

O.P. JINDAL SCHOOL, SAVITRI NAGAR
PERIODIC TEST –III (Round-2) (2025-26)

CLASS-IX
SUBJECT-SCIENCE

MAX.MARKS-20
MAX.TIME-1 Hour

General Instruction:-

- (i) All questions are compulsory. There are 12 questions in this question paper with some internal choice in section B and C.
- (ii) **SECTION –A:** Question numbers 1 to 6 are MCQs, carrying 1 mark each.
- (iii) **SECTION –B:** Question numbers 7 to 10 are short answer questions carrying 2 marks each.
- (iv) **SECTION –C:** Question numbers 11 and 12 are long questions carrying 3 marks each.

SECTION A

- Q1.** A battery lights a bulb. The sequence of energy transfer in the process is
 (a) electrical energy to heat and light
 (b) chemical energy to electrical energy and then to heat and light
 (c) chemical energy to heat and light
 (d) chemical energy to light
- Q2.** The atom of given element which does not contain neutron
 (a) Oxygen (b) Helium
 (c) Hydrogen (d) Sodium
- Q3.** The tissue responsible for covering the body surfaces and lining body cavities is:
 (a) Epithelial tissue (b) Nervous tissue
 (c) Muscular tissue (d) Connective tissue
- Q4.** Which one of the following is not the unit of energy?
 (a) joule (b) newton metre
 (c) kilowatt (d) kilowatt hour
- Q5.** Atomic number (Z) is equal to -
 (a) Number of protons in the nucleus of an atom.
 (b) Number of electrons in a neutral atom
 (c) Both (a) and (b)
 (d) None of the above
- Q6.** Cartilage is an example of which type of tissue?
 (a) Epithelial tissue (b) Nervous tissue
 (c) Connective tissue (d) Muscular tissue

SECTION B

Q7. Attempt either (A) or (B):

(A):

- (i) When is the work done by a force on a body said to be negative? Give an example.

(ii) When is the work done by a force on a body said to be zero? Give an examples.

OR

(B):

The power of a heart which beats 72 times in a minute is 1.2kW. Calculate the work done by heart for each beat.

Q8. Attempt either (A) or (B):

(A):

- (i) What will be the valency of an atom if it contains 5 protons and 6 neutrons?
- (ii) One electron is present in the outermost shell of the atom of an element X. What would be the nature and value of charge on the ion formed if this electron is removed from the outermost shell?

OR

(B):

Valency of an element X is 3. Write the chemical formula of its chloride.

Write the electronic configuration of a positively charged sodium ion (Na^+).

Atomic number of sodium is 11.

Q9. Explain Isotopes and Isobars with examples of each.

OR

Composition of the nuclei of two atomic species X and Y are given as under

X	PROTONS	6	6
Y	NEUTRONS	6	8

Give the mass number of X and Y. What is the relation between the two species?

Q10. Why are voluntary muscles also called skeletal muscles?

OR

What is adipose tissue ? State one function.

SECTION C

Q11. Attempt either (A) or (B):

(A):

Derive the expression for the kinetic energy of a moving object, showing that it is equal to $\frac{1}{2}mv^2$, where m is the mass of the object and v is its velocity.

OR

(B):

(i) Define power.

(ii) State the commercial unit and SI unit of electrical energy.

(iii) An electric heater of 400 W works for 2 hours. Find the electrical energy units consumed in a day.

Q12. Explain the three types of muscular tissues with one function each.

OR

Describe the structure of a neuron with labelled parts.
