

FIRST UNIT TEST – AUGUST 2023
SUBJECT – SCIENCE-I

STD:IX
DATE :

MARKS:40
TIME : 2 hrs

Q.1[A] Choose the correct option.

[5]

- 1) Newton's _____ law of motion is called the law of inertia.
(A) First (B) Second (C) Third (D) None of the Above.
- 2) Force = _____
(A) MV (B) m/a (C) weight × acceleration (D) mass × acceleration.
- 3) _____ is a composite radical
(A) NH_4^+ (B) Cl^- (C) Br^- (D) S^{2-}
- 4) Copper hydroxide is a _____
(A) Diacidic base (B) Monobasic acid (C) Dibasic base (D) Triacidic base
- 5) Momentum = _____
(A) $\frac{1}{2} mv^2$ (B) mgh (C) mass × velocity (D) mass × speed

Q.1 [B] Answer the following question

[5]

- i) Write the correlation of :
Valency of C: _____ : : Valency of N: 3.
- ii) State whether True/False
The number 6.022×10^{22} is called Avogadro's number.
- iii) Fill in the blank
When an object is in uniform circular motion, its _____ changes at every point.
- iv) Give one example in which motion is visible.
- v) Write down the molecular formula of sulphuric acid.

Q.2 [A] Give scientific reason (any-2)

[4]

- 1) The valency of oxygen is 2.
- 2) The velocity of an object at rest is considered to be uniform.
- 3) When an object falls freely to the ground, its acceleration is uniform.

Q.2 [B] Answer the following question (any-3)

[6]

- 1) What is meant by atomic radius?
- 2) Name the two elements having independent existence.
- 3) What is velocity? State its SI and CGS units.
- 4) State the newton's second law of motion.
- 5) A body covers 20m in the first 5sec and 40m in the next 5sec. find its average speed.

Q.3 Answer the following question (any-5)

[15]

- 1) Write down the symbols of given elements: - Nitrogen, Mercury, Sodium, Magnesium, Silver, Potassium.
- 2) Differentiate between uniform motion and non-uniform motion.
- 3) A body moves in a straight line with a uniform acceleration. If the initial velocity of the body is 5m/s and the velocity after 10sec is 15m/s, find the acceleration of the body and the distance covered by the body in this time interval.
- 4) Calculate the number of molecules in 51 grams of ammonia (NH₃).
- 5) How many molecules of water are there in 36 gram of water?
- 6) A person travels a distance of 72km in 4hours. Calculate the average speed in m/s.

Q.4. Answer the following question (any-1)

[5]

- 1) Derive the derivation of given below.
 - a) $v = u + at$
 - b) $s = ut + \frac{1}{2} at^2$
 - c) $v^2 = u^2 + 2as$

OR

- 1) Deduce the molecular masses of the given compound
 - a) NaCl
 - b) MgCl
 - c) HNO₃
 - d) NaOH
 - e) K₂CO₃

***** BEST OF LUCK*****