CBSE Question Paper (Set-1)
Class 9 Science

Time : 3 Hrs.

M.M. : 80

General Instructions:

 i. All the questions are compulsory.
 ii. Please write down the Serial Number of the question before attempting it.
 iii. The question paper consists of 27 questions and it is divided into five sections A, B, C, D and E.
 iv. Section A comprises of 2 questions carrying 1 mark each.
 v. Section B comprises of 3 questions carrying 2 marks each.
 vi. Section C comprises of 10 questions carrying 3 marks each.
 vii. Section D comprises of 6 questions carrying 5 marks each.
 viii. Section E (PBQ) comprises of 6 questions carrying 2 marks each.
 ix. There is no overall choice. However, an internal choice has been provided in 1 question of 2 marks, 3 questions of 3 marks, 2 questions of 5 marks and 3 questions (PBQ) of 2 marks each. You have to attempt only one of the alternatives in all such questions.

Section 'A'

1. Name the process by which a pure solid can be separated from solution in crystal form.
2. Write two essential elements, that plant get from Air and water.

Section 'B'

3. Write the chemical formula of sodium chloride and calcium oxide.
4. State the second law of motion.

OR

Which of the following has more intertia (a) a rubber ball and a stone of same size and why?

5. Give two point of difference between mixture and compound.

Section 'C'

6. An element 'X' have 3 electrons in its outer most third orbit.

   A. What will be its Atomic number and Number of proton in it.

   B. Write its Electronic configuration?

7. A. Where does stomata located in plant?

   B. Write two functions of stomata.

8. A. Define health.

   B. 'Prevention of disease in better then cure". Do you agree? Why?

   OR

   Name any two diseases each caused by bacteria, virus and protozoa.

9. Explain in brief any three measures to control air pollution.

10. Calculate the molecular mass of $NaNO_3$, Na_2CO_3 and $CaCl_2$.

    (Ca = 40u, Cl = 35u, Na = 23u, O = 16u, N = 14u C = 12u)

    OR

    Calculate the No. of moles in the following :

    i. 64 g oxygen molecule (O_2)

    ii. 12 g Helium

11. Describe water-cycle in nature.

12. An object of mass 100 kg is accelerated uniformly from a velocity of 5 ms^{-1} to 8 ms^{-1} in 6s. Calculate initial and panal momentum also Calculate the acceleration of the object.

13. What is ultrasound? write any two application.

14. A. What is meant by Animal husbandry?

    B. What factors are responsible for losses of grains during storage.

15. A. Differentiate between isobars and isotopes.

    B. Write two isotopes of hydrogen element.

    OR

    Write the observation of rutherford's alpha particle scattering experiment.

16. A. Convert the following in Celsius:

    i. 373 K

    ii. 400 K

    B. Write three features of solid state of matter.

    C. Explain in brief any three factors that affect the rate of evaporation.

OR

A. Define :
   i. Latent heat of fusion
   ii. Melting point
   iii. Matter

B. i. Write boiling point of water
   ii. Write melting point of ice

C. Write full form of LPG and CNG.

17. A. What happen if :
   i. A living Animal cell is kept in hypotonic solution.
   ii. Lysosomes get burst inside a living cell.

B. Write full form of DNA and ATP.

18. A. Who Proposed five kingdom classification of giving being.

B. Explain the basis for grouping organisms in to five kingdoms.

C. Give one point of difference between plantae and fungi.

19. A. A car decreases its speed from 80 kmh^{-1} to 60 kmh^{-1} in 5s, find the acceleration of the car.

B. Derive an equation for position-time relation for an object that traveled a distance 's' in time 't' under uniform acceleration 'a'.

20. A. Define :
   i. Power
   ii. Potential energy
   iii. Kinetic energy

B. Write the law of conservation of energy.

C. How many Jouls of energy is present in 1kwh.

OR

A. What is the work to be done to increase the velocity of a car from 36 kmh^{-1} to 72 kmh^{-1} if the mass of the car is 1400 kg?

B. In which different forms the energy is get converted (Transform) in the Hydropower plant.

21. A. What will be the weight of a 18 kg object on earth and moon ? g = 10ms-2.

B. What is pressure? Also write its S. I unit.

C. If density of an object is 3gcm^{-3}, will it float or sink in water.

Section : 'E'

22. Ram observed following a permanent slide of animal tissue in microscope.

OR

i. Cells are long and cylindrical.

ii. Light and dark bands are present giving striated appearance.

(A) Identify the tissue, write its name

(B) Write its one function.

OR

Identify and write one function of the plant tissue on following obsovation.

(i) Cells have inter cellular spaces between the

(ii) Have thin cell wall and simple in nature.

(iii) Cells are living.

23. Write the steps of the experiment to separate the components of the mixture of sand, salt and Ammonium chloride.

OR

Write the process to make a colloidal solution starch.

24. A. Write boiling point of distilled water.

B. Which thermometer is used to measure the boiling point of water?

OR

Write the precautions be taken while performing a experiment to determine the melting point of ice.

25. Write the name of phylum and one feature of the phylum of Earthworm and cockroach.

26. A. State Archimedes principle.

B. Calculate the density of a 20 g object it is volume is 10cm^{3}.

27. List out the material required to be used in experiment to verify the laws of reflection of sound.