

CASE STUDY QUESTION 13

Read the following and answer any four questions from (i) to (v)

A group of students measured the pH of some substances they found in their homes. Their results are given in the following table :

Substance	pH	Substance	pH
Apples	3.0	Vinegar	3.0
Salt	7.0	Lemon juice	2.5
Baking soda	8.5	Washing soda	11.5
Sugar	7.0	Milk	6.5
Black coffee	5.0	Household ammonia	12.0
Toothpaste	9.0		

(a) Which solution is the most acidic?

- (i) Apples (ii) Vinegar
(iii) Lemon Juice (iv) Black Coffee

Ans: (iii) Lemon juice

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(b) Which solution is the most alkaline ?

- (i) Household ammonia
(ii) Washing soda
(iii) Baking soda
(iv) Toothpaste

Ans: (i) Household ammonia

(c) Which solutions are neutral ?

- (i) Salt
- (ii) Sugar
- (iii) Milk
- (iv) Both (i) and (ii)

Ans: (iv) Both (i) and (ii)

(iv) What will be the litmus test if the solution is basic?

- (a) Red litmus will turn to blue
- (b) Blue litmus will turn to red
- (c) No change in colour
- (d) It will change into orange pink.

Ans: (a) Red litmus will turn to blue

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Toothpaste	9.0		

(v) Arrange the following in order of the increasing basic strengths.

Baking soda, Toothpaste, Household ammonia, Washing soda

(a) Baking soda, Toothpaste, Household ammonia, Washing soda

(b) Baking soda, Toothpaste, Washing soda, Household ammonia

(c) Washing soda, Baking soda, Toothpaste, Household ammonia

(d) Baking soda, Household ammonia, Toothpaste, Washing soda

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Higher the pH, the stronger the base

Ans: (b) Baking soda, Toothpaste, Washing soda, Household ammonia