Q. Suppose in one summer, the weather is extremely hot as there happens to be a heat wave. In addition to that during the same summer, a cyclone destroys part of the sugarcane crop and drives up the price of sugar; which is an essential ingredient for Ice cream production. How do these events affect the market (demand and supply) equilibrium for ice cream? Explain with the diagram.

Ans:

Given that a heat wave and a cyclone occur during the same summer. To analyze this combination of events, we have to follow the three steps.

Step-1: Decide whether the event shifts the supply or demand curve (or both).

In this case, both curves must shift. The hot weather affects the demand curve because it alters the amount of ice cream that households want to buy at any given price.

At the same time, when the cyclone drives up sugar prices, it alters the supply curve for ice cream because it changes the amount of ice cream that firms want to sell at any given price.

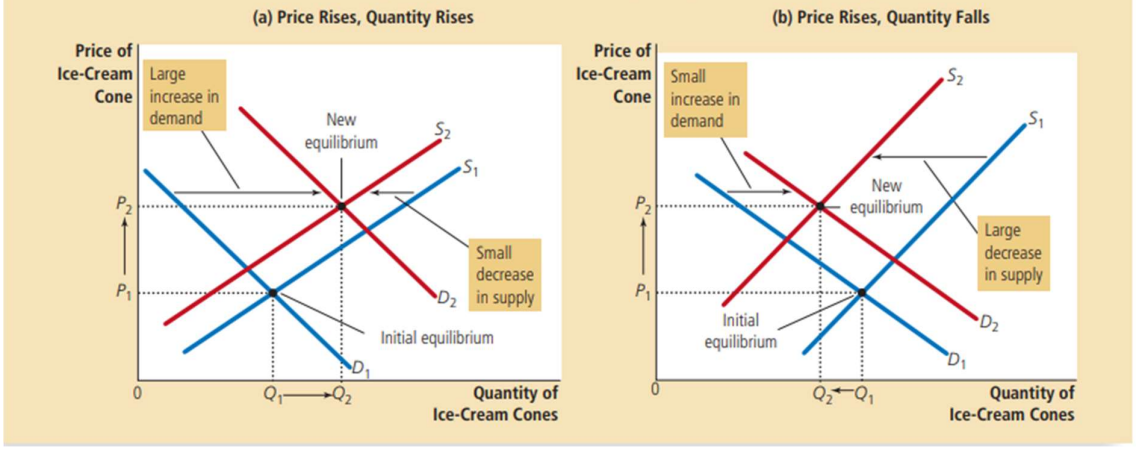
Step-2: Decide whether the curve(s) shift(s) to the left or to the right.

Here, the demand curve shifts to the right, and the supply curve shifts to the left. The following figure illustrates these shifts.

Figure 12

A Shift in Both Supply and Demand

Here we observe a simultaneous increase in demand and decrease in supply. Two outcomes are possible. In panel (a), the equilibrium price rises from P_1 to P_2, and the equilibrium quantity rises from Q_1 to Q_2. In panel (b), the equilibrium price again rises from P_1 to P_2, but the equilibrium quantity falls from Q_1 to Q_2.



Step-3: Use the supply-and-demand diagram to see how the shift affects equilibrium price and quantity.

As Figure 12 shows, two possible outcomes might result depending on the relative size of the demand and supply shifts. In both cases, the equilibrium price rises.

In panel (a), where demand increases substantially while supply falls just a little, the equilibrium quantity also rises.

By contrast, in panel (b), where supply falls substantially while demand rises just a little, the equilibrium quantity falls. Thus, these events certainly raise the price of ice cream, but their impact on the amount of ice cream sold is ambiguous (that is, it could go either way).