

SRM IST - DEPARTMENT OF BIOTECHNOLOGY
21BTB102T – INTRODUCTION TO COMPUTATIONAL BIOLOGY
FT1 (2024-2025 ODD)

Reg No:

Section:

Name:

Date:

Note: Part-A - should be answered within first 10 minutes and sheet should be handed over to hall invigilator at the end of 10th minute.

Time: 10 Minutes

Max Marks: 10

PART – A ($10 \times 1 = 10$ Marks)

Answer ALL Questions

1. What are small spheres that contain enzymes able to break down proteins, lipids, nucleic acids, and some carbohydrates?

- | | |
|---------------------------------|--------------|
| a. Smooth endoplasmic reticulum | c. Ribosomes |
| b. Nucleus | d. Lysosomes |

ANS: _____

2. The _____ controls what enters and leaves the cell

- | | |
|--------------------|------------------|
| a. Cell wall | c. Nucleus |
| b. Golgi apparatus | d. Cell membrane |

3. Which process occurs in the chloroplasts of plant cells?

- | | |
|-------------------|--------------|
| a. Photosynthesis | c. Digestion |
| b. Respiration | d. Excretion |

ANS: _____

4. Which organelle has its own Genetic material?

- | | |
|-----------------|---------------------|
| a. Mitochondria | c. Ribosomes |
| b. Chloroplast | d. Both (a) and (b) |

ANS: _____

5. Which of the following is a component present in Cell wall?

- a. Nucleic acids
- b. Phospholipids
- c. Amino acids
- d. Cellulose

ANS: _____

6. The term “homeostasis” is described by which one of the following statements? The body’s ability to:

- a. Respond to a stimulus or stress in such a way as to enhance the stress
- b. Maintain a relatively constant internal temperature
- c. Respond to a stimulus or stress in such a way as to reduce the stress
- d. Maintain a relatively constant internal environment

ANS: _____

7. As blood glucose concentration decreases, what homeostatic response would the body produce?

- a. Insulin would be released to cause blood glucose to fall.
- b. Glucagon would be released to cause blood glucose to fall.
- c. Insulin would be released to cause blood glucose to rise.
- d. Insulin and glucagon would be released to cause blood glucose to rise.

ANS: _____

8. Which of the following statements about positive feedback and homeostasis is correct?

- a. They are regulation mechanisms that control most fluctuations in the internal environment of the body.
- b. The response to the stimulus serves to exaggerate the feedback effect.
- c. This type of feedback response only involves an effector not a specific stimulus receptor site.
- d. This feedback mechanism involves adjustments at the organ level but not at the cellular level.

ANS: _____

9. Which of the following would be a negative feedback response by the body to hypothermia?

- A. Shivering
- B. Vasoconstriction of blood vessels in the dermis
- C. Sweating
- D. An increase in metabolic rate

ANS: _____

10. Which of the following would be an example for Positive feedback mechanism?

- a. Shivering
- b. An increase in the production of Glucagon
- c. Contraction of the Uterus
- d. Sweating

ANS: _____

