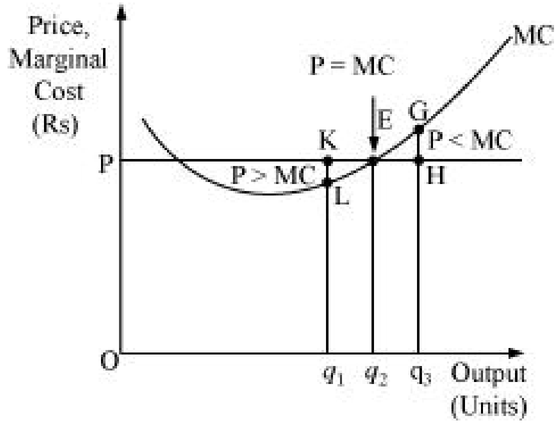
Q7. What conditions must hold if a profit-maximizing firm produces positive output in a competitive market?
Ans: The following three conditions must hold if a profit maximizing firm produces positive level of output (say equilibrium output Q*) in a competitive market:
i) MR must be equal to MC at Q*.
ii) MC should be upward sloping or rising at Q*.
iii) In short run – Price must be greater than or equal to AVC. i.e. P>AVC at Q*.
In long run – Price must be greater than or equal to LAC.

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.

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