

SUMMETIVE ASSESSMENT – II (SAMPLE PAPER) SCIENCE CLASS – IX - 1

1. What is the atomicity of the following: (a) K_2CO_3 (b) HCO_3^{-1}

2. A table showing the number of protons, neutrons and electrons in some atoms is given below:

State the following by referring to the table :

(a) Which one is an inert gas atom ?(b) Which atom will form an anion ?

Atom	Proton	Neutron	Electron
A	10	10	8
B	17	18	18
C	10	10	10

4. A sound wave of frequency 2,000 Hz passes through water. Calculate the time of one complete oscillation of a particle of water.

5. Name any two forms of energy. Define the SI unit of energy.

6. Nitrogen and Hydrogen atoms combine in the ratio 14 : 3 by mass to form ammonia molecule. Find the formulae of ammonia molecule by calculating the molar ratio. (Given atomic mass of N = 14 u, H = 1 u)

7. Differentiate between an isotope and an isobar. Give an example in each category.

8. Show the formation of chemical formulae of following compounds using their ions :

(i) Ammonium sulphate (ii) Magnesium nitrate (iii) Aluminium sulphide

9. Name two plants each of the following types :

(i) Vascular cryptogams (ii) Naked seeded plants (iii) Flowering plants.

10. What is the role of the immune system, when a disease causing microbe enters the healthy human body ?

11. According to a newspaper report, some areas in Delhi received grey coloured water in their taps. It was reportedly due to mixing of contents at some points due to leakage in sewer and water supply pipes. Which kind of diseases are likely to spread due to such problems and why ? Give two specific names of diseases that can thus be spread.

12. A light and a heavy object have the same momentum. Find out the ratio of their kinetic energies. Which one has a larger kinetic energy ?

13. A block of glass is kept on a wooden board. The mass of glass block is 2 kg and its dimensions are 8 cm x 5 cm x 1 cm. Find the pressure exerted by the glass block on wooden board if it is made to lie on the board with its dimensions (a) 5 cm x 1 cm (b) 8 cm x 5 cm

14. Explain what is an ultrasound scanner? Write its one application.

15. What is the condition for an object to sink in water ? What is the physical meaning of relative density? Why do hydrogen filled balloons float in air ?

16. Nalini visited her relatives in Raipur. One day her aunt expressed unhappiness with the milk supplied by the milkman. She complained of adulterated milk. Nalini asked her to buy an instrument to check the purity of milk. Next day, the supplied milk was tested and found water being mixed in the milk. Her aunt informed all her neighbors about the instrument.

On the basis of above information answer the following questions:- (a) Identify the instrument and the principle on which it is based ? (b) What values are shown by Nalini, her aunt and the milkman respectively ?

17. (a) You are given an element 1_7X . Find out

(i) Number of protons, electrons and neutrons in 'X'. (ii) Valency of 'X'. (iii) Electronic Configuration of 'X'.

(b) If bromine atom is available in the form of, say two isotopes ${}^{79}_{35}Br$ (49.7%) and ${}^{81}_{35}Br$ (50.3%). Calculate the average atomic mass of bromine atom.

18. Justify that Labio Rohita (rohu) is a chordata. (Give five points)

19. Justify the following statements :

(a) Availability of proper and sufficient food would prevent from infectious diseases “.

(b) “The general ways of preventing infection mostly relate to preventing exposure” List three points of prevention of exposure.

20. List two differences between thrust and pressure. What is meant by 1 pascal and 1 newton ? How will the pressure change if area of contact is doubled ?

21. Calculate the electricity bill amount for a month of 30 days, if the following devices are used as specified :

(a) 3 bulbs of 40 W for 6 hours. (b) 4 tube lights of 50 W for 6 hours. (c) A refrigerator of 320 W for 24 hours.

Given the rate of electricity is Rs. 2.50 per unit.

Objective:

22. For effective reflection of sound in the experiment to verify the laws of reflection of sound the reflector metal plates should be placed with respect to the plane containing both pipes –

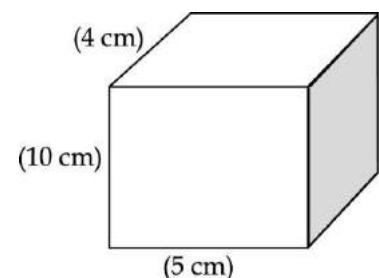
(a) either horizontally or inclined (b) horizontally (c) vertically (d) either vertically or inclined (c)

23. student is doing an experiment to find the pressure exerted by an iron cuboid of mass 10kg as shown below ($g = 10 \text{ m/s}^2$) :

The pressure exerted by the cuboid on the ground is :

(a) $5 \times 10^4 \text{ Pa}$ (b) $2 \times 10^4 \text{ Pa}$

(c) $4.5 \times 10^4 \text{ Pa}$ (d) $3 \times 10^4 \text{ Pa}$



24. We require meter scale in the experiment to find velocity of pulse to :

(a) give string a rigid support.

(b) measure the length of the string.

(c) know the length of pulse.

(d) keep the same length of string.

25. Needle – shaped structure in Pinus plant is :

(a) Leaf

(b) Shoot

(c) Stem

(d) Reproductive part

