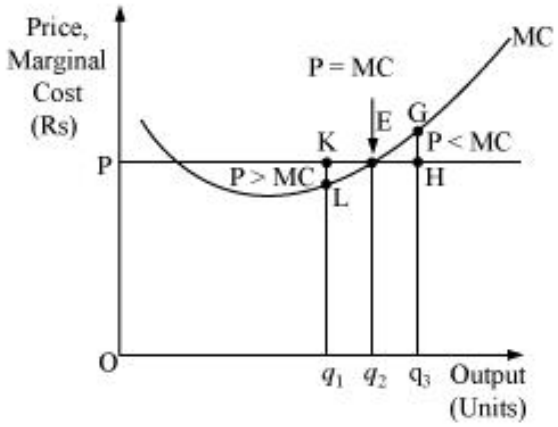
Q8. Can there be a positive level of output that a profit-maximizing firm produces in a competitive market at which market price is not equal to marginal cost? Give an explanation.
Ans:There cannot be any positive level of output that a firm produce at which price is not equal to MC. Let us evaluate the following two cases where price is not equal to MC.



Case A: If P > MC

At output Oq_1, Price is Kq_1, while the MC is Lq_1. So, Oq_1 is not the profit maximising output. This is due to the fact that the firm can increase its profit level by expanding its output to Oq_2.

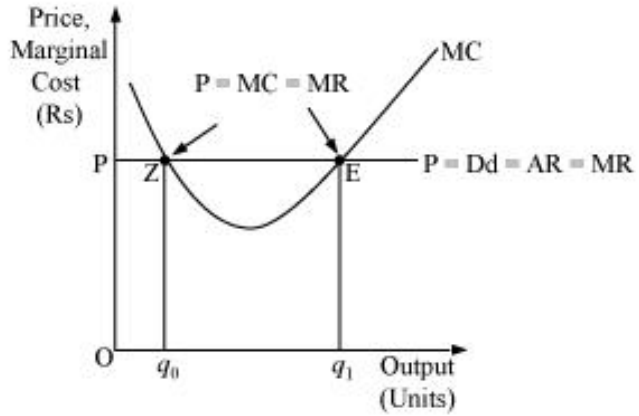
Case B: If P < MC

At output Oq_3, price is Hq_3 and MC is Gq_3. So, Oq_3 is not the profit maximising output. This is because the firm can increase its profit by reducing its output level to Oq_2.

Thus, at profit maximising point, price must be equal to MC and it cannot be greater or lesser than MC.

Q9. Will a profit-maximising firm in a competitive market ever produce a positive level of output in the range where the marginal cost is falling? Give an explanation.
Ans:It is not possible for any perfect competitive firm to produce a positive level of output in a range where MC is falling. This is because, according to one of the conditions of profit-maximization, MC curve should be upward sloping or the slope of MC curve should be positive at the equilibrium level of output.

Let us take an example: At point Z price is equal to MC, but MC is falling and is negatively sloped. For any level of output more than , the firm is facing price Oq0> MC, which implies that the profit can be maximized by increasing the output level further.



Hence, the point 'E' is the equilibrium point, where a profit maximising firm would operate and produce Oq_1 units of output and its profit will be maximized.

********** END **********