Grade 6 Science
Revision 2

Syllabus: Unit 7 "Forces and their Effects"
Unit 9 "Elements, compound and Mixture"
Unit 11 "The Environment"
Unit 12 "Solutions"

Define the following.

1. Density **Density of a substance is its mass per unit volume. Its unit are gm / cm^3 or kg/m^3.**

2.Elasticity **The property of a material to resume its original shape after being stretched or compressed is called Elasticity.**

3.Compound **A compound is a substance formed when two or more elements are chemically bonded together.**

4. Mixture **A mixture is a material made up of two or more different substances which are physically combined. Examples Air, sand.**

5.Sediment **A layer formed by the settling of insoluble particles at the bottom of a liquid is called sediment.**

Give Reasons.

1. Why do things float in water?
Water has a density of 1 gm / cm^3. Objects having density less than this will float in water while objects having density greater than water will sink.

2. Why do ships float higher in sea water than in fresh water?
Ships float higher in sea water than in fresh water because sea water is denser than fresh water. The denser a liquid is, greater the upthrust.

Solve the following

An exploration robot of mass 100kg is built in Earth at a place where the strength of gravity is 9.8 N/Kg. It is sent to Mars where the strength of gravity is 3.7 N/Kg. What does the robot weigh?

a) on Earth **b) On Mars**

Weight = mass x gravitational strength

a) W = 100 x 9.8 = 980 N

b) W = 100 x 3.7 = 370 N

Long Question Answer

Q1. What is an atom? Describe three parts of an atom.

An atom is the smallest part of an element that can exist and take part in chemical reaction. All atoms, apart from hydrogen are made from three even smaller particles called:

Proton → have a positive charge

Electron →have a negative charge

Neutron →have no charge, they are neutral.

Q2. What is meant by stopping distance? How it is affected?

The distance taken by the driver to slow down and then stop totally is called the stopping distance. It is affected by road surface and the condition of the car's brake and tyres.

Q3. Describe how would you make Copper Sulphate crystals in laboratory?

1. Heat $CuSO_4$ solution to evaporate water till the solution becomes concentrated.

2. Crystals will be formed as this solution cools down.

3. Leave the solution in warm place to let the water to evaporate and small crystals of $CuSO_4$ will left behind.

Differentiate the following

Abiotic Factors	Biotic Factors
Abiotic factors are non-living chemical and physical components of the environment which affect the ecosystem. E.g. Sunlight, air, water, temperature, atmospheric gases etc	Biotic factors are the living components of the ecosystem. E.g. Animals, plants, fungi, bacteria, etc.

Metals	Non-Metals
They are hard solids except mercury.	They are usually gases or solids which melt easily.
They have high melting point.	They have low melting point.
They are malleable. (can be easily bent).	They are brittle or powdery.
They are good conductor of heat and electricity.	They are poor conductor of heat and good electrical insulators.