** SINDHI HIGH SCHOOL, HEBBAL**

**ENTRANCE EXAM [2024-25]**

**SUBJECT – SCIENCE**

**Class : IX - X Max. Marks: 25**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Reg no : \_\_\_\_\_\_\_\_\_\_\_**

**Choose the correct option from the following:-**

1. One joule work is said to be done when:

1. a force of 1 N displaces a body by 1 m
2. a force of 1 N displaces a body by 1 cm
3. a force of 1 dyne displaces a body by 1 cm
4. a force of 1 dyne displaces a body by 1 m **(1)**

2. To meet the demands of the growing population, white revolution has led to better and more

efficient use as well as availability of -

a) Pulses b) Fish c) Milk d) Food grains **(1)**

3. Select the incorrect statement **(1)**

a) Food production should be increased without degrading our environment.

b) Increasing grain production for storage in warehouses alone can solve the problem of malnutrition and hunger.

c) Adopting hybridisation techniques to improve crop varieties and increase crop yield.

d) Increase in income of people working in agriculture helps combat the problem of hunger.

**In the following questions a statement of assertion (A) is followed by a statement of**

**Reason(R). Choose the correct option.**

**a) Both A and R are true, and R is the correct explanation of A.**

**b) Both A and R are true, and R is not the correct explanation of A.**

**c) A is true but R is false.**

**d) A is false but R is true.**

4. **Assertion:** A light body and heavy body have same momentum. Then they have same

kinetic energy.

**Reason:** Kinetic energy depends on mass of the body . **(1)**

5. **Assertion:** On burning magnesium in oxygen, the mass of magnesium oxide formed is

equal to the total mass of magnesium and oxygen.

**Reason:** In a chemical substance, the elements are always present in a definite proportion.

**(1)**

6. **Assertion:** Different crops require different climatic conditions, temperature and

photoperiods for their growth and completion of their life cycles.

**Reason:** Rabi crops and Kharif crops are different. **(1)**

7. a) Explain the difference between 2N and N2

b) Write the name of the compound (NH4)2SO4 and mention the ions present in it. **(2)**

8. Classify the given nutrients based on their source of availability for the crops to grow

better and give good yield.

**P, Cu, H, B, Fe, Cl, O, N, K, S, C (2)**

9. **Differentiate between manure and fertilisers based on**

**a) Duration of benefits b) Pollution (2)**

10. i) A household consumes 1 kWh of energy per day. How much energy is this in joules?

ii) If an electric iron of 1200 W is used for half an hour every day, find the electric energy

consumed in the month of April. **(3)**

**11. a) What do you mean by atomicity? What is the atomicity of ozone?**

**b) Calculate the Percentage composition of Calcium present in Calcium hydroxide.**

**[Ca=40u; H=1u; O=16u] (3)**

12. With the help of a mind map explain in detail the factors required for crop variety

improvement. **(3)**

13.Atoms of most elements are not able to exist independently. Atoms of same elements or

different elements combine to form molecules and ions. (atoms exist as molecules or ions)

Atoms of the same element or of different elements can join together to form molecules.

The molecules of an element are constituted by the same type of atoms. Atoms of different

elements join together in definite proportions to form molecules of compounds.

i) Find the ratio between masses of carbon and oxygen in CO2? **(1)**

ii) An element X has valency 3 while the element Y has valency 2. Write the formula of

the compound between X and Y. **(1)**

iii) Hydrogen and oxygen combine in the ratio of 1:8 by mass to form water. What mass

of oxygen gas would be required to react completely with 3 gram of hydrogen gas? **(1)**

iv) Derive the molecular formula of Zinc Nitrate using steps. **(1)**

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