

# HOMEWORK 1

## **Explain the concepts of explicit cost and implicit cost using an example.**

Explicit cost is the clear, out-of-pocket expenses a business or individual pays for goods, services, or resources. These costs involve direct payments and are easily quantifiable. For example, when a business buys raw materials, pays employee wages, or rents office space, these are explicit costs.

Implicit cost is the **opportunity cost** of using resources that you already own. They're the value of resources used for one purpose that could have been used for something else. For example, if you decide to start your own business instead of working at a regular job, the salary you could have earned at that job is an implicit cost. It's not a direct payment like explicit costs, but it represents what you're giving up by choosing one option over another.

## **'Accounting profit can be higher than the economic profit.'** **Explain.**

In microeconomics, accounting profit only considers explicit costs like expenses and taxes, while economic profit considers both explicit and implicit costs, including opportunity costs. Accounting profit exceed economic profit when implicit costs are neglected. For example, a business may seem profitable based on accounting records if it covers its explicit costs and earns a surplus. However, if it neglects the owner's opportunity cost, like their foregone salary, economic profit could be lower or negative despite positive accounting profit. So, accounting profit may appear higher than economic profit because it doesn't account for all costs.

## **Using a diagram, explain the concept of 'profit-maximizing principle of marginal analysis'.**

The marginal profit maximization rule is a principle in economics that guides businesses in determining the optimal level of output to maximize their profits. It

involves comparing the additional revenue earned from producing one more unit of a good or service (marginal revenue) with the additional cost incurred from producing that additional unit (marginal cost).

According to this rule, a firm should continue producing additional units of output as long as the marginal revenue generated from selling those units exceeds the marginal cost of producing them. The profit-maximizing level of output is reached when marginal revenue equals marginal cost. Beyond this point, producing more units would result in diminishing returns and lower profits.

In summary, the marginal profit maximization rule helps businesses make decisions about how much to produce in order to achieve the highest level of profitability, ensuring efficient allocation of resources.

### **What is sunk cost? Explain using an example.**

A sunk cost is a cost that is nonrecoverable. A sunk cost should be ignored in decisions about future actions.

For example, imagine you buy a ticket to a concert for \$50, but then you realize you have other plans on the same day. The \$50 you spent on the ticket is a sunk cost because you can't get it back, no matter what you do. Even if you decide not to go to the concert, the money is already gone.

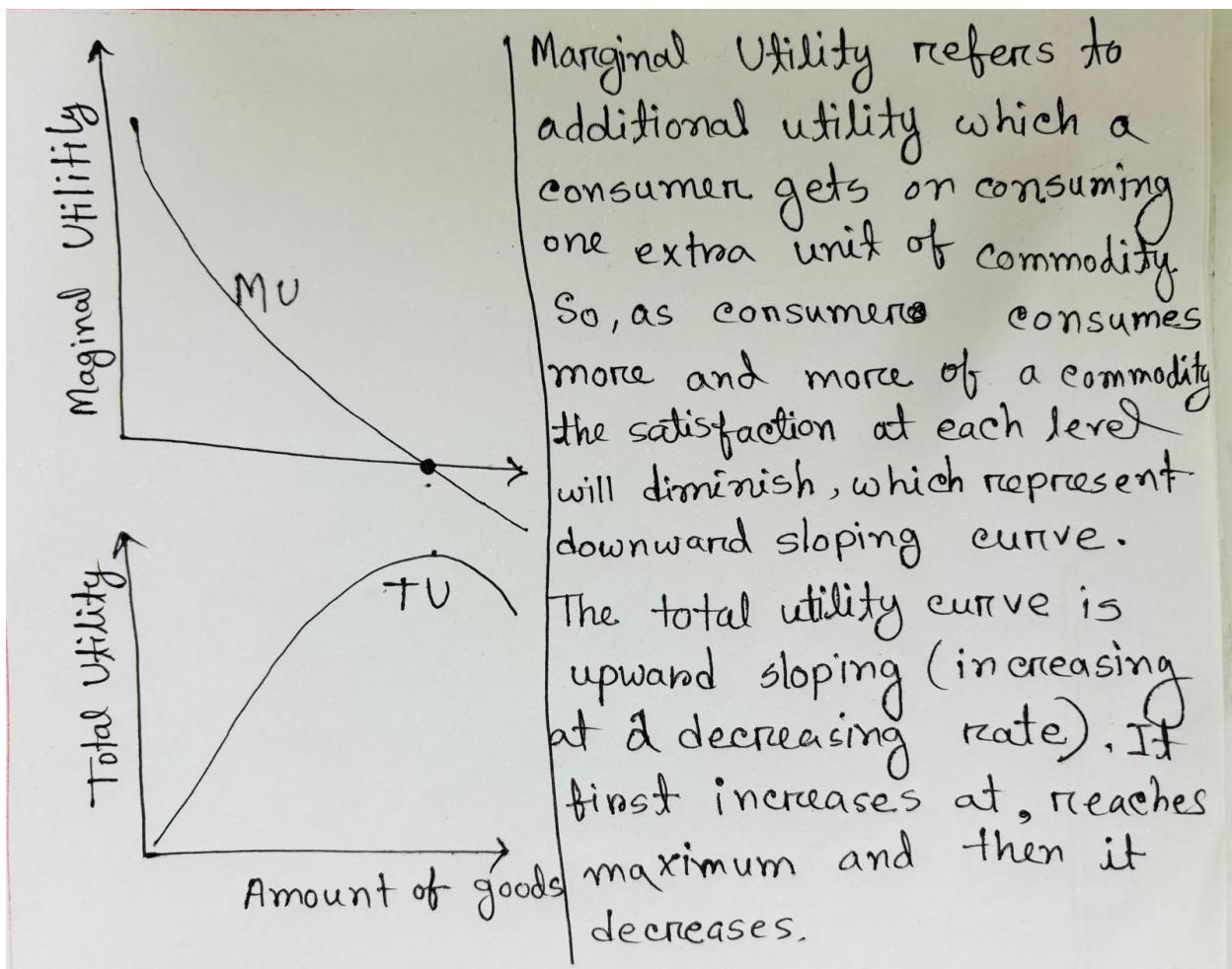
### **What is the 'principle of diminishing marginal utility'? Explain using an example.**

The principle of diminishing marginal utility states that as you consume more of a good or service, the additional satisfaction or happiness you get from each additional unit decreases. In simpler terms, the more you have of something, the less you value each extra bit of it.

Here's an example:

Imagine you're eating slices of pizza. The first slice you eat might be really satisfying, making you really happy. The second slice is still enjoyable, but not as much as the first one. By the time you eat , you might start feeling less happy with each additional slice. This is because your desire for pizza diminishes as you consume more of it. Each additional slice gives you less happiness compared to the previous one.

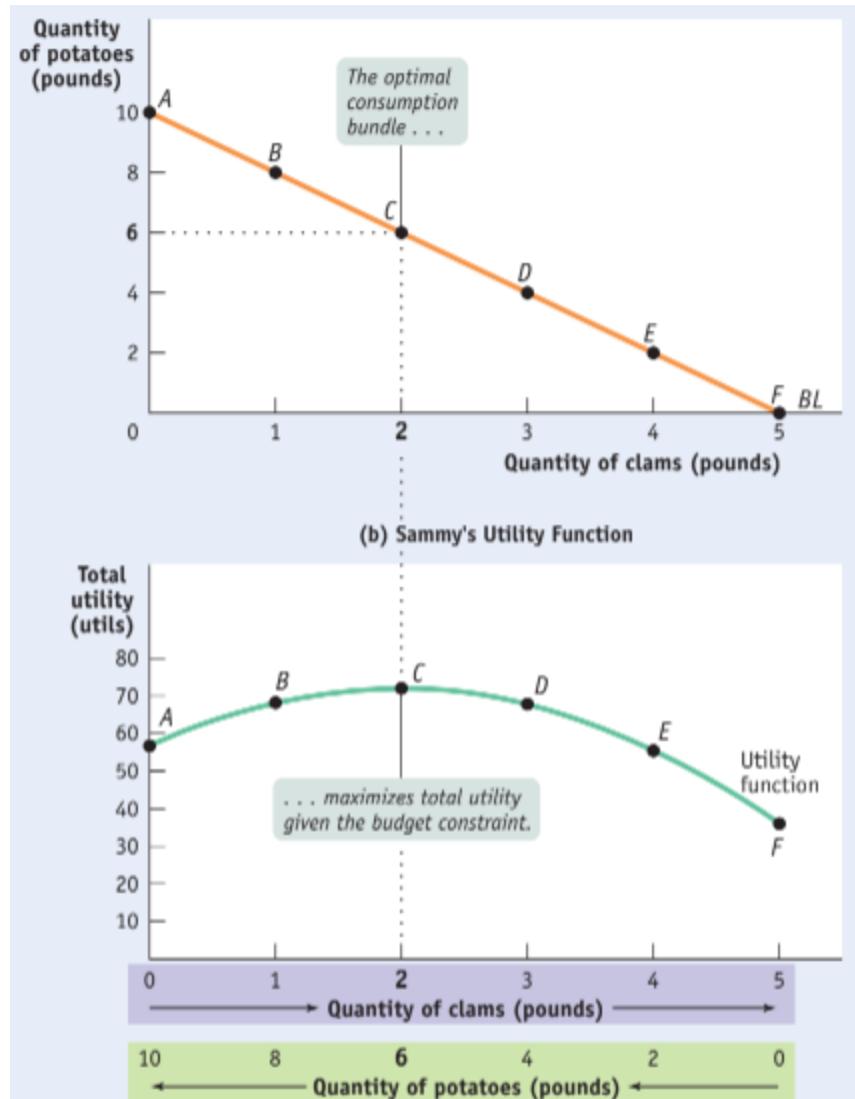
**Explain the shapes of marginal utility and total utility curves. (use two separate diagrams)**



**Using total utility and budget constraint, how do we identify the optimal consumption bundle?**

The optimal bundle is also called the utility maximization point or the consumer equilibrium. This is a combination of two goods that provides us maximum utility within the budget.

Identifying the optimal consumption bundle involves finding the combination of goods and services that maximizes total utility while staying within the constraints of the consumer's budget.



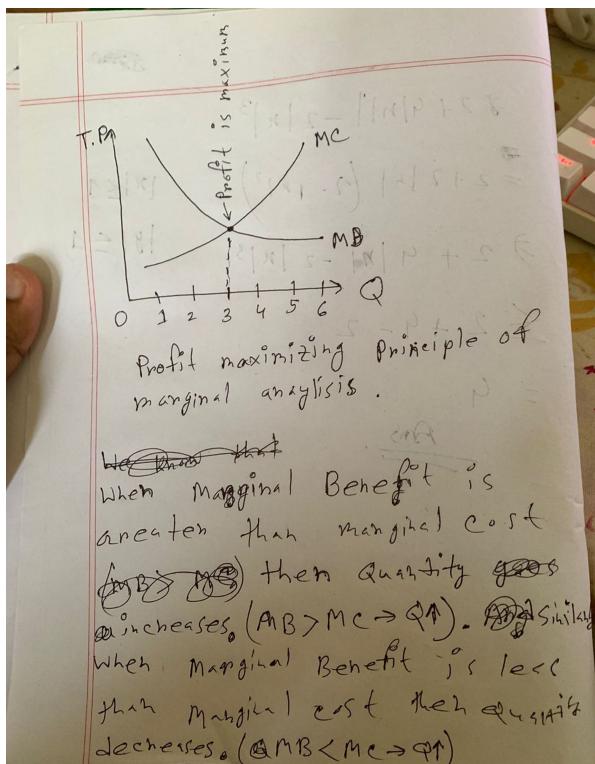
Here C is giving the highest utility than A,B,D,E. So ,the optimal consumption bundle is at point C.

## Why is it important to calculate the marginal utility of per unit of our income?

Calculating marginal utility per unit of income helps us spend money wisely. By knowing how much satisfaction or happiness we get from each dollar spent, we can decide where to allocate our budget for maximum joy. It guides individuals to prioritize spending on items that bring the most happiness relative to their cost. For businesses, it aids in pricing strategies and resource allocation, ensuring optimal profits. Policymakers also use this data to design fairer taxation and

welfare policies, ultimately aiming for a happier society with efficient resource use. Overall, Calculating the marginal utility of income helps individuals and businesses make smart choices about spending and production.

## Using a diagram, explain the concept of 'utility maximizing principle of marginal analysis'.



~~Profit~~  
But when  $MB$  is equal to  $MC$  then the profit is maximum.

The combination of goods or services that maximize utility is determined by comparing the marginal utility of two choices and finding the alternative with the highest total utility within the budget limit. The decision is influenced by the option that produces a higher level of satisfaction. Through maximizing utility, the consumer will buy an item that produces the greatest marginal utility within budget.

Generally, a customer will consume a product up until the marginal utility is equal to zero. If a certain item comes with marginal utility, the consumer will continue to purchase more of that good. However, if the utility of that product declines with the consumption of each subsequent additional unit, then the consumer will stop when marginal utility reaches zero or becomes negative.

