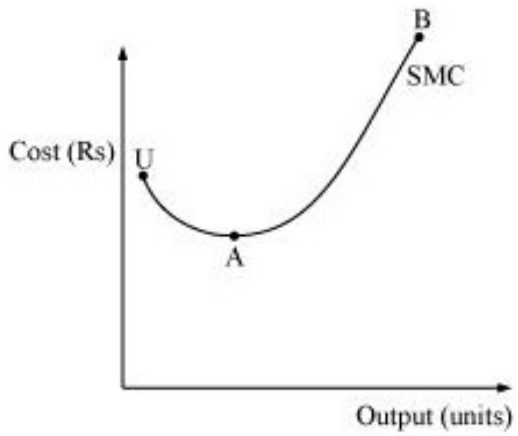
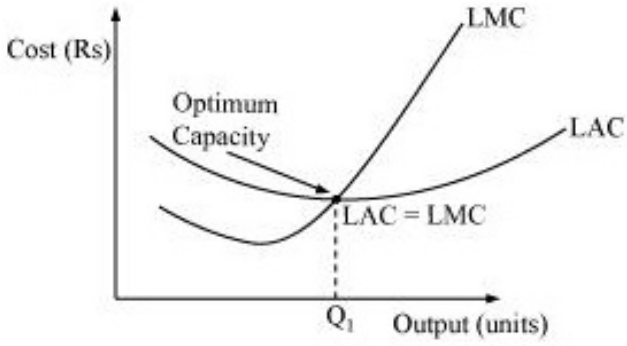
Q20. Why is the short run marginal cost curve 'U'-shaped?
Ans:



The SMC curve is a U-shaped curve due to the law of variable proportions. In order to understand the reason behind the U-shape of SMC, let us divide the SMC curve (UAB) into three different parts according to the law of variable proportions:
(a) UA part corresponds to increasing returns to factor.
(b) Minimum point A corresponds to constant returns to factor.
(c) AB part corresponds to decreasing returns to factor.
In the initial production stages, the falling part of SMC (UA) is due to application of increasing returns to factor. Then the SMC stops falling and reaches its minimum point 'A' due to the existence of constant returns to a factor.
After the minimum point A, SMC starts rising (i.e. 'AB' part of SMC) due to the onset of decreasing returns of variable factor. This trend of SMC curve (initially falling, then becoming constant at its minimum point and then rising) makes it look like the English alphabet – 'U'.

Q21. What do the long run marginal cost and the average cost curves look like?
Ans: The long run marginal cost (LMC) and long run average cost (LAC) are U shaped curves. The reason behind them being U-shaped is due to the law of returns to scale. It is argued that a firm generally experiences IRS during the initial period of production followed by CRS, and lastly by DRS. Consequently, both LAC and LMC are U-shaped curves. Due to IRS, as the output increases, LAC falls due to economies of scale. Then falling LAC experiences CRS at Q1 level of output which is also called the optimum capacity. Beyond Q1 level of output, the firm experiences diseconomies of scale and if the firm continues to produce beyond Q1 level, the cost of production will rise.



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