**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 × 1 = 10 Marks)**

**Answer ALL Questions**

1. Which of the following cell organelles does not contain DNA?

A. Nucleus C. Lysosomes

B. Chloroplast D. Mitochondria

ANS: _____

2. Which of the following is not part of the cell theory?

A. All living things are made of cells.
B. Cells come from existing cells.
C. Cells are the basic units of structure and function in all living things.
D. All cells contain the same organelles.

ANS: _____

3. What is the small dark structure in the nucleus that produces ribosomes?

A. Rough ER C. Smooth ER

B. Nucleolus D. Chromatin

ANS: _____

4. What are the two proteins that Microtubules and Microfilaments are comprised of?

A. Actin and Tubulin C. Actin and Myosin

B. Only Actin D. Tubulin and Actin

ANS: _____

5. Chitin is the compound present in the cell wall of which kingdom?

A. Monera C. Fungi

B. Plantae D. Protista

ANS: _____

6. Homeostasis usually returns the body to a healthy state after stressful stimuli by:

A. Negative feedback C. Positive feedback

B. Means of the immune system D. Means of the nervous system

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 would be a negative feedback response by the body to hypothermia?

A.Shivering C. Sweating

B.Vasoconstriction of blood vessels in the dermis D. An increase in metabolic rate

ANS: _____

9. Match the following:

a. Receptor - Produces response ☐

b. Stimulus - Disruptions caused in control condition ☐

c. Control center - Generates input ☐

d. Effector - Receives input ☐

10. Some of the body's homeostatic responses rely on "Positive feedback". Which of the following happens in positive feedback?

A. The body ignores changes in a physiological variable that are directed towards the set point for that variable.
B. The body ignores changes in a physiological variable that are directed away from the set point for that variable.
C. The body's response acts to oppose the change in the physiological variable.
D. The body's response acts to enhance the change in the physiological variable

ANS: _____