

## O. P. JINDAL SCHOOL, SAVITRI NAGAR

### Periodic Test - III Round-2 (2025 – 2026)

Class: XI

Subject: Biology(044)

MM: 20

Time: 01 Hr.

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#### General Instructions:

- Question paper contains 03 Sections (Section – A, Section – B, Section – C)
  - Section A – Multiple Choice Questions (MCQ's) carries 01 mark each.
  - Section B – Very Short Answer Type Questions carries 02 marks each.
  - Section C – Short Answer Type Questions carries 03 marks each.
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#### Section – A

Q1. 12. Which of these structures has alternate dark and light bands on it?

- (a) Fascicles                      ( b) Sarcolemma  
(c) Myofibrils                    ( d) Fascia

Q2. Which of these ions are abundant in the sarcoplasmic reticulum?

- (a) Magnesium                    ( b) Sodium  
(c) Potassium                    (d) Calcium

Q3. What does the A band of a myofibril contain?

- (a) Troponin                      ( b) Actin  
(c) Myosin                        ( d) Tropomyosin

Q4. Which of the following is not a part of a neuron?

- (a) Cell body                      ( b) Lignin  
(c) Dendrites                    ( d) Axon

Q5. What does each branch of axon terminate into?

- (a) Synaptic knob                    ( b) Vesicles  
(c) Tubules                        (d) Another cell

Q6. What are the short repeatedly branched fibres called?

- (a) Axon                            ( b) Cell body  
(c) Neurite                        (d) Dendrite

#### Section – B

Q7. With respect to rib cage, explain the following:

- (i) True ribs  
(ii) Floating ribs

Q8. In old age, people often suffer from stiff and inflamed joints. What is this condition called? What are the possible reasons for these symptoms?

OR

Sarcolemma, sarcoplasm and sarcoplasmic reticulum refer to a particular type of cell in our body. Which is this cell and to what parts of that cell do these names refer to?

Q9. Explain the role of sodium in the generation of the action potential.

Q10. What is the difference between electrical transmission and chemical transmission?

### **Section – C**

Q11. Explain sliding filament theory of muscle contraction with neat diagram.

Q12. During resting potential, the axonal membrane is polarised. Explain the movement of positive and negative ions leading to polarisation.

OR

Explain the process of the transport and release of a neurotransmitter with the help of a labelled diagram showing a complete neuron, axon terminal and synapse.

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