PPC and Opportunity Cost - HOTS & Applications

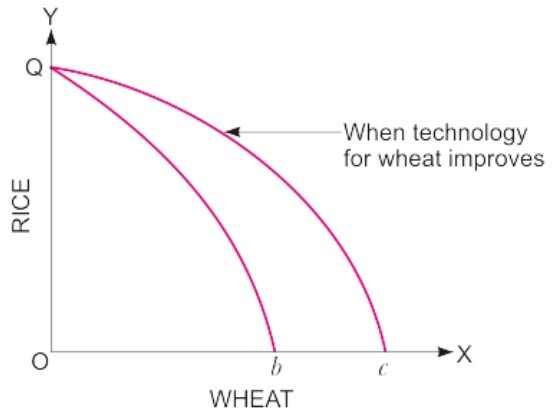
Q.1. If production possibility curve shifts to the right, should it be parallel to the old one?

Ans. Not necessarily, because slope of PPC indicates marginal opportunity cost, which may be different at different levels of output.

Q.2. If PPC relates to wheat and rice (on the X-axis and Y-axis respectively) draw diagram showing change in PPC when resources remain constant and technology improves only for wheat.

Ans. See Fig. 4, here PPC will not shift but rotate to the right showing more production of wheat from Ob to Oc when all resources are employed in the production of wheat. Production of rice remains constant at OQ corresponding to zero output of wheat when production of wheat is zero.

FIGURE 4



Q.3. What does increasing marginal opportunity cost along a PPC mean?

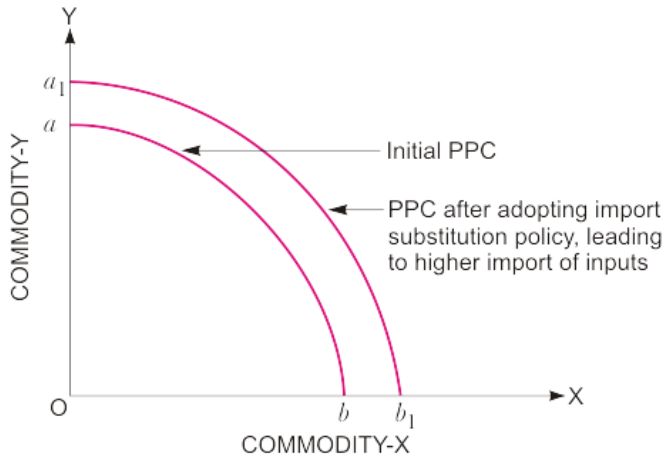
Ans. Increasing marginal opportunity cost along a PPC means that $\frac{\Delta \text{loss of Y}}{\Delta \text{gain of X}}$ Δloss of YΔ gain of X tends to increase as more and more of resources are shifted from Y to X, which is why PPC is concave to the origin. It occurs because resources are use-specific. As these are shifted from a more specialised use to a less specialised use, loss of output tends to be higher than the gain of output.

Q.4. A lot of people have died and many industrial units have been razed to the ground owing to a massive earthquake in Nepal. How will it affect the country's PPC? Explain diagrammatically.

Ans. Production possibility curve (or PPC) is drawn on the assumption of a given amount of resources. Destruction of manpower and industrial capital of the country

leads to a massive fall in the quantum of resources. Accordingly, PPC will shift to the left, as in **Fig. 5.**

FIGURE 6



Q.5. Giving reason, comment on the shape of production possibility curve based on the following schedule. Also, find the marginal opportunity cost of producing Good-1.

Good-1 (Units)	**0**	**1**	**2**	**3**	**4**	**5**
Good-2 (Units)	**25**	**20**	**15**	**10**	**5**	**0**

Ans.

Good-1 (Units)	Good-2 (Units)	Marginal Opportunity Cost $\left(\frac{\Delta y}{\Delta x}\right)$
0	25	—
1	20	$\frac{5}{1} = 5$
2	15	$\frac{5}{1} = 5$
3	10	$\frac{5}{1} = 5$
4	5	$\frac{5}{1} = 5$
5	0	$\frac{5}{1} = 5$

The above schedule shows that the marginal opportunity cost of producing more of Good-1 in place of Good-2 is constant. Accordingly, production possibility curve should be a downward sloping straight line.