

DELHI PUBLIC SCHOOL , JAMMU

FINALASSIGNMENT (2017-2018)

CLASS: IX

SUBJECT:SCIENCE

CHEMISTRY (Matter in our surroundings, Is matter around us pure , Atoms and molecules& Structure of atom)

Q1. What is evaporation ? State the various factors which affect the rate of evaporation .

Q2. Define ‘latent heat of fusion’ of a solid and ‘latent heat of vaporisation’ of a liquid.

Q3. Differentiate between solutions, colloids and suspensions .

Q4. What is fractional distillation ? What is the use of fractionating column in fractional distillation.

Q5. Explain with the help of well labelled diagram , how water is purified on a large scale at water works.

Q6. Calculate the formula masses of the following compounds:

a) sodium oxide

b) calcium carbonate

Q7. Calculate the mass of the following:

a) 3.011×10^{24} molecules of NH_3

b) 0.25 moles of CO_2

Q8. An element has an atomic number 13 and mass number 27.

a) Calculate the number of protons, electrons and neutrons.

b) Write the electronic configuration of the element.

Q9. Describe the Bohr’s model of atom. How did Neil Bohr explain the stability of atom ?

Q10. Bromine occurs mainly in the form of two isotopes with mass number 79 (49.7%) and 81(50.3%), calculate the average atomic mass of bromine .

PHYSICS (Motion, Force and Laws of motion,Work and Energy, Gravitation & Sound)

Q1. Define inertia and force .

Q2. Derive all the equations of motion .

Q3. State and prove law of conservation of linear momentum.

Q4. a) Derive expression for kinetic energy.

b) State and prove law of conservation of mechanical energy .

Q5. Explain the working of human ear with neat diagram .

Q6. a) Give full form of SONAR.

b) Give its working and principle .

Q7. a) How a bat catches its prey ?

b) How we clean unreachable parts using ultra-sounds?

Q8. Define Relative density and Archimede's principle .

Q9. What are the factors affecting buoyant force?

Q10. Define the acceleration due to gravity and discuss the various factors affecting it.

BIOLOGY (Cell, Tissues, Improvement in food resources , Why do we fall ill ,Diversity in living organisms & natural resources)

Q1. How does an Amoeba obtain its food ?

Q2. Briefly explain the structure of plasma membrane.

Q3. Differentiate between striated, un-striated and cardiac muscles on the basis of their structure and location in the body .

Q4. What is the role of Epidermis in plants .

Q5. What are the benefits of organic farming ?

Q6. Give reasons why .

a) Blood is called connective tissue .

b) Muscles contain contractile proteins.

c) Cardiac muscles are involuntary.

Q7. Acute diseases are severe but are less harmful than chronic disease , why ?

Q8. Explain the following .

a) Eutrophication

b) Bio magnification

Q9. What are the differences between the animals belonging to the Aves group and those in the mammalian group?

Q10. Write the characteristics of Kingdom FUNGI .

