Q.1. Define total product.

Ans. Total product is the sum total of output produced by all units of labour (along with other factors of production).

 $TP = AP \times L$

Q.2. What is meant by average product?

Ans. Average product refers to output per unit of the variable factor (labour).

$$AP = \frac{TP}{L}$$

Q.3. Define marginal product.

Ans. Marginal product or marginal physical product is the change in total product as a result of a unit change in the input of a variable factor.

MP or MPP =
$$TP_n - TP_{n-1}$$

Or
MP or MPP = $\frac{\Delta TP}{\Delta L}$

Q.4. How is total product derived from the marginal product schedule?

Ans. Total product is the sum total of marginal product corresponding to all levels of employment of the variable factor. $TP = \sum MP$.

Q.5. When is total output maximum?

Ans. Total output is maximum when marginal product is zero.

Q.6. How is fall in total product related to marginal output?

Or

What will you say about the marginal physical product of a factor when total physical product is falling?

Ans. Marginal product (or marginal physical product) must be negative.

Q.7. Can total product and average product become zero or negative?

Ans. No, total product and average product can never be zero or negative.

Q.8. When total product increases at an increasing rate, what happens to marginal product?

Ans. Marginal product should be increasing.

Q.9. When total product increases at a decreasing rate what happens to marginal product?

Ans. Marginal product should be decreasing.

Q.10. When **TP** becomes constant, what happens to marginal product?

Ans. Marginal product should be zero.

Q.11. What is the general shape of AP curve?

Ans. It is an 'inverse U-shape' curve.

Q.12. What is the general shape of MP curve?

Ans. It is an 'inverse U-shape' curve.