

CLASS – VII

Question Bank :- Competency Based Questions

CHAPTER –7: Acids , Bases & Salts

Qu1: Rena is trying to wash turmeric stain on her cloth with soap, she noticed the stain colour changed to red, explain why?

Ans:

Turmeric is a natural indicator which when reacts with bases turns it into red colour; here soap solution is basic so it turns red.

Qu2: A shopkeeper has a few bottles of soft drink in his shop. But, unfortunately, these are not labelled. He has to serve the drinks on the demand of customers. One customer wants acidic drink; another wants basic and third one wants neutral drink. How will he decide which drink is to be served to whom?

Ans:

On the basis of the property of acids and bases he can differentiate all the drinks. Like an Acidic drink will have a sour taste and will turn blue litmus red. A basic drink will turn red litmus red. A neutral drink will not change the colour of red or blue litmus. Apart from this he can also use turmeric solution for checking the drinks.

Qu3: Arnav is provided with three kinds of liquid of them one is sodium hydroxide; another is hydrochloric acid and third is a sugar solution. How will he identify them when he have only turmeric indicator.

Ans:

Turmeric is yellow in colour, when it is exposed to neutral (Sugar Solution) or acidic substances (Hydrochloric Acid) it will retain its yellow colouration. However, if turmeric is exposed to more alkaline substances (sodium hydroxide) it becomes a dark pink/red. So first we detect sodium hydroxide -a basic substance by a colour change from yellow to dark or red. Then will test for an acid or neutral substance with indication of no colour change. Now out of these two, we will mix one with already tested solution for basic substance -sodium hydroxide with dark or red

colour, if on mixing the colour reverses back to yellow, the liquid is an acid and the remaining third liquid is neutral.

Qu4. Three liquids are given to you. One is hydrochloric acid; another is sodium hydroxide and third is a sugar solution. How will you identify them? You have only turmeric indicator.

Ans. Put a drop of each of the three liquids i.e. hydrochloric acid, sodium hydroxide and sugar solution on the turmeric indicator, the liquid which changes the colour of turmeric indicator to red is basic in nature, that is, sodium hydroxide.

Now, put a drop of sodium hydroxide on a drop of each of the other two liquids separately i.e. hydrochloric acid and sugar solution. After that, put the drops of these mixtures on turmeric indicator. The drop which will change colour of the turmeric indicator to red contains sugar solution. This is because the mixture of basic and neutral solution is basic in nature. On the other hand, the drop will not change the colour of turmeric indicator contains hydrochloric acid. This is because hydrochloric acid reacts with sodium hydroxide to form a neutral solution.