles

b) It generates electric potential that runs the cellular machinery

c) It is the major seat of ATP synthesis

d) It is the seat of synthesis of amino acids and fats

30. Which of the following is false regarding eukaryotic cells?

a) The nucleus exists in the cells.

b) They are generally multicellular organisms.

c) A single chromosome is present.

d) They undergo sexual as well as a sexual reproduction.