"SCIENCE IS SIMPLY A WORD WHICH MEANS ORGANIZING CURIOSITY."

CHAPTER-3(Chemical Substances and Processes)

1. Define the following terms:

(a) Atoms   (b) Molecules   (c) Pure substances   (d) Ions

2. Give symbols for the following elements /ions:

Element	Ion
Sodium	Chlorine
Magnesium	Phosphate
Aluminium	Sulphur
Potassium	Bromine
Iron	Carbonate

3. Write chemical formula for following substances and also calculate total number of atoms present in each of these.

(a) Sodium carbonate (b) Magnesium carbonate (c) Silver nitrate (d) Copper nitrate (e) Magnesium phosphate

4. Identify the following reactions into different types, giving reason.

(i) $CaO(s)+H_2O \rightarrow Ca(OH)_2$

(ii) $C(s)+O_2(g) \rightarrow CO_2$

(iii) $AgCl(s) \rightarrow Ag(s) +Cl_2(g)$

(iv) $FeSO_4 \rightarrow Fe_2O_3+SO_2+SO_3$

(v) $AgBr(s) \rightarrow Ag(s)+Br_2(g)$

(vi) $Zn(s)+CuSO_4(s) \rightarrow ZnSO_4(aq)+Cu(s)$

(vii) $KOH+CH_3COOH \rightarrow CH_3COOK+H_2O$

5. Balance the following equations :

(i) $C_3H_8 + O_2 \longrightarrow CO_2 + H_2O$ (iv) $Fe_2O_3 + C \longrightarrow Fe + CO_2$

(ii) $O_3 \longrightarrow O_2$ (v) $CH_4 + O_2 \longrightarrow CO_2 + H_2O$

(iii) $H_2O_2 \longrightarrow H_2O + O_2$

Chapter-6 (Motion and Time)

1. Assume that the distance between Banglore and Delhi is 1200 km by air and 1500 km by train . A person takes 2 hours to reach there by air but needs 25 hours to reach there by train . Find the average speed in both the cases .

2. Given along –side is the graph for two cars A and B. Which of the car has more speed? Justify your answer.

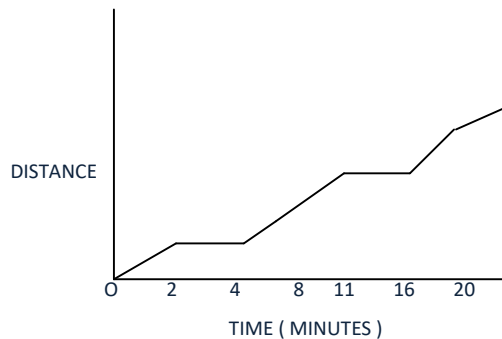**Fig. 13.15** *Distance-time graph for the motion of two cars*

3. Gopal is trying to measure time using a simple pendulum whose time period is 10 seconds. The pendulum completed 6 oscillations . What is the measure of time at this point ?

4. You want to measure the speed of flow of a river . You make a paper boat and place the paper boat in the river . You allow the paper boat to flow for a distance of 20 m . You notice that boat takes 40 second to cover 20 m . What is the speed of river flow ?

5. The distance between two stations is 1995km. How much time a car will take to cover this distance at an average speed of 19km/h.

6. D-t graph of your school bus today is given below . Can you tell for how many minutes did the bus not move during the journey ?

ACTIVITIES:

1. Find out a park near your locality and go for a walk along with your parents . Estimate the distance of the park from your home and note down your time taken in fixed intervals to reach out there. Plot a distance – time graph for the same on colored A4 size sheet and calculate your average speed in m/s .

2. Look up for ingredients of various products used at your home (like- toothpaste, cough syrup, oil, Talcum powder, shoe polish, toilet cleaner, surf, soap etc) . Try to locate atleast one chemical in each of them displayed on their packet. Classify these chemicals into category of useful and harmful chemicals . Display it creatively on a chart.

3. Prepare turmeric indicator at your home and classify your household products (Eg- soap, surf, vinegar, lemonade , baking soda, water, glucose , ENO etc) into acidic , basic and neutral substances . Record your observation in a tabular form in your science notebook.

4. Maintain your scrapbook named as **'MY GREEN DIARY'** which you had already started in your previous class . Look up for any two medicinal (eg-basil, madar, aloe vera, lavender, dandelion etc) and any two ornamental plants(eg- Amaltas, Red bottle brush, Roses , tulips etc) in your locality . Find out their any two uses and their mode of reproduction. Write the same in your green diary . Also click your picture with these plants and paste in your green diary .

NOTE: SOLVE YOUR WORKSHEET ON A SEPARATE SHEET.