**KEY CONCEPTS AND SKILLS: Theory of the Firm 3 – Perfect Competition**

**Definitions:**

*[Note: there are not many new terms presented in this unit, but make sure you know all of the terms from earlier Theory of the Firm units.]*

* **Homogenous Product**: A product that is completely standardized and not differentiated in any way (Note: this includes differences in convenience, customer services, branding, etc.)
* **Barrier to Entry**: Anything that can prevent a firm from entering an industry and beginning production. (The opposite is “free entry”, where there are no barriers to entry.)
* **Barrier to Exit**: Anything that can prevent a firm from exiting an industry and ceasing production. (The opposite is “free exit”, where there are no barriers to immediately ceasing production.)
* **Shut-Down Price**: The price at which a loss-making firm will stop production in the short-run. (In a perfectly competitive market, the shut-down price = minimum average variable costs).
* **Break**e**ven Price**: A price at which the firm breaks even, meaning that its total revenues are just equal to its total economic costs.
* **Breakeven Point**: The output quantity at which a firm’s total revenues are just equal to its total economic costs.

**Concepts and Applications:**

***A. Characteristics of Perfectly Competitive Markets***

1. Describe the assumed characteristics of perfect competition.
2. Identify examples of markets that have all or most of the characteristics of perfect competition.
3. Given an industry, discuss the extent to which it exemplifies the characteristics of perfect competition.

***B. Deriving a Firm’s Demand and Revenue Curves***

1. Explain, using a diagram, what it means to say that every firm in a competitive market is a “price taker”.
2. Outline what would happen if a firm raised its price above the market price or lowered its price below the market price.
3. Using a diagram, explain how the demand curve facing an individual firm can be derived from the market supply and demand curves.
4. Explain, using a diagram how a firm’s average revenue, marginal revenue and total revenue curves are implied by market equilibrium price.

***C. Profit Maximization in the Short Run***

1. Explain, using a diagram, how a perfectly competitive firm’s profit-maximizing level of output can be determined.
2. Construct diagrams that show firms making i) an economic profit, ii) normal profits and iii) a loss.
3. Explain why a perfectly competitive firm can only make abnormal profits or losses in the short run, not the long run.
4. Distinguish between the short-run *shut-down price* and the *break-even* *price*.
5. At the *break-even price*, what level of profit is a firm making?
6. Explain, using a diagram, when a loss-making firm would shut down in the short run.
7. Given a set of cost, price, and quantity data, calculate profit levels at different levels of output and indicate the level of output that a profit maximizing firm will choose.
8. Explain how the short-run supply curve of a perfectly firm can be derived from its marginal cost curve.
9. Explain why the general profit maximization rule is MR=MC, but the specific rule for perfectly competitive firms is P=MC.

***D. Profit Maximization in the Long Run***

1. Using diagrams, and assuming an industry where firms are making supernormal profits in the short run, explain what will happen in the long run to: i) the number of firms in the industry, ii) industry supply, iii) the economic profits of firms, iv) the industry’s quantity of output.
	* Same question, but assuming an industry where firms are making losses in the short run.
2. Explain, using a diagram, when a loss-making firm would shut down and exit the market in the long run.
3. How do the assumptions of *free entry* and *free exit* affect the potential levels of firm profit in the short run versus the long run?
4. Using diagrams, explain the adjustment to a new long-run equilibrium following i) a change in consumer preferences against a product; ii) new technology which makes the product’s production more efficient.

***E. Allocative and Productive Efficiency***

1. State the conditions under which a market would reach i) *allocative efficiency* and ii) *productive efficiency*.
2. Outline the relationship between output and costs in a condition of *productive efficiency*.
3. Explain, using a diagram, why a perfectly competitive market leads to allocative efficiency in both the long run and the short run.
4. Explain, using a diagram, why a perfectly competitive firm will be productively efficient in the long run but not necessarily in the short run.

***F. Evaluating Perfect Competition***

1. Evaluate the benefits of perfect competition for a society/economy.
2. Explain benefits and limitations of the perfect competition model.
3. Explain why we study the perfectly competitive market even though it is based on unrealistic assumptions.