

Chapter End Test

Date : _____	Science	BATCH
Duration: 1 Hr. Max. Marks : 26	Topic : Fundamental Unit of Life	IX

Disclaimer: The paper has been designed for students of class 9th who have just completed the first chapter of Biology, Fundamental Unit of life. The paper aims to check whether the students have been able to understand and memorise the concepts. It also aims to check the student's writing ability in a prescribed time limit.

General instruction:

1. This paper consist of two Sections. Students has to attempt both sections.
2. Section – A is objective carry 1 mark each.
3. Section – B is subjective.

[Section – A]

1. Diffusion refers to movement of _____ from higher concentration to lower concentration whereas Osmosis refers to movement of _____ from higher concentration to lower concentration.

(a) Substance, water	(b) Solvent, solute
(c) Solute, solvent	(d) Water, substance
2. A cell is placed in solution swells up. The solution is

(a) Hypertonic	(b) Isotonic
(c) Hypotonic	(d) Both A and B
3. Living cells were first observed by

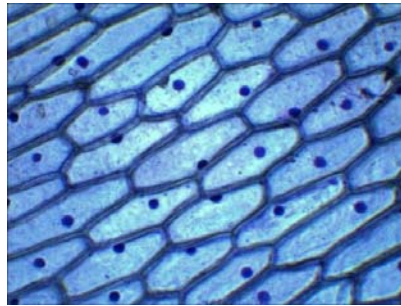
(a) Robert Hooke	(b) Van Leeuwenhoek
(c) Rudolf Virchow	(d) Schleiden and Schwann
4. Nucleolus is a seat of

(a) DNA synthesis	(b) Protein synthesis
(c) Ribosomes synthesis	(d) Enzyme synthesis
5. Which of the following is incorrectly matched?

(a) Smallest cell- <i>Mycoplasma</i>	(b) Eucleated cell- RBC
(c) Rudolf Virchow-discovered Nucleus	(d) Purkinjee- Protoplasm
6. What is the characteristic of nuclear envelope?
 - (a) It is single membranous and continuous
 - (b) It is single membranous and porous
 - (c) It is double membranous and continuous
 - (d) It is double membranous and porous
7. Where are proteins synthesised in the cell?

I. Nucleolus	II. Ribosomes
III. Mitochondria	IV. Endoplasmic Reticulum
(a) I and II	(b) All of these
(c) Only II	(d) I, II and IV

8. Which stain is used to stain the plant cells?
 (a) Iodine solution (b) Safranin
 (c) Methylene blue (d) All of these
9. The organelle present in both prokaryotic and eukaryotic cells
 (a) Nucleus (b) Mitochondria
 (c) Lysosome (d) Ribosome
10. Which of the following organelles is known as the "power house of the cell"?
 (a) Golgi (b) Mitochondria
 (c) Plastids (d) Nucleus
11. What can be observed in the given picture/diagram?



- (a) Human cheek cells, Cell wall, cell membrane, nucleus, cytoplasm and vacuole
 (b) Onion peel cells, Cell wall, cell membrane, cytoplasm, vacuole and nucleus
 (c) Human cheek cells with cell membrane, nucleus and vacuole only
 (d) Onion peel cells with cell membrane, cytoplasm and nucleus only
12. Which of the following group of organelles are called semi-autonomous organelles?
 (a) Lysosome and chloroplast
 (b) Plastids and endoplasmic reticulum
 (c) Mitochondria and plastids
 (d) Endoplasmic reticulum and golgi apparatus
13. Which of the following is an exception of cell theory?
 (a) *Mycoplasma* (b) *Spirogyra*
 (c) *Amoeba* (d) HIV
14. SER does not perform _____ in vertebrates.
 (a) lipid synthesis (b) steroid hormones synthesis
 (c) protein synthesis (d) detoxification of drugs
15. Lysosomes arise from
 (a) Endoplasmic reticulum (b) Nucleus
 (c) Vacuoles (d) Golgi apparatus

[Section – B]

16. Why are lysosomes called suicidal bags of the cell? [1]
 17. How are bacterial cells different from onion peel cells? [2]
 18. What are the two types of cell division? How are they different from each other? [3]
 19. (a) Carry out the following experiment: Take two peeled potato halves and scoops each one out to make potato cups. One of these potato cups should be made from a boiled potato. Put each potato cup in a trough containing water. Now, put one teaspoon sugar in raw potato cup A and put one teaspoon sugar in the boiled potato cup (B) Observe the two potato cups after 2 hours and Explain

- (i) In which cup will water be gathered and why?
- (ii) What is the process called?
- (iii) How is it different from diffusion?
- (b) Draw a cell and label the organelles which
 - (i) forms a large network of membrane bound tubes
 - (ii) wall covering made up of lipid and proteins
 - (iii) waste disposal system of the cell
 - (iv) contains heredity material of the cell

[3+2]



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Hints/Solutions to Chapter End Test

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[Section – A]

- | | | | | |
|---------|---------|---------|---------|---------|
| 1. (c) | 2. (c) | 3. (d) | 4. (b) | 5. (c) |
| 6. (a) | 7. (d) | 8. (c) | 9. (a) | 10. (d) |
| 11. (a) | 12. (c) | 13. (b) | 14. (d) | 15. (a) |

[Section – B]

Subjective

16. Lysosomes are called suicidal bags of the cell as they destroy themselves and help in removal of worn out cell organelles, foreign particles and worn out cell.

17. Bacterial Cell

1. Prokaryotic cell
2. Nucleus not well defined
3. Nuclear membrane absent
4. Organelles absent.

Onion peel

1. Eukaryotic cell
2. Nucleus well defined
3. Nuclear Membrane present
4. Organelles present

18. Two type of cell divisions are Mitosis and Meiosis.

Mitosis

1. The new cells formed have the same no of chromosome as the parent cell.
2. Take place in all the cells of the body.

Meiosis

1. The new cells formed have half the no of chromosome of the parent cell.
2. Helps in formation of gametes.

- 19. (a)**
- (i) Water will gather in the raw A cup as water will move from higher concentration i.e. from the trough to lower concentration i.e. the potato cup.
 - (ii) Process is known as Osmosis i.e. Endosmosis.
 - (iii) It is different from diffusion as a semipermeable membrane is required in it while not in diffusion.

