

Read the given case study and answer the questions:

Tina loves fizzy drinks and is curious about their composition. She decided to investigate how different types of drinks affect indicators. Tina took three different fizzy drinks and tested them using various indicators. Here are her observations:

Drink X turned blue litmus paper red.

Drink Y turned phenolphthalein pink.

Drink Z did not show any color change with either indicator.

Based on these observations, answer the following questions:

1. Which of the following pair is correct?

- i. Drink X: Acidic, Drink Y: Basic, Drink Z: Neutral
- ii. Drink X: Basic, Drink Y: Neutral, Drink Z: Acidic
- iii. Drink X: Acidic, Drink Y: Basic, Drink Z: Basic
- iv. Drink X: Basic, Drink Y: Basic, Drink Z: Neutral

2. Most of the cold drinks are acidic in nature. Which of the following acids are not present in them:

- i) Oxalic acid, Tartaric acid
- ii) Carbonic acid, Malic acid
- iii) Both i and ii
- iv) Citric acid, Phosphoric acid

3. Tina has acidity. Which of the drink should she choose to get relief?

- i) Drink X
- ii) Drink Y
- iii) Drink Z
- iv) None of the above

4. Tina has observed that consuming too much of fizzy drinks affect her teeth, causing tooth decay but brushing her teeth twice daily reduces the damage, because

- i) Toothpaste kills the bacteria in mouth
- ii) Toothpastes are mostly basic in nature
- iii) Toothpastes cleans the mouth
- iv) All of the above

5. Tina's mother accidentally spilled turmeric in the fizzy drinks, which of the following is correct set of observation:

- i) Drink X turned a deep pinkish-red color
- ii) Drink Z turned yellow
- iii) Drink Y turned a deep pinkish-red color
- iv) Drink X turned colorless