The document gives a brief explanation of different concepts in SYBA Economics II. Disclaimer: Definitions and explanations taken from various sources. Only for LSRC students.
1. **Preferences**: In economics and other social sciences, preference is the ordering of alternatives based on their relative utility, a process which results in an optimal "choice". Consumer preference is defined as a set of assumptions that focus on consumer choices that result in different alternatives such as happiness, satisfaction, or utility. The entire consumer preference process results in an optimal choice.

2. **Transitivity of preferences**: Transitivity of preferences is a fundamental principle shared by most major contemporary rational, prescriptive, and descriptive models of decision making. To have transitive preferences, a person, group, or society that prefers choice option x to y and y to z must prefer x to z.

3. **Completeness of Preferences**: These preferences have to satisfy three properties: completeness, transitivity and "more is better". By completeness I mean that when consumers face a choice between any two bundles of goods, they can always rank them.

4. **Rational Preference**: When a preference order is both transitive and complete, then it is standard practice to call it a rational preference relation, and the people who comply with it are rational agents. A transitive and complete relation is called a weak order (or total pre-order).

5. **Strong Ordering**: A set of items is strongly ordered, if each item has a place of its own in the order and each item could then be given a number and to each number there would be one item and only one item which would correspond.

6. **Weak Ordering**: A set of items is weakly ordered if the items are clustered into groups but none of the items within a group can be put ahead of the others. A weak ordering consists of a division into groups, in which sequence of groups is strongly ordered, but in which there is no ordering within the groups.

7. **Indifference curve**: It is a graph showing combination of two goods that give the consumer equal satisfaction and utility. Each point on an indifference curve indicates that a consumer is indifferent between the two and all points give him the same utility.

8. **A budget constraint** represents all the combinations of goods and services that a consumer may purchase given current prices within his or her given income. It is use to analyze consumer choices. Thus the budget constraint describes the different amount of two commodities that a consumer can afford.

9. **Properties of Indifference curves**:
   - They Slope Negatively or Slope Downwards from the Left to the Right:
   - They are Convex to the Origin.MRS\_{xy} is diminishing.
   - Every Indifference Curve to the right represents Higher Level of Satisfaction than that of the Proceeding One
- Indifference Curves can neither touch nor Intersect each other
- Indifference Curves are not Necessarily Parallel to each other. Although, they are Falling and Negatively Inclined to the Right

10. Consumer equilibrium: The state of balance achieved by an end user of products that refers to the amount of goods and services they can purchase given their present level of income and the current level of prices. Consumer equilibrium allows a consumer to obtain the most satisfaction possible from their income. It is denoted by $MRS_{xy} = \frac{P_x}{P_y}$.

11. Utility Maximization: Consumers must choose among alternative goods with their limited money incomes. The Utility Maximization rule states: consumers decide to allocate their money incomes so that the last dollar spent on each product purchased yields the same amount of extra marginal utility.

12. Income Effect: the income effect is the change in the consumption of goods caused by a change in income, whether income goes up or down. The income effect can be direct or indirect. The income effect is the effect on real income when price changes - it can be positive and negative. Below, as price falls, and assuming nominal income is constant, the same nominal income can buy more of the good - hence demand for this (and other goods) is likely to rise.

13. The income-consumption curve is a curve in a graph in which the quantities of two goods are plotted on the two axes; the curve is the locus of points showing the consumption bundles chosen at each of various levels of income.

14. Substitution effect: It is the economic understanding that as prices rise — or income decreases — consumers will replace more expensive items with less costly alternatives. The substitution effect is when there is a change in quantity demanded due to the change in the price of one good relative to another good. Substitution effect means that the consumer is chose a less expensive product for maximizing his satisfaction as his nominal income is fixed.

15. Price Effect: The change in demand of a product or a service due to change in the price of it is known as price effect. Price effect = Proportionate change in quantity demanded of $X$/ Proportionate price change of $X$. Price effect is said to be the summation of income effect and substitution effect.

16. Price Consumption Curve: The price-consumption curve (PCC) indicates the various amounts of a commodity bought by a consumer when its price changes, other things remaining the same.

17. A production function relates quantities of physical output of a production process to quantities of physical inputs or production function refers as the expression of the technological relation between physical inputs and outputs of the goods. It refers to the functional relationship between the quantity of a good produced (output) and factors of production (inputs). It is expressed as follows:
\[ Q = f( L, K, N, E, T ) \] where \( L \) = Labour, \( N \) = Land, \( K \) = Capital, \( E \) = Enterpreneur, \( T \) = Technology

18. **The Cobb-Douglas production function** is a particular functional form of the production function, widely used to represent the technological relationship between the amounts of two or more inputs and the amount of output that can be produced by those inputs. It is a particular form of the production function as we will see below. \( Q(L,K) = A L^\beta K^\alpha \)

where:
- \( Q \) is the quantity of products.
- \( L \) is the quantity of labor.
- \( K \) is the quantity of capital.
- \( A \) is a positive constant.
- \( \beta \) and \( \alpha \) are constants between 0 and 1.

19. **Shortrun returns to scale**: The way total output changes due to change in the scale of production is known as returns to scale. In the short-run change in output is associated with the change in factor proportions. The production law associated with it is called as Law of variable proportions which explains the behaviour of output with changes in the variable factors.

20. **Long run returns to scale**: In the long run, all factors of production are variable. How the output of a business responds to a change in factor inputs is called returns to scale. In the long run, output can be increased by increasing all factors in the same proportion. Generally, laws of returns to scale refer to an increase in output due to increase in all factors in the same proportion. Such an increase is called returns to scale.

21. **An Isoquant** is a curve that shows all the combinations of inputs that yield the same level of output. 'Iso' means equal and 'quant' means quantity. Therefore, an isoquant represents a constant quantity of output.

22. **The Isocost line** illustrates all the possible combinations of two factors that can be used at given costs and for a given producer's budget. In simple words, an isocost line represents a combination of inputs which cost the same amount. Isocost curve is a producer's budget line. An isocost line is a graphical representation of various combinations of two factors (labor and capital) which the firm can afford or purchase with a given amount of money or total outlay and the prices of the two factors.

23. **Producer’s Equilibrium or Least Cost combination**: Producers generally strive hard to maximize profit at minimum cost. A producer can attain equilibrium by applying the least cost combination. The least cost combination of factors refers to a firm producing the largest volume of output from a given cost and producing a given level of output with the least cost combination of factors, combined in an optimum manner. It is the point where \( MRTS_{LK} = \frac{P_L}{P_K} \).
24. **Total cost (TC)** describes the total economic cost of production and is made up of variable costs, which vary according to the quantity of a good produced and include inputs such as labour and raw materials, plus fixed costs, which are independent of the quantity of a good produced.

25. **A fixed cost** is a cost that remains the same and does not depend on the amount of goods and services a company produces. One can find total fixed cost by subtracting total variable cost from a company's total cost. Total fixed costs are the sum of all expenses that are constant that a company must pay.

26. **Total Variable costs** are expenses that vary in proportion to the amount of goods. The overall expense associated with producing a good or providing a service that change in direct proportion to the quantity produced or provided. The total variable cost of producing an item will typically include the cost of labor and raw materials used in the process.

27. **Average cost** and/or unit cost is equal to total cost (TC) divided by the number of goods produced (the output quantity, Q). It is also equal to the sum of variable costs (total variable costs divided by Q) plus average fixed costs (total fixed costs divided by Q).

28. **Marginal cost** is the additional cost incurred for the production of an additional unit of output.

29. **The social cost** is used in the social cost-benefit analysis of the overall impact of the operations of the business on the society as a whole and do not normally figure in the business decisions. The social cost includes both the private cost and the external cost. It is the expense to an entire society resulting from a decision, an activity or a change in policy.

30. **The private cost** is the actual cost incurred in performing the day to day operations of the business, such as the cost involved in the production and consumption of the product. Private cost: are the those costs that are incurred by the individuals and firms who are directly involved in some economic activity.

31. **A historical cost** is a measure of value used in accounting in which the price of an asset on the balance sheet is based on its nominal or original cost when acquired by the company.

32. **Replacement cost** is the cost to replace an asset of a company at the same or equal value, where the asset to be replaced could be a building, investment securities, accounts receivable or liens. Accountants use depreciation to expense the cost of the asset over its useful life. The term replacement cost or replacement value refers to the amount that an entity would have to pay to replace an asset at the present time, according to its current worth. In the insurance industry, "replacement cost" or "replacement cost value" is one of several method of determining the value of an insured item.
33. **An explicit cost** is a direct payment made to others in the course of running a business, such as wage, rent and materials, as opposed to implicit costs, land lassanare those where no actual payment is made.

34. **An implicit cost** is any cost that has already occurred but is not necessarily shown or reported as a separate expense. It represents an opportunity cost that arises when a company allocates internal resources toward a project without any compensation for the utilization of resources.

35. **Accounting costs** come from the total explicit costs of the company during the fiscal year. Explicit costs are defined monetary values and are used to calculate. It is the monetary value of economic resources used in performing an activity.

36. **Economic costs** include accounting costs, but they also include opportunity costs. It includes both, explicit and implicit costs.

37. **The Long Run Average Cost, LRAC**, curve of a firm shows the minimum or lowest average total cost at which a firm can produce any given level of output in the long run (when all inputs are variable). Long-run cost curve is a planning curve because it is a guide to the entrepreneur to plan his output. Long-run average cost is derived from short-run cost curves. LAC curve is the locus of points denoting the least cost of producing the corresponding output. So LAC curve is also called 'envelope curve'.

38. **Total revenue** in economics refers to the total receipts from sales of a given quantity of goods or services. It is the total income of a business and is calculated by multiplying the quantity of goods sold by the price of the goods.

39. **Average revenue** is the revenue generated per unit of output sold. It plays a role in the determination of a firm's profit. Per unit profit is average revenue minus average (total) cost. A firm generally seeks to produce the quantity of output that maximizes profit.

40. **Marginal revenue** (MR') is the additional revenue that will be generated by increasing product sales by one unit. It can also be described as the unit revenue the last item sold has generated for the firm.

41. **Features of a Perfectly Competitive Market**
   - Large number of firms
   - Large number of buyers
   - Sellers are price takers
   - Homogeneous Product
   - Free entry and exit
   - Perfect knowledge
   - Cheap and Efficient Transport and Communication

42. Two conditions of equilibrium are:
   (i) MC = MR
   (ii) MC curve should cut the MR curve from below i.e. slope of MC > Slope of MR at intersection.

43. **Consumer surplus** is defined as the difference between the total amount that consumers are willing and able to pay for a good or service (indicated by the demand curve) and the total amount that they actually do pay (i.e. the market price).
44. **Producer surplus** is defined as the difference between the amount the producer is willing to supply goods for and the actual amount received by him when he makes the trade.