

Question bank

1-mark question

Q] why do we see water droplet on the outer surface of a glass containing ice cold water?

Q] in which of the following, the particles have highest forces of attraction?

Q] what are the two components of a colloidal solution?

Q] why is water called universal solvent?

Q] the atomic number of three elements A, B and C are 9,10,13 respectively. Which of them will form a cation?

Q] what is wrong in saying 'one mole of nitrogen'?

Q] which isotope of hydrogen is present in heavy water?

Q] Valence of an element X is 3. Write the chemical formula of its oxide.

Q] which cell organelle controls most of the activities of the cell?

Q] which organelle is the storage sac of solid and liquid materials?

Q] what is the name of bone cell?

Q] what is lignin and cutin?

Q] name the organisms which has nervous system but no brain.

Q] what are hermaphrodites?

Q] does the speedometer of a car measure its average speed?

Q] define one radian.

Q] write the SI unit of impulse.

Q] what did Galileo conclude on the basis of basic of his experiments on the motion of objects?

Q] why is G called the universal constant?

Q] the earth is acted upon by gravitation of sun, even though it does not fall into sun. why?

Q] can kinetic energy of a body be negative?

Q] what is the commercial unit of energy?

Q] what is intensity of sound?

Q] what is one complete oscillation?

Q] expand HIV, PEM and AIDS.

Q] write each five bacterial and viral diseases?

Q] name any one source of freshwater.

Q] write the formula of acid rain.

Q] give two examples of kharif crop, rabi crop and zyad crop.

Q] name two breeds of buffaloes.

2 marks question

Q1] why do people sprinkle water on the roof after a hot sunny day?

Q2] which gas is called dry ice? why?

Q3] define chromatography and give its one application.

Q4] give two differences between mixture and compound?

Q5] how many moles are present in 4g of sodium hydroxide?

Q6] calculate the formula mass of sodium carbonate($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$).

Q7] write two characteristics of canal rays.

Q8] write electronic configuration of Al^{3+} and Cl^- .

Q9] why do the animal cells not have cell wall?

Q10] what are the functional regions of a cell?

Q11] describe the functions of bones and muscle?

Q12] how are glandular epithelium formed?

Q13] what are mycoplasma.

Q14] why are bryophyta called amphibians?

Q15] differentiate between scalar and vector quantity?

Q16] write dimensional formula of acceleration?

Q17] on which factors does friction depend?

Q18] there are three solids made up of aluminium, steel and wood, of the same shape and same volume. Which of them would have highest inertia?

Q19] mention any four phenomena that the universal law of gravitation was able to explain?

Q20] when does an object show weightlessness?

Q21] give any two uses of kinetic energy.

Q22] calculate the work done against the gravity.

Q23] explain the terms crests and troughs of a wave.

Q24] why do we hear the sound produced by the humming bees while the sound of vibrations of pendulum is not heard?

Q25] why is vaccination considered a prevention of diseases?

Q26] why there is no use of giving vaccine of hepatitis A virus?

Q27] what are harmful effects of ozone?

Q28] explain the role of the sun in the formation of soil.

Q29] what is honey?

Q30] what is green manure

3 marks questions

Q1] suggest an activity to show that the rate of diffusion of liquids decreases with increases in density of the liquid.

Q2] design an experiment to show that ammonium chloride undergoes sublimation.

Q3] describe any three properties of colloid.

Q4] on heating, calcium carbonate gets converted into calcium oxide and carbon dioxide

a) Is this a physical or a chemical change?

b) Can you prepare one acidic and one basic solution by using the products formed in the above process? If so, write the chemical equation involved.

Q5] what are ionic and molecular compounds? Give examples.

Q6] calculate the mass per cent of each element of sodium chloride in one mole of it.

Q7] write the formula of the compounds formed by the following ions.

a. Mg^{2+} and S^{2-}

b. Cu^{2+} and OH^-

Name the compounds formed in each case.

Q8] an element 'X' contains 6 electrons in 'L' shell as valence electrons:

a. What is the atomic number of 'X'?

b. Identify whether 'X' is a metal or non-metal.

Q9] difference between mitosis and meiosis.

Q10] what is cell division? Give the types of cell division.

Q11] differentiate between voluntary and involuntary muscles. Give one example of each type.

Q12] what is cell theory?

Q13] how do amphibians respire and reproduce?

Q14] difference between monocot and dicot with example.

Q15] an object starting from rest travels 20 m in first 2s and 160 m in next 4s. what will be the velocity after 7s from the start?

Q16] a girl walks along a straight path to drop a letter in the letterbox and comes back to her initial position.

Her displacement-time graph. Plot a velocity – time graph for the same.

Q17] derive law of conservation of momentum.

Q18] describe balanced forces with the help of two example.

Q19] state universal law of gravitation and derive them.

Q20] show that the weight of an object on the moon is one sixth of its weight on the earth.

Q21] if two bodies have masses in the ratio 1:2, have their speed in the ratio 4:5, find the ratio of their kinetic energies.

Q22] write differences between kilowatt and kilowatt hour. And what is HP.

Q23] prove that $v = \nu\lambda$, where the symbols have their usual meanings.

Q24] write full form of acronym SONAR. Explain how the method of echo- ranging is used to determine the depth of sea.

Q25] what are the causes and symptoms of goiter?

Q26] what is immunity? Explain natural and acquired immunity.

Q27] in coastal area, wind current moves from the sea towards the land during day but during night it moves from land to the sea. Explain the reason.

Q28] why is carbon dioxide produced in large extents?

Q29] list out some useful traits in improved crop/

Q30] what do you understand by humane farming?

5 marks question

Q1] describe the continuous motion of particles of matter with the help of an activity.

a] to demonstrate motion of particles of solid matter:

b] to demonstrate motion of particles in air:

Q2] compare the properties of a true solution, a suspension and a colloid.

Q3] calculate the mass per cent of each element present in the molecule of calcium carbonate.

Q4] write difference between cation and anion. With examples.

Q5] write all the cell organelles along with their functions.

Q6] describe the types of connective tissues along with their functions and locations.

Q7] write the important features of nematode.

Q8] derive all equations of motion.

Q9] derive the mathematical relation of newton's second law of motion.

Q10] calculate the value of acceleration due to gravity 'g' using the relation between 'g' and 'G'.

Q11] show that when a body is dropped from a certain height, the sum of its kinetic energy at any instant during its fall is constant.

Q12] what is meant by reflection of sound? Describe an activity to study the reflection of sound. State the laws of reflection of sound.

Q13] why is AIDS considered to be a 'syndrome' and not a disease?

Q14] describe the steps and processes involved in the nitrogen cycle.

Q15] describe the main irrigation systems that are adopted in India?