**C-ECO 204: Fundamentals of Economic Theory (CBCS)**

**Group A**

### Topic 4: Market Structure

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**Price and Output decisions of a Perfectly Competitive firm**

A competitive firm supplies only a small portion of the total output of all the firms in an industry. Therefore, the firm takes the market price of the product as given, choosing its output on the assumption that the price will be unaffected by the output choice. The demand curve facing the firm is perfectly elastic, given by a horizontal line as it is a price taker.

The demand curve facing an individual firm in a competitive market is both its average revenue curve and its marginal revenue curve. Along this demand curve, marginal revenue, average revenue, and price are all equal.

A profit maximizing competitive firm produces the amount of output at which its marginal cost equals the market price i.e. MC = P.

* Marginal Revenue > Marginal Cost: the firm is producing too little and can increase profit by increasing output
* Marginal Revenue < Marginal Cost: the firm is producing too much and can increase profit by decreasing output

Decision rules regarding optimal output and pricing in the long run are the same as in the short run.

A perfectly competitive firm should choose its output so that marginal cost equals price:

**Choosing Output in the Short Run**

**Short-Run Profit Maximization by a Competitive Firm**

In the short run, the competitive firm maximizes its profit by choosing an output q\* at which its marginal cost MC is equal to the price P (or marginal revenue MR) of its product.

**Equilibrium condition:** MC = MR = AR= P

**Choosing Output in the Long Run**

**Long-Run Profit Maximization**

The firm maximizes its profit by choosing the output at which price equals long-run marginal cost LMC.

The long-run output of a profit-maximizing competitive firm is the point at which long-run marginal cost equals the price.

**Equilibrium condition:** P = LMC