

Unit 1 Questions

NOTE: These are POSSIBLE Essay Questions from this Unit

- 1. Define Managerial Economics and explain its nature and scope**
- 2. Managerial Economics -Interdisciplinary Explain**
- 3. Law of Demand**
- 4. Factors affecting Law of Demand or demand determinants or Demand Function**
- 5. Elasticity of Demand**
- 6. Demand Forecasting**

Other small topics not covered here(check below Syllabus) can be prepared from here -

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Unit I- Introduction Managerial Economics, Demand and Demand Forecasting

Economics: Significance of Economics, Distinction between Micro and Macro Economics, Introduction to Managerial Economics, Nature and Scope of Managerial Economics, Multidisciplinary nature of Business Economics.

Demand Analysis: Meaning of Demand, Determinants of Demand, Law of Demand and its exceptions, Elasticity of Demand Elasticity, Types of Elasticity, Measurement and Significance of Elasticity of Demand.

Demand Forecasting: Importance of Demand Forecasting, Methods of Demand forecasting, Characteristics of Good Demand Forecasting method.

R18 CSE Team

Unit 1 Answers

1. Define Managerial Economics and explain its nature and scope

Answer :

- **Definition**

- Acc to E. F. Brigham and J. L. Pappas

- the applications of economics theory and methodology to business administration practice
- Managerial economics deals with the application of the economic concepts, theories, tools, and methodologies to solve practical problems in a business.
 - It is the combination of economics theory and managerial theory
 - It helps the manager in decision-making and acts as a link between practice and theory

- **Nature of Managerial Economics**

- 1. **Close to microeconomics**

- as managerial economics is concerned with finding the solutions for different managerial problems of a particular firm

- 2. **Operates against the backdrop of macroeconomics**

- managerial economist has to be aware of the limits set by the macroeconomics conditions such as government industrial policy, inflation and so on.

- 3. **Normative statements:**

- By introducing corrective steps it aims at achieving the objective and solves specific issues or problems.

- 4. **Prescriptive actions**

- suggests the course of action from the available alternatives for optimal solution

- 5. **Applied in nature:**

- Models can be built to reflect the real life complex business situations and help managers for decisionmaking
 - Eg : in inventory control, optimization, project management etc.

- 6. **Offers scope to evaluate each alternative**

- evaluate each alternative in terms of its costs and revenue. and helping the managerial economist to decide which is the better alternative to maximize the profits for the firm

- 7. **Interdisciplinary**

- contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy etc

- 8. **Assumptions and limitations**

- Every concept and theory of managerial economics is based on certain assumption and their validity is not universal

- 9. **Managerial economics is a study of allocation of resources:**

- deals with the problem of resource allocation like what to produce, how to produce and for whom to produce.
 - resources can be 3 types

- 1. Input allocation

- raw materials, labor hrs, machine hrs

- 2. Output allocation:

- meeting customers demand in different segments of markets at different locations

- 3. Allocation of funds

- Ratio analysis and financial statement analysis helps in making decisions about fund allocation

- **Scope of Managerial Economics**

- 1. **DEMAND ANALYSIS**

- study of consumer behavior towards the firms product
 - In demand analysis we analyse the consumer sensitivity towards the price of the product, its quality, after sales services.

- 2. **INPUT-OUTPUT DECISION**

- costs of inputs in relation to output are studied to optimize the profits

- 3. **PRICE-OUTPUT DECISION**

- firm has to be aware of markets it is operating in so Market analysis helps in arriving at an effective pricing decision.

- 4. **Profit related decision**

- employ techniques such as break even analysis, cost reduction and cost control
 - Ration analysis ascertains level of profit

- 5. **Investment analysis /capital budgeting decisions**

- firm evaluates each investment to carry on a sensible policy of capital budgeting so as to take care of long term investments

6. Economic forecasting and forward planning

- economic forecasting leads to forward planning

2. Managerial Economics -Interdisciplinary Explain

Answer :

- Managerial economics has a close linkage with other disciplines and fields of study.
- The subject has gained by the interaction with Economics, Mathematics and Statistics and has drawn upon Management theory and Accounting concepts
- contents, tools and techniques of managerial economics are drawn from different subjects such as economics, management, mathematics, statistics, accountancy etc

• link with other disciplines

1. Managerial Economics and Traditional Economics

- Managerial Economics has been described as economics applied to decisionmaking.
- It may be viewed as a special branch of economics bridging the gulf between pure economic theory and managerial practice

2. Managerial Economics and Accounting

- Managerial economics and accounting are closely interrelated.
- Accounting can be defined as the recording of financial operations of a business firm.
- A business manager needs a lot of accounting information data for logical analysis in decisionmaking and policy formulation at the level of firm

3. Managerial Economics and Operational Research

- Operational research is the application of mathematical techniques to solving business problems
- Both Managerial economics and Operational Research are concerned with efficient use of scarce resources
- techniques such as linear programming is extensively used in decisionmaking

4. Managerial Economics and Marketing

- Managerial Economics helps marketing in two ways
 - 1. provides tools and concepts of analysis
 - 2. providing its judgement on the optimum sales volume under the given cost function of a firm, market structure etc

5. Managerial Economics and Mathematics

- mathematics helps in estimating various economic relationships, predicting relevant economic quantities and using them in decision-making and forward planning
- A knowledge of geometry, trigonometry and algebra is not essential & certain mathematical tools and concepts such as logarithms and exponentials, vectors, determinants and matrix algebra, calculus, differential, integral, are the needed

6. Managerial Economics and Statistics

- Statistics is important to managerial economics in several ways
 - **Eg :** in order to base its pricing decisions on demand and cost considerations, a firm should have statistically derived or calculated demand and cost functions.

7. Managerial Economics and psychology

- In Managerial economics most important task is to assess demand for which analysis of consumer behaviour is necessary to know the reaction of consumers towards change in demand determinants
- Various organization and leadership models were developed to achieve the business objective keeping in mind various stakeholders

3. Law of Demand

Answer :

- Law of demand shows the relation between price and quantity demanded of a commodity in the market.
- **Law** -> the amount demand increases with a fall in price and diminishes with a rise in price



- **Assumptions :** Law of demand is based on certain assumptions

1. There is no change in consumers' taste and preferences.
2. Income should remain constant.
3. Prices of other goods should not change.
4. There should be no substitute for the commodity.
5. The commodity should not confer any distinction.
6. The demand for the commodity should be continuous.
7. People should not expect any change in the price of the commodity.

- **Exceptional demand curve or exceptions to demand curve**

- Sometimes the demand curve slopes upwards from left to right.
- In this case the demand curve has a positive slope.
- When price increases quantity demanded also increases and vice versa.
- The reasons for exceptional demand curve are as follows

1. **Giffen paradox**

- When the price of an inferior good falls, the poor will buy less and vice versa.
- **Eg :**
 - when the price of maize falls, the poor are willing to spend more on superior goods than on maize.
 - If the price of maize increases, he has to increase the quantity of money spent on it. Otherwise he will have to face starvation.
 - Thus a fall in price is followed by reduction in quantity demanded and vice versa.

2. **Veblen or Demonstration effect**

- Veblen goods are typically high-quality goods and are a status symbol.
- Veblen goods are generally sought after by affluent consumers who place a premium on the utility of the good.
- **Eg :**
 - diamonds are bought by the richer class for the prestige it possesses. If the price of diamonds falls, the poor also will buy hence they will not give prestige. Therefore, rich people may stop buying this commodity.

3. **Ignorance**

- Sometimes, the quality of the commodity is judged by its price.
- Consumers think that the product is superior if the price is high.
- As such they buy more at a higher price.

4. **Speculative effect or fear of change in price**

- If the price of the commodity is increasing, the consumers will buy more of it because of the fear that it will increase still further.

5. **Extraordinary situations**

- During the times of emergency or war, people may expect shortage of a commodity.
- At that time, they may buy more at a higher price to keep stocks for the future.

6. **Conspicuous Necessaries**

- In the case of necessities like rice, vegetables etc., people buy more even at a higher price.

Answer :

- affect of all the factors on the amount demanded for the commodity is called Demand Function

1. Price of the Commodity

- existing price and also the expected changes in price, which affect demand

2. Income of the Consumer

- demand for a normal commodity goes up when income rises and falls down when income falls.
- But in case of Giffen goods the relationship is the opposite.

3. Prices of related goods

- demand for a commodity is also affected by the changes in prices of the related goods also

1. Substitutes - can replace each other in use

- **Eg :** rise in price of coffee shall raise the demand for tea

2. Complementary - are those which are jointly demanded, such as pen and ink

- **Eg :** If the price of pens goes up, their demand is less as a result of which the demand for ink is also less

4. Tastes of the Consumers

- amount demanded also depends on consumer's taste. Tastes include fashion, habit, customs, etc.
- A consumer's taste is also affected by advertisement.

5. Population

- Increase in population increases demand for necessities of life.
- The composition(proportion of young and old and children ,ratio of men to women) of population also affects demand

6. Government Policy

- Government policy affects the demands for commodities through taxation.
- Taxing a commodity increases its price and the demand goes down.
- Similarly, financial help from the government increases the demand for a commodity while lowering its price

7. Expectations regarding the future

- If consumers expect changes in price of commodity in future, they will change the demand at present even when the present price remains the same.
- Similarly, if consumers expect their incomes to rise in the near future they may increase the demand for a commodity just now

8. Climate and weather

- climate of an area and the weather prevailing there has a decisive effect on consumer's demand.
- In cold areas woolen cloth is demanded.
- During hot summer days, ice is very much in demand.
- On a rainy day, ice cream is not so much demanded

9. State of business

- level of demand for different commodities also depends upon the business conditions in the country.
- If the country is passing through boom conditions, there will be a marked increase in demand
- the level of demand goes down during depression

5. Elasticity of Demand

Answer :

- Elasticity is the measure of responsiveness. It is the ratio of the percent change in one variable to the percent change in another variable
- Elasticity of demand shows the extent of change in quantity demanded to a change in price
- **Types of Elasticity of Demand**

1. Price elasticity of demand

- measures changes in quantity demand to a change in Price.
- It is the ratio of percentage change in quantity demanded to a percentage change in price

Proportionate change in the quantity demanded

$$\text{Price elasticity} = \frac{\text{Proportionate change in the quantity demanded}}{\text{Proportionate change in price of the product}}$$

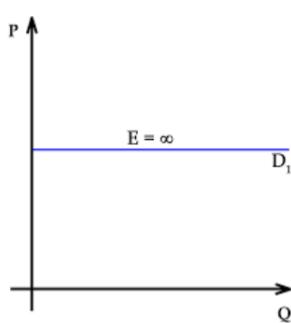
Proportionate change in price of the product

- **Price elasticity of demand can be classified into**

1. Perfectly / infinitely elastic demand

- small change in price leads to an infinitely large change in quantity demand

- $E = \infty$



2. Perfectly inelastic demand:

- large change in price fails to bring about a change in quantity demanded
- response of demand to a change in Price is nil
- $E' = 0$

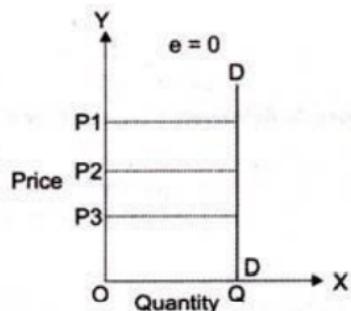


Figure-3: Perfectly Inelastic Demand

3. Relatively elastic demand

- small change in price leads to a very big change in the quantity demanded
- Demand changes more than proportionately to a change in price
- $E > 1$
- demand curve will be flatter

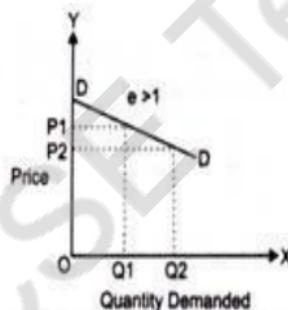


Figure-4: Relatively Elastic Demand

4. Relatively in-elastic demand

- A large change in price leads to small change in amount demanded
- Quantity demanded changes less than proportional to a change in price
- Here $E < 1$.
- Demand curve will be steeper

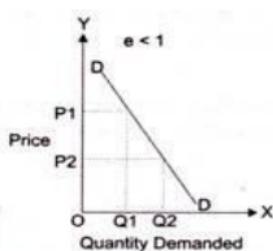
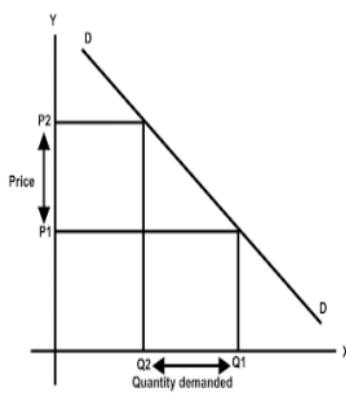


Figure-5: Relatively Inelastic Demand

5. Unit elastic

- change in demand is exactly equal to the change in price
- $E=1$



2. Income elasticity of demand

- shows the change in quantity demanded as a result of a change in income
Proportionate change in the quantity demand of commodity

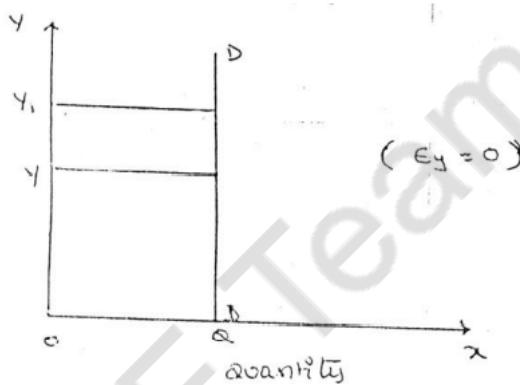
Income elasticity of demand = -----

Proportionate change in the income of the people

■ Income elasticity of demand can be classified in to five types

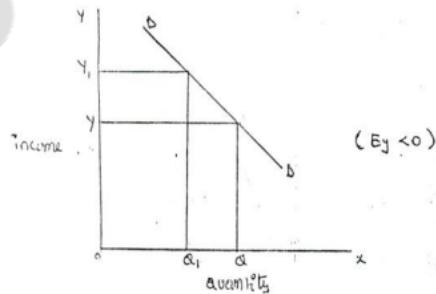
1. Zero income elasticity

- Quantity demanded remains the same, even though money income increases
- $E_y = 0$



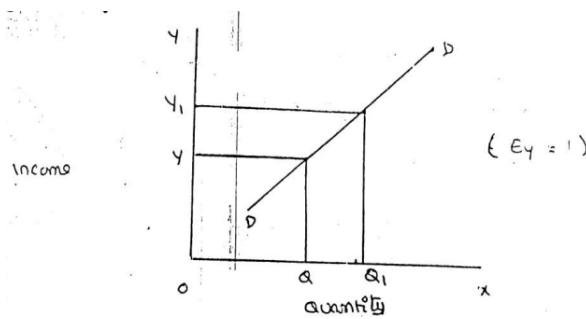
2. Negative Income elasticity

- income increases, quantity demanded falls
- In this case, income elasticity of demand is negative
- $E_y < 0$



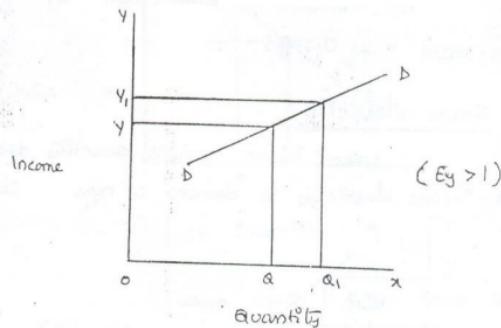
3. Unit income elasticity

- increase in income brings about a proportionate increase in quantity demanded
- income elasticity of demand is equal to one.
- $E_y = 1$



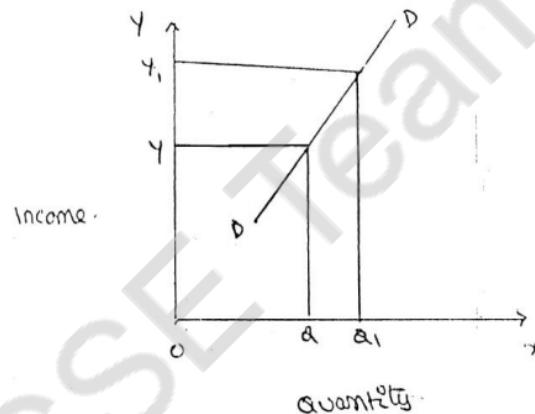
4. Income elasticity greater than unity

- increase in income brings about a more than proportionate increase in quantity demanded
- $E_y > 1$



5. Income elasticity less than unity

- income increases quantity demanded also increases but less than proportionately
- $E_y < 1$



3. Cross elasticity of demand

- change in the price of one commodity leads to a change in the quantity demanded of another commodity

Proportionate change in the quantity demand of commodity "X"

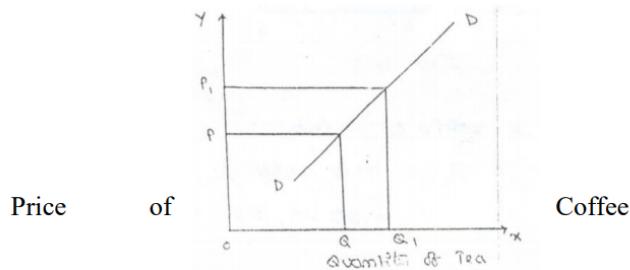
$$\text{Cross elasticity} = \frac{\text{Proportionate change in the quantity demand of commodity "X"}}{\text{Proportionate change in the price of commodity "Y"}}$$

■ Cross elasticity of demand can be seen under

1. In case of substitutes

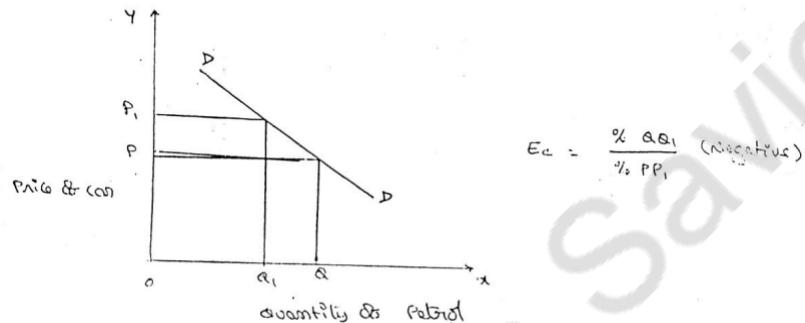
- cross elasticity of demand is positive.
- Eg:

- Coffee and Tea
- When the price of coffee increases, Quantity demanded of tea increases. Both are substitutes



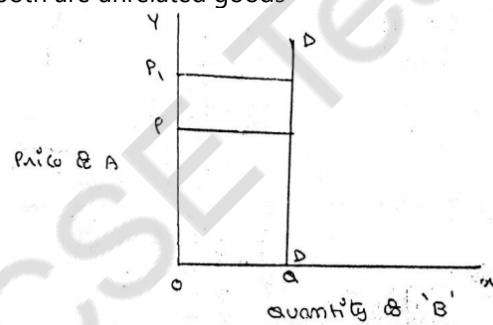
2. In case of **complements**

- cross elasticity is negative.
- If increase in the price of one commodity leads to a decrease in the quantity demanded of another and vice versa
- The cross-demanded curve has negative slope
- When price of car goes up from OP to OPI, the quantity demanded of petrol decreases from OQ to OQI.



3. In case of **unrelated** commodities

- cross elasticity of demanded is zero.
- A change in the price of one commodity will not affect the quantity demanded of another
- Quantity demanded of commodity "B" remains unchanged due to a change in the price of 'A', as both are unrelated goods



4. Advertising elasticity of demand

- ratio of proportionate change in quantity demanded for product X to the proportionate change in the advertising expenditure incurred in promoting it
- Advertising elasticity is always positive

Advertising elasticity = _____

Proportionate change in advertising costs

6. Demand Forecasting

Answer :

- **Demand Forecasting**

- Demand Forecasting refers to the process of predicting the future demand for the firm's product
- It involves series of steps that involves the anticipation of demand for a product in future under both controllable and non-controllable factors.

- historical sales data is used to develop an estimate of an expected forecast of customer demand

- **WHY TO FORECAST DEMAND ?**

1. To assess the likely demand
2. To plan the production accordingly
3. To plan the INPUTS (factors of production) Manpower (labour), Raw material, and Capital

- **Types of demand Forecasting** - Based on the time span and planning requirements of business firms

1. **Short-term demand forecasting**

- is limited to short periods, usually for one year

2. **Long – term demand forecasting.**

- to forecast long-term demand for the product
- Planning of a new plant or expansion of an existing unit depends on long-term demand

- **Methods of Demand Forecasting**



1. **Survey method**

- based on **Survey of buyer intentions**-

1. **Sample survey**

- survey is conducted by considering the small group of potential buyers who can represent the whole population
- also called as SAMPLE method

2. **Census survey**

- survey is conducted by considering the whole population
- also called as TOTAL ENUMERATION method

- based on **salesman intention**

1. **Opinion survey method/ sales force opinion method**

- company asks its salesman to submit estimate of future sales in their respective territories

2. **Statistical method**

1. **Trend projection methods**

- data accumulated by a well-established firm is analyzed to determine the nature of existing trend.
- Then, this trend is projected into the future and the results are used as the basis for forecast
- There are five main techniques

1. **Trend line by observation**

- involves plotting the actual sales data on a chart and the estimating just by observation where the trend line lies
- line can be extended towards a future period and corresponding sales forecast read from the graph

2. **Least square method**

- form of mathematical regression analysis that finds the line of best fit for a set of data

Y= future sales, a= constant, b=rate of change, x=year for which forecast is made

$$\Sigma S = Nx + y \sum T$$

$$\Sigma ST = x \sum T + y \sum T^2$$

Where S= sales, T= year number N= no of years

3. Time series analysis

- considerable data on the performance of the product or service over significantly large period should be available for better results under this method
- The major components analyzed in time series are
 1. Trend(T)
 2. Cyclic trend(C)
 3. Seasonal trend(s)
 4. Erratic trend (E)

4. Moving averages method

- averages of past events determine the future events
- 2-year, 3-year and 4-year moving averages are used

5. Exponential smoothing

- popular technique used for short run forecast
- value of the given variable in the recent times are given higher weights and values of the given variable in the distant past are given relatively lower weights for further processing

$$S_{t+1} = CSt + (1-C)Smt$$

Where,

S_{t+1} = Exponential smoothed average for new year

S_t = actual data in the most recent past

Smt =most recent smoothed forecast

C=smoothing constant

2. Barometric technique

- focuses on cyclical variations in time series data which acts as barometer as macroeconomic factors are considered.
- Under this method one set of data is used to predict another set.
- Eg :
 - Inflation and data relating to unemployment levels are the top indicators that help in understanding or analyzing the performance of the economy

3. Simultaneous equation method

- all variables are simultaneously considered, with the view that every variable influences the other variables in an economic environment
- set of equations equal the number of dependant variables / endogenous variables

$$Q=f(P, I, Pr, T)$$

4. Correlation and regression

- correlation describes the degree of association between two variables such as sales and advertisement expenditure
- When the two variables tend to change together, then they are said to be correlated
- In regression analysis, an equation is estimated which best fits in the sets of observations of dependent variables and independent variables.
- The best estimate of two underlying relationship between these variables is generated

3. Other methods

1. Expert opinion method

- Apart from salesmen, consumers & distributors, outside experts may also be used for forecasting
- Eg :
 - In United States of America, the automobile companies get sales estimates directly from their dealers

2. Test marketing

- entire product and marketing program is carried for the first time in a small number of well chosen and authentic sales environment
- primary objective of test marketing is to know whether the customer will accept the product in the present form or not

3. Controlled experiments

- product is introduced with different packages, different prices, in different markets to assess which combination appeals to the customer most

4. Judgmental approach

- when none of statistical and other methods are directly related to the given product/service the management has to use its own judgment in forecasting the demand
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Unit 2 Questions

NOTE: These are POSSIBLE Essay Questions from this Unit

1. Production Function with One Variable(Law of Variable proportion)
2. Production Function with two variable(isocost, isoquants)
3. Law of Returns to scale / Production function with change in multiple variables
4. What is BEP or cost-volume-profit(CVP) relationship , limitations, its importance
5. All BEP Problems
6. Type of Costs

Other small topics not covered here(check below Syllabus) can be prepared from here -

> https://drive.google.com/drive/folders/15mO_0D0frJbQ0za4MXXMWryGh2C5HgDd

Unit II- Theory of Production and Cost Analysis

Production Analysis: Factors of Production, Production Function, Production Function with one variable input, two variable inputs, Least Cost Combination of Inputs -Returns to Scale;
Cost Analysis: Types of Costs, CVP Analysis, Determination of Break Even Point (Simple Problems)

Unit 2 Answers

1. Production Function with One Variable(Law of Variable proportion)

Answer :

Law of Variable proportion

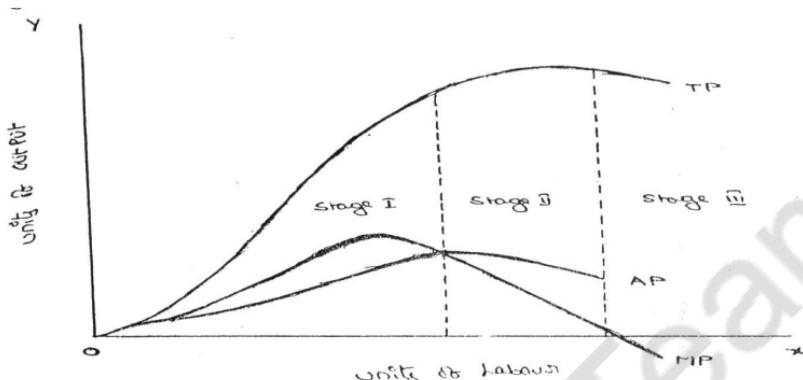
- **Statement**

- As the quantity of one variable input in a production process is Increased, with quantities of other Inputs remaining fixed, marginal physical product firstly increases, then after reaching a maximum, starts decreasing and finally becomes negative

- **Assumptions of the Law**

1. Land is considered as the fixed factor of production
2. Labour is assumed as a variable factor of production.
3. All workers involved in production are equally efficient.
4. There is short-run in the economy during which fixed factors of-production cannot be changed.

- **Graph**



- **Explanation of the above graph**

1. **Stage of Increasing Returns to variable proportion**

- total product increases at an increasing rate up to a point
- **Reason :** efficiency of the fixed factors increases as additional units of the variable factors are added to it
- $MP > 0 > AP$

2. **Stage of Diminishing Returns**

- total product continues to increase but at a diminishing rate until it reaches its maximum point
- both marginal product and average product of labour are diminishing but are positive
- **Reason :** fixed factor becomes inadequate relative to the quantity of the variable factor
- $MP > 0 < AP$

3. **Stage of Negative Returns**

- total product declines and therefore the TP curve slopes downward
- marginal product of labour is negative and the MP curve falls below the X-axis
- This is technically inefficient stage of production and a rational firm will not operate in this stage
- **Reason :** variable factor (labour) is too much relative to the fixed factor
- $MP < 0$ while AP will be falling

2. Production Function with two variable(isocost, isoquants)

Answer :

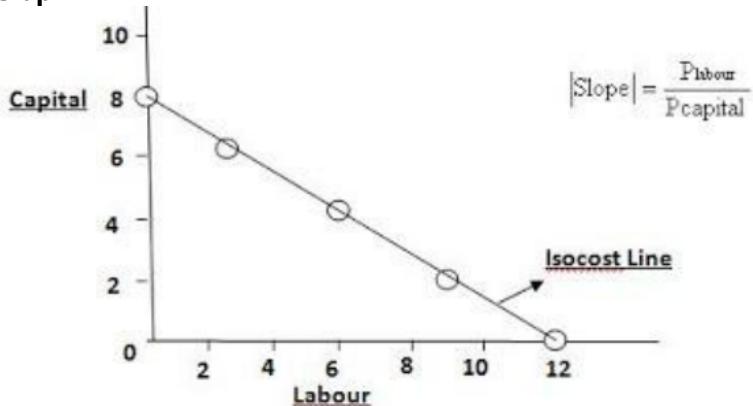
a) **Isocost**

- isocost line illustrates all the possible combinations of two factors that can be used at given costs and for a given producer's budget
- isocost line represents a combination of inputs which all cost the same amount
- is an important component when analysing producer's behaviour
- **Assumptions**

1. Input prices are fixed

- 2. No quantity discounts
- 3. Any change in input price changes the slope of cost line

- **Graph**



- **b) Isoquant**

- Iso means equal and quent implies quantity. Isoquant therefore, means equal quantity
- A family of iso-product curves or isoquants or production difference curves can represent a production function with two variable inputs, which are substitutable for one another within limits
- Isoquants are the curves, which represent the different combinations of inputs producing a particular quantity of output.
- Any combination on the isoquant represents the same level of output
- For a given output level firm's production become,

$$Q = f(L, K)$$

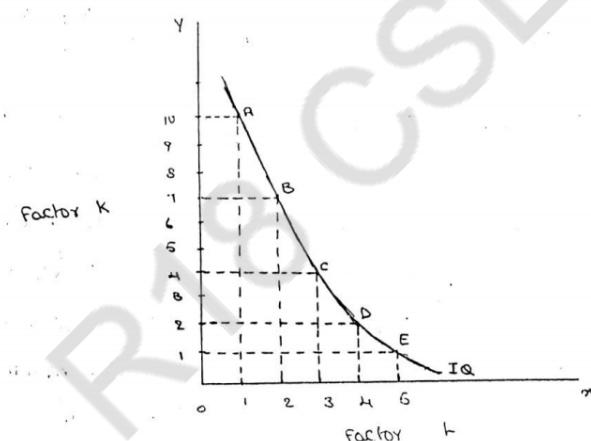
Where 'Q', the units of output is a function of the quantity of two inputs 'L' and 'K'.

- Thus an isoquant shows all possible combinations of two inputs, which are capable of producing equal or a given level of output.

- **Assumptions**

1. There are only two factors of production, viz. labour and capital.
2. The two factors can substitute each other up to certain limit
3. The shape of the isoquant depends upon the extent of substitutability of the two inputs.
4. The technology is given over a period

- **Graph**



- **Explanation for above graph**

- Labor is on the X-axis and capital is on the Y-axis. IQ is the ISO-Product curve which shows all the alternative combinations A, B, C, D, E which can produce 50 quintals of a product

- **Properties of Isoquants**

- 1. IQs are never parallel to each other**
 - Interspacing between them is least at the ends and maximum in the middle
- 2. IQs are convex to the origin**
 - convex isoquants possess continuous substitutability of K and L over a stretch.
 - Beyond this stretch, K and L are not substitutable for each other
- 3. IQs may be linear when labour and capital are perfect substitute**
 - linear isoquant implies that either factor can be used in proportion

4. If Land K are perfect complements to each other, the IQ is L-shaped

- It is also known as input-output isoquant or Leontief isoquant.
 - the corner point of L-shaped isoquant is the only one combination of L and K available for production
5. If marginal product of one of the two factors is zero, IQ is parallel to the axis on which the factor with zero marginal products is represented.
6. If one of the two factors has negative marginal product the IQ slopes upwards from left to right.
7. If both the factors have negative marginal products, the IQ is concave to the origin.
8. If the producer has a preference for a factor of production, the IQ is quasi linear.
9. If the factors to be employed in whole numbers units only. The IQ is discontinuous

3. Law of Returns to scale / Production function with change in multiple variables

Answer :

Law of Returns to scale

- law of returns to scale describes the relationship between variable inputs and output when all the inputs or factors are increased in the same proportion
- law of returns to scale operates in the long period
- analysis the effects of scale on the level of output
- we find out in what proportions the output changes when there is proportionate change in the quantities of all inputs
- when there is a proportionate change in the amounts of inputs, the behavior of output varies in following ways

1. Increasing Returns to Scale

- If the output of a firm increases more than in proportion to an equal percentage increase in all inputs, the production is said to exhibit increasing returns to scale
- The increase in the scale of production leads to lower average cost per unit produced as the firm enjoys economies of scale
- **Eg :** if the amount of inputs are doubled and the output increases by more than double, it is said to be an increasing returns to scale

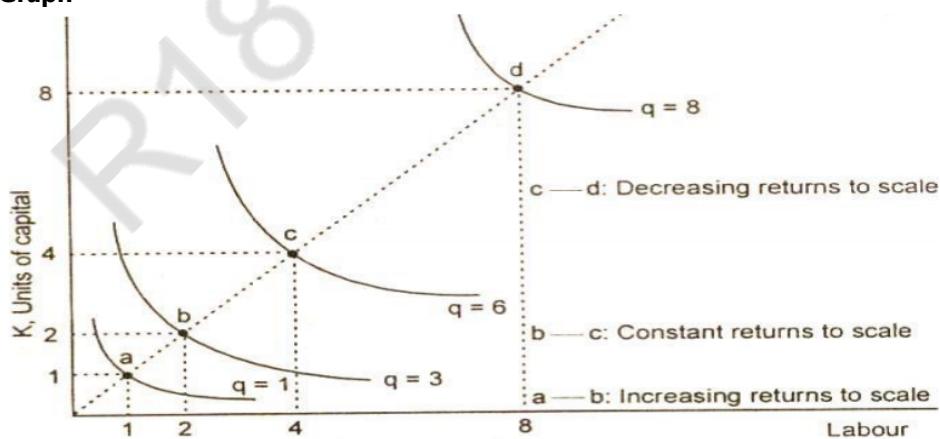
2. Constant Returns to Scale

- inputs are increased by a certain percentage, the output increases by the same percentage
- It has no effect on average cost per unit produced
- **Eg :** if a firm doubles inputs, it doubles output

3. Diminishing Returns to Scale

- output increases in a smaller proportion than the increase in all inputs
- In case of decreasing returns to scale, the firm faces diseconomies of scale. & firm's scale of production leads to higher average cost per unit produced
- **Eg :** firm increases inputs by 100% but the output decreases by less than 100%

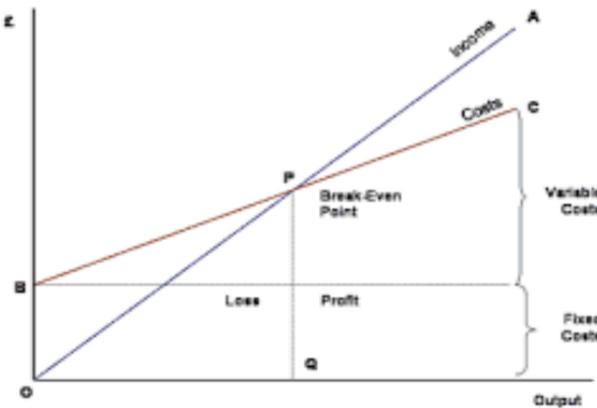
• Graph



4. What is BEP or cost-volume-profit(CVP) relationship , limitations, its importance

Answer :

- The study of cost-volume-profit relationship is also referred as BEA
- break-even point for a product is the point where total revenue received equals the total costs associated with the sale of the product
- A breakeven point is helps a business to determine if it would be profitable to sell a proposed product, as opposed to attempting to modify an existing product instead so it can be made lucrative
- **Graph**



- The chart plots revenue, fixed costs, and variable costs on the vertical axis, and volume on the horizontal axis.
- The chart is useful for portraying the ability of a business to earn a profit with its existing cost structure

• Limitations of BEP

1. Break-even chart presents **only cost volume profits**. It ignores other considerations such as capital amount, marketing aspects and effect of government policy etc., which are necessary in decision making.
2. It is **assumed that sales, total cost and fixed cost can be represented as straight lines**. In actual practice, this may not be so.
3. It **assumes that profit is a function of output**. This is not always true. The firm may increase the profit without increasing its output.
4. A major draw back of BEC is its **inability to handle production and sale of multiple products**.
5. It is **difficult to handle selling costs such as advertisement and sale promotion** in BEC.
6. It **ignores economics of scale** in production.
7. Fixed costs do not remain constant in the long run.
8. Semi-variable costs are completely ignored.
9. It **assumes production is equal to sale**. It is not always true because generally there may be opening stock.
10. When production increases variable cost per unit may not remain constant but may reduce on account of bulk buying etc.
11. The **assumption of static nature of business and economic activities** is a wellknown defect of BEC

• Importance or Significance or Applications of BEP/BEA in Managerial Decision Making

- Break Even Analysis chart help following things
 1. **Safety Margin**
 - safety margin refers to the extent to which the firm can afford a decline before it starts incurring losses
 - break-even chart helps the management to know at a glance the profits generated at the various levels of sales
 2. **Target Profit**
 - helps in calculating the volume of sales necessary to achieve a target profit
 3. **Change in Price**
 - helps the management to take decision about increasing or decreasing prices
 4. **Change in Costs**
 - helps in taking decisions regarding changing costs as costs undergo change, the selling price and the quantity produced and sold also undergo changes
 5. **Decision on Choice of Technique of Production**
 - BEA is most simple and helpful in the case of decision on most economical technique of production both at the planning and expansion stages

■ **Eg :**

- for low levels of output, some conventional methods may be most probable as they require minimum fixed cost
- For high levels of output, only automatic machines may be most profitable

6. Make or Buy Decision

- Break-even analysis can enable the firm to decide whether to make or buy ie option of making certain components or for purchasing them from outside

7. Plant Expansion Decisions

- break-even analysis may be adopted to reveal the effect of an actual or proposed change in operation condition
- it helps to examine the various implications of this proposal

8. Plant Shut Down Decisions

- BEA helps to take the final call on plant shutdowns by making a distinction between out of pocket and sunk costs

9. Advertising and Promotion Mix Decisions

- helps the management to know about the circumstances & to take appropriate decision but by showing how these additional fixed cost(in form of advertising) would influence BEPs

10. Decision Regarding Addition or Deletion of Product Line

- helps in deciding whether addition of a product to its existing product line would act as a potential profit spinner

5. All BEP Problems

Answer :

Here we kept some solved problems for reference

→ Given Fixed cost = Rs 40,000
Profit = Rs 20,000
BEP = Rs 80,000

find a) P/V Ratio

b) Sales

c) Margin of Safety

Answ.

$$\text{a) P/V Ratio} = \frac{\text{Total sales} - \text{Total C}}{\text{Total C}}$$

$$\text{a) P/V Ratio} \geq \text{BEP} = \frac{\text{Fixed cost}}{(\text{P/V Ratio})}$$

$$\text{P/V Ratio} = \frac{\text{Fixed cost}}{\text{BEP}}$$

$$= \frac{40,000}{80,000}$$

$$\text{P/V Ratio} = \frac{1}{2} (\text{or}) 50\%$$

$$\text{b) Sales} = \frac{\text{Total contribution}}{\text{P/V Ratio}}$$

$$= \frac{(\text{Fixed} + \text{Profit})}{\text{P/V Ratio}} = \frac{(40,000 + 20,000)}{50/100}$$

$$\text{Sales} = \text{Rs } 1,20,000$$

i) Margin of safety

$$= \text{Sales} - \text{BEP}$$

$$= 120,000 - 80,000.$$

$$= 40,000$$

Given

(Other A)

YEAR	PROFIT	SALES
2014-2015	10% of Sales (250000)	25,00,000
2015-2016	.8% of Sales (160000)	20,00,000

Find :-

i) Fixed cost

ii) Break even point

iii) Amount of profit, if sales is Rs 30,00,000

iv) Sales, when desired profit is Rs 4,76,000

v) Margin of safety at a profit of Rs 2,70,000

Ans -

① P/V Ratio = $\frac{\text{change in Profit}}{\text{change in sales}} \times 100$

$$= \frac{(90000)}{(500000)} \times 100 = \frac{18}{100} = 18\%$$

Contribution = sales \times P/V ratio

$$= 25,00,000 \times \frac{18}{100} = 45,0000$$

$$\text{i) Fixed Cost} = \frac{(S-V)}{P} - \text{Profit}$$
$$= 450000 - 250000$$
$$= 200000$$

$$\text{ii) Break Even point} = \frac{\text{Fixed cost}}{(\text{P/V Ratio})}$$
$$= \frac{200000}{\frac{18}{100}}$$
$$= 1111111.111$$

$$\text{iii) Sales} = \frac{\text{F.C} + \text{Desired Profit}}{\text{P/V Ratio}}$$

$$30,00,000 = \frac{30,00,000 + DP}{\frac{18}{100}}$$

$$200,000 + DP = 30,00,000 \times \frac{18}{100}$$

$$2,00,000 + DP = 5,40,000$$

$$\boxed{DP = 340000}$$

$$\text{iv) Sales} = \frac{\text{FC} + \text{DP}}{\text{P/V Ratio}} \quad \frac{200,000 + 4,75,000}{\frac{18}{100}}$$

$$\text{Sales} = 3750000$$

v) MOS = Actual Sales - BEP

(or) (or) M.S Ratio

$$MOS = \frac{\text{Profit}}{\text{P/V Ratio}} = \frac{M \text{ of } S}{\text{Sales}} \times 100$$

$$MOS = \frac{2,70,000}{\frac{16}{100}} = 1500000$$

Given FC = 10,000

Selling Price = 10

Variable cost = 6

Calculate BEP?

$$\Rightarrow P/V \text{ Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100 = \frac{(S-V)}{\text{Sales}} \times 100 = \frac{(10-6)}{10} \times 100 = 40\%$$

$$BEP = \frac{FC}{P/V \text{ Ratio}} = \frac{10000}{40\%} = 25000$$

6. Type of Costs

Answer :

- Cost refers to the amount of expenditure incurred in acquiring something
- A manager must have a clear understanding on various cost concepts
- **Types of Costs**

1. Fixed and variable costs

■ Fixed costs

- is that cost which remains constant for a certain level of output
- is not affected by the changes in the volume of production
- **Eg :** salaries, Rent

■ Variable costs

- varies directly with the variation in output.
- An increase in total output results in an increase in total variable costs and decrease in total output results in a proportionate decline in the total variable costs
- **Eg :** Raw materials, labour, direct expenses

2. Out-of-pocket and books costs

■ Out-of-pocket costs / explicit costs

- costs that involve current cash payment

■ Books costs / implicit costs

- do not require current cash payments
- is the cost of self-owned factors of production
- are taken into account in determining the level dividend payable during a period
- **Eg :** Depreciation, unpaid interest, salary of the owner

3. Short-run and long-run costs

- **Short – run costs**

- varies with output when the plant and capital equipment in constant
- Short-run is a period during which the physical capacity of the firm remains fixed

- **Long – run costs**

- vary with output when all inputs are variable including plant and capital equipment
- Long-run cost analysis helps to take investment decisions

4. Historical and Replacement costs

- **Historical costs**

- is the original cost of an asset
- shows the cost of an asset as the original price paid for the asset acquired in the past
- Historical valuation is the basis for financial accounts

- **Replacement costs**

- is the price that would have to be paid currently to replace the same asset
- is a relevant cost concept when financial statements have to be adjusted for inflation

5. Explicit and implicit costs

- **Explicit costs**

- those expenses that involve cash payments.
- These are the actual or business costs that appear in the books of accounts
- **Eg :** payment of wages and salaries, payment for raw-materials, interest on borrowed capital funds, rent on hired land, Taxes paid

- **implicit costs**

- costs of the factor units that are owned by the employer himself.
- These costs are not actually incurred but would have been incurred in the absence of employment of self-owned factors
- **Eg :** depreciation, interest on capital

6. Opportunity costs and outlay costs

- **Opportunity costs**

- implies the earnings foregone on the next best alternative, has the present option is undertaken
- important in capital expenditure budgeting
- If there is no alternative, Opportunity cost is zero

- **outlay costs**

- are those expends which are actually incurred by the firm these are the payments made for labour, material, plant, building, machinery traveling, transporting etc.,

7. Past and Future costs

- **Past costs**

- historical costs are the actual cost incurred and recorded in the book of account these costs are useful only for valuation and not for decision making

- **Future costs**

- costs that are expected to be incurred in the futures
- is useful for decision making because decision are meant for future

8. Controllable and uncontrollable costs

- **Controllable costs**

- can be regulated by the executive who is in charge of it
- **Eg :** Direct expenses like material, labour etc

- **uncontrollable costs**

- varies with the variation in the basis of allocation and is independent of the actions of the executive of that department

9. Incremental and sunk costs

- **Incremental costs / different cost**

- additional cost due to a change in the level or nature of business activity
- **Eg :** adding a new product, adding new machinery, replacing a machine by a better one etc

- **sunk costs**

- are not altered by any change
- They are the costs incurred in the past.
- This cost is the result of past decision, and cannot be changed by future decisions.
- **Eg :** Investments in fixed assets

10. Total, average and marginal costs

- **Total costs**

- total cash payment made for the input needed for production.
- It may be explicit or implicit.
- It is the sum total of the fixed and variable costs

- **average costs**

- is the cost per unit of output

If is obtained by dividing the total cost (TC) by the total quantity produced (Q)

$$\text{Average cost} = \frac{\text{TC}}{\text{Q}}$$

- **marginal costs**

- is the additional cost incurred to produce an additional unit of output or it is the cost of the marginal unit produced
-

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Unit 3 Questions

NOTE: These are POSSIBLE Essay Questions from this Unit

1. Define market & its types
2. features of perfect competition
3. Price Output Determination in Perfect Competition
4. features monopoly
5. Price Output Determination in Monopoly
6. Features / Characteristics of monopolistic competition
7. Inflation & its types
8. Business cycle & its phases

Other small topics not covered here(check below Syllabus) can be prepared from here -

> https://drive.google.com/drive/folders/15mO_0D0frJbQ0za4MXXMWryGh2C5HgDd

TOPIC:-

Unit III- Market Structures & Macro Economic Concepts

Market Structures: Nature of Competition, Features of Perfect competition, Monopoly, Monopolistic competition, Oligopoly.

Introduction to Macro Economic concepts useful to Business: National Income, Inflation, Money Supply, Business cycles, phases in Business cycles.

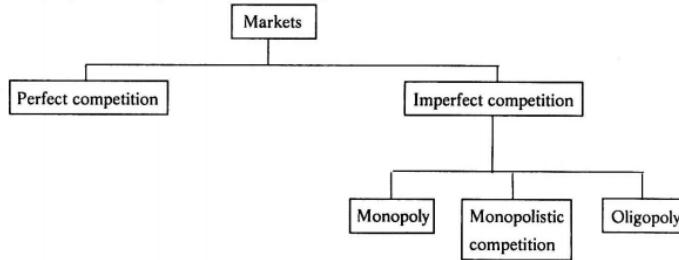
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Unit 3 Answers

1. Define market & its types

Answer :

- Market is a place where buyer and seller meet, goods and services are offered for the sale and transfer of ownership occur
- Market Structure Types**



1. Perfect competition

- describes a market structure, where a large number of small firms compete against each other.
- In this scenario, a single firm does not have any significant market power.
- As a result, the industry as a whole produces the socially optimal level of output, because none of the firms can influence market prices

2. Imperfect competition

1. Monopoly

- a market structure where a single firm controls the entire market.
- the firm has the highest level of market power, as consumers do not have any alternatives.
- As a result, monopolies often reduce output to increase prices and earn more profit

2. Monopolistic Competition

- a large number of small firms compete against each other
- firms in monopolistic competition sell similar, but slightly differentiated products
- this gives them a certain degree of market power, which allows them to charge higher prices within a certain range

3. Oligopoly

- a market structure which is dominated by only a few small number of firms.
- results in a state of limited competition.
- Monopsony The firms can either compete against each other or collaborate

4. Duopoly

- a situation in which two suppliers dominate the market for a commodity or service

5. Monopsony

- a market situation in which there is only one buyer

Features of the four market structures

Type of market	Number of firms	Freedom of entry	Nature of product	Examples	Implications for demand curve faced by firm
Perfect competition	Very many	Unrestricted	Homogeneous (undifferentiated)	Cabbages, carrots (approximately)	Horizontal: firm is a price taker
Monopolistic competition	Many / several	Unrestricted	Differentiated	Builders, restaurants	Downward sloping, but relatively elastic
Oligopoly	Few	Restricted	Undifferentiated or differentiated	Cement cars, electrical appliances	Downward sloping. Relatively inelastic (shape depends on reactions of rivals)
Monopoly	One	Restricted or completely blocked	Unique	Local water company, train operators (over particular routes)	Downward sloping: more inelastic than oligopoly. Firm has considerable control over price

2. features of perfect competition

Answer :

- Perfect competition refers to a market structure where competition among the sellers and buyers prevails in its most perfect form.
- In a perfectly competitive market, a single market price prevails for the commodity, which is determined by the forces of total demand and total supply in the market

• Characteristics of Perfect Competition

- The following features characterize a perfectly competitive market

- (i) *Large Number of buyers and Sellers* : There should be significantly large number of buyers and sellers in the market. The number should be so large so that it should not make any difference in the determination of price even if one enters or exists the market.
- (ii) *Homogeneous Product* : The product should be homogeneous. It should be of same quality and same price in all the firms of the market.
- (iii) *Freedom to enter or exit* : There should be freedom to enter or exit the market. The consumers can enter or leave the market whenever they want.
- (iv) *Perfect Knowledge* : Each buyer and seller has total knowledge of the prices prevailing in the market at every given point of time, quantity supplied, costs, demand etc.
- (v) *No existence of transport costs* : There should be no transport costs in a perfect competitive market.
- (vi) *Perfect Mobility of factors of Production* : This means that there should be free availability of factors of production, i.e., they should be available whenever they are wanted.
- (vii) *Each firm a Price taker* : Each firm should sell its commodity at the prevailing price in the Market. It has no right to sell its good according to its own choice.

3. Price Output Determination in Perfect Competition

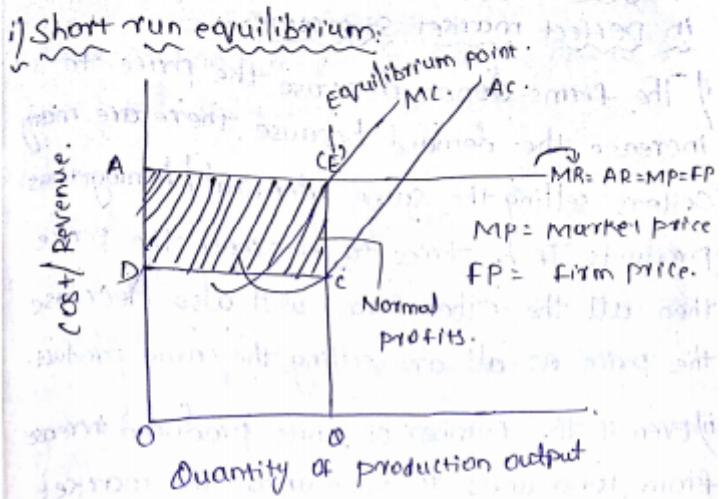
Answer :

i) Price-output determination in perfect market structure:

Short run equilibrium

mScann

ii) Long run equilibrium (horizontal equilibrium)



ii)

Output	Market price (20 Rs. per unit)
1000 units	20000 (2000×100)
3000 units	60000 (2000×300)
5000 units	100000 (2000×500)
4000 units	180000.

Soln: $M.R = \frac{60000 - 20000}{3000 - 1000} = 20 \text{ Rs. per unit}$

$A.R = \frac{180000}{9000} = 20 \text{ Rs. per unit}$

conditions required for short run equilibrium in perfect market structure

- i) The firms do not decrease the price to increase the demand because there are many sellers selling the same identical / homogeneous products. If he tries to decrease the price then all the other firms will also decrease the price as all are selling the same product.
- ii) Even if the number of units produced increases from 1000 units to 5000 units, the market price remains the same at Rs 20 per unit.
Therefore marginal revenue = Average revenue = Rs. 20 per unit.
- iii) All the firms fix the same price which is existing in the market. Therefore Market Price = firm price = Rs. 20 per unit.
- iv) All the firms will increase their production output till they reach point 'Q' because till point 'Q' marginal revenue curve lies above marginal cost curve. Thus till Point 'Q' Marginal revenue is greater than marginal cost.

v) At point 'Q' the firms are at equilibrium point 'E' where Marginal revenue curve intersects Marginal cost curve. Thus at 'Q'
Marginal revenue = Marginal cost.

vi) The firms will not increase their production output beyond point 'Q' because beyond point 'Q' marginal cost curve lies above the marginal revenue curve. Thus beyond point 'Q' marginal cost is greater than marginal revenue.

vii) Area \square AEQQ is the area of average revenue.

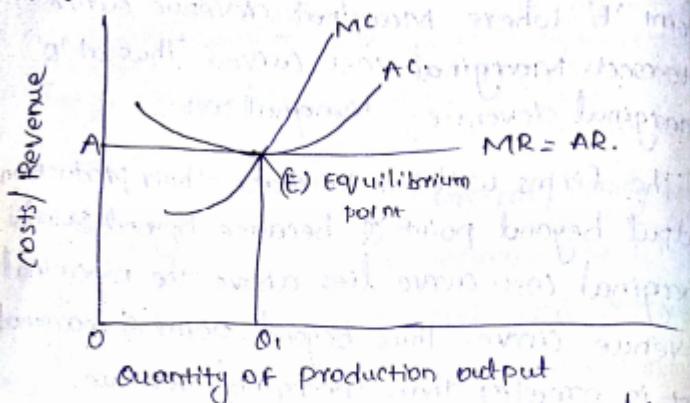
viii) Area \square DCQQ is the area of average costs.

ix) Area \square AECD is the area of normal profits.

x) Since the marginal revenue remains constant at Rs 20 per unit irrespective of increase in the number of units produced, the marginal revenue curve is horizontal to the X-axis.

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Long run equilibrium:



conditions required for long run equilibrium

in perfect market:

- i) In the long run period many firms enter the market.
- ii) Since all the firms are selling the same product, the firms fix a price which generates the revenue, which will cover up the costs. There is hardly any profit margin.
- iii) All the firms run at BEP (Break Even point) in the long run.
- iv) Area \square OAEO is the area of Average revenue = Average costs.

4. features monopoly

Answer :

The following are the features of Monopoly.

1. *Single person or a firm* : Here the total supply of the product is controlled by a single person or a firm.
2. *No close substitutes* : There should be no close substitutes and no competitors.
Ex: Electric bulb and Railway.
3. *Large Number of Buyers* : There may be large number of buyers under monopoly.
4. *Poly Market* : Since there is only one in the industry he is the Price Maker.
5. *Supply and Price* : the Monopolist can decide either the price or quantity, not both.
6. *Downward Sloping Curve* : the demand curve of monopolist slopes downward from left to right.
7. *Inelastic Demand* : The Products and services provided by the monopolist bear inelastic demand.
8. *Easy Creation* : Monopoly can be created through statutory grant of special privileges such as licenses, permits, patent right and so on.

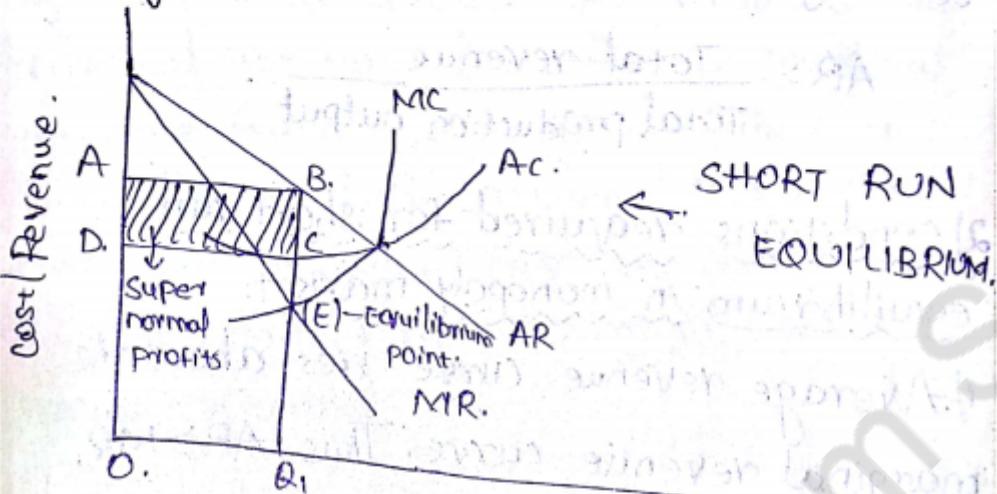
5. Price Output Determination in Monopoly

Answer :

i) Price Output determination in Monopoly
Market Structure.

ii) Short run equilibrium.

iii) Long run equilibrium.



MC = Marginal cost.

AC = Average cost

MR = Marginal Revenue

AR = Average Revenue

a) Marginal cost: Marginal cost is the additional cost incurred on every additional unit produced

b) Average cost (AC):

$$AC = \frac{\text{Total cost}}{\text{Total production output}}$$

c) Marginal revenue: It is the additional revenue earned on every additional unit produced.

d) Average revenue (AR):

$$AR = \frac{\text{Total revenue}}{\text{Total production output}}$$

2) Conditions required for short-run equilibrium in monopoly market:

i) Average revenue curve lies above the marginal revenue curve. Thus $AR > MR$.

ii) The marginal cost curve cuts the marginal revenue curve from below.

iii) The Average revenue curve and Marginal revenue curve are downward sloping because the monopolist goes on decreasing the price to increase the demand for his goods.

iv) The monopolist goes on decreasing the price to increase the output till he reaches

point 'Q' because till point 'Q' the marginal revenue curve lies above the marginal cost curve.

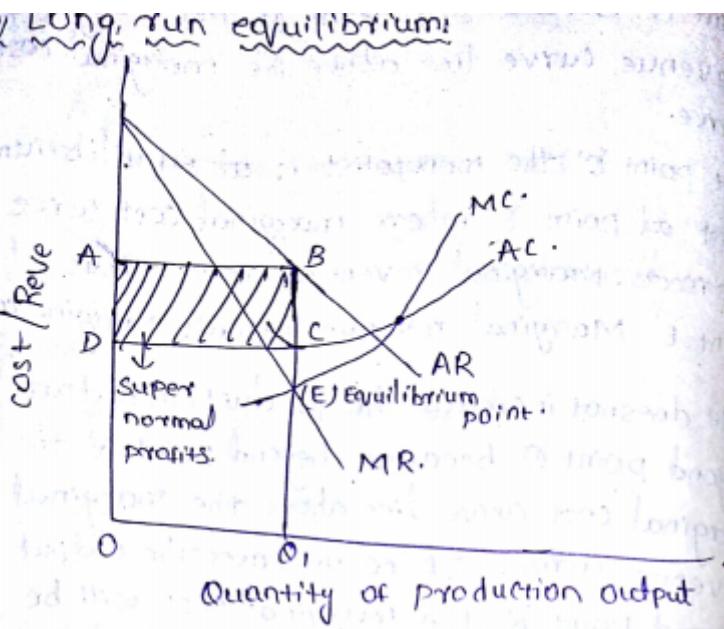
v) At point 'Q' the monopolist is at equilibrium point at point 'E' where marginal cost curve intersects Marginal revenue curve. Thus at point 'E' Marginal revenue equals Marginal cost

vii) He does not increase the production output beyond point 'Q' because beyond point 'Q' the marginal cost curve lies above the marginal revenue curve. If he increases the output beyond point 'Q' the marginal cost will be more than marginal revenue. Therefore he does not produce beyond point 'Q' level of production output

viii) Area \square ABQQ is the area of average revenues.

viii) Area \square BCQQ is the area of average costs.

ix) Area \square ABCD is the area of super normal profit or economic profit.



conditions required for long run equilibrium in Monopoly market:

The conditions required for long run equilibrium is same as the conditions required for short run equilibrium for a monopoly because even in the long run the monopolist makes super normal profits as he creates many entry and exit barriers for any new firm to enter the market.

6. Features / Characteristics of monopolistic competition

Answer :

1. Existence of Many firms

- Industry consists of a large number of sellers, each one of whom does not feel dependent upon others.
- Every firm acts independently without bothering about the reactions of its rivals
- The size is so large that an individual firm has only a relatively small part in the total market, so that each firm has very limited control over the price of the product.
- As the number is relatively large it is difficult for these firms to determine its price- output policies without considering the possible reactions of the rival firms.
- A monopolistically competitive firm follows an independent price policy.

2. Product Differentiation

- products are different in some ways, but not altogether so.
- These products are relatively close substitute for each other but not perfect substitutes.
- Consumers have definite preferences for the particular varieties or brands of products offered for sale by various sellers.

3. Large Number of Buyers

- There are large number buyers in the market.
- But the buyers have their own brand preferences.
- So the sellers are able to exercise a certain degree of monopoly over them.
- Each seller has to plan various incentive schemes to retain the customers who patronize his products.

4. Free Entry and Exist of Firms

- there is freedom of entry and exit

5. Selling costs

- Since the products are close substitute much effort is needed to retain the existing consumers and to create new demand.
- So each firm has to spend a lot on selling cost, which includes cost on advertising and other sale promotion activities.

6. Imperfect Knowledge

- Imperfect knowledge about the product leads to monopolistic competition.
- If the buyers are fully aware of the quality of the product they cannot be influenced much by advertisement or other sales promotion techniques.

7. The Group

- products of various firms are not identical though they are close substitutes.
- the collection of firms producing close substitute products is a group

7. Inflation & its types

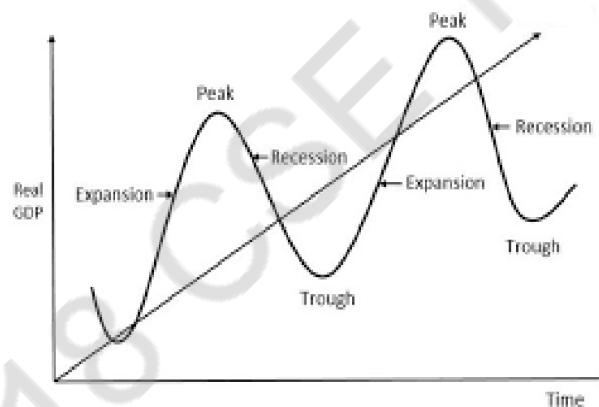
Answer :

- Inflation is a rise in the general level of prices of goods and services in an economy over a period of time
- inflation also reflects an erosion of purchasing power of money
- **Types** -> Refer Unit 3 pdf from Pg 62 to 76 -
https://drive.google.com/drive/folders/15mO_0D0frJbQ0za4MXXMWryGh2C5HgDd

8. Business cycle & its phases

Answer :

- Business cycle is defined as the upward and downward fluctuations of GDP(aggregate production, trade, economic activity) along its natural growth over a long period of time
- this sequence of changes is recurrent but not periodic



● Phases of Business Cycle

1. Expansion

- In this stage, there is an increase in positive economic indicators such as employment, income, output, wages, profits, demand, and supply of goods and services.
- Debtors are generally paying their debts on time, the velocity of the money supply is high, and investment is high.
- This process continues as long as economic conditions are favorable for expansion

2. Peak

- The economy then reaches a saturation point, or peak, which is the second stage of the business cycle.
- The maximum limit of growth is attained. The economic indicators do not grow further and are at their highest.
- Prices are at their peak.
- This stage marks the reversal point in the trend of economic growth.
- Consumers tend to restructure their budgets at this point

3. Recession

- The recession is the stage that follows the peak phase.

- The demand for goods and services starts declining rapidly and steadily in this phase.
- Producers do not notice the decrease in demand instantly and go on producing, which creates a situation of excess supply in the market.
- Prices tend to fall.
- All positive economic indicators such as income, output, wages, etc., consequently start to fall.

4. Depression

- There is a commensurate rise in unemployment.
- The growth in the economy continues to decline, and as this falls below the steady growth line, the stage is called depression
- In the depression stage, the economy's growth rate becomes negative.

5. Trough

- There is further decline until the prices of factors, as well as the demand and supply of goods and services, reach their lowest point.
- The economy eventually reaches the trough. It is the negative saturation point for an economy.
- There is extensive depletion of national income and expenditure.

6. Recovery

- In this phase, there is a turnaround from the trough and the economy starts recovering from the negative growth rate
- Demand starts to pick up due to the lowest prices and, consequently, supply starts reacting, too.
- The economy develops a positive attitude towards investment and employment and production starts increasing.
- Employment begins to rise and, due to accumulated cash balances with the bankers, lending also shows positive signals.
- In this phase, depreciated capital is replaced by producers, leading to new investments in the production process.
- Recovery continues until the economy returns to steady growth levels.

- Thus the business cycle completes one full business cycle of boom and contraction, with the extreme points as the peak and the trough.

Unit 4 Questions

NOTE: These are POSSIBLE Essay Questions from this Unit

1. Concepts and conventions of accounting or Generally Accepted Accounting Principles
2. double entry book keeping
3. problems in journal entries, ledger
4. problems in Final Accounts

Other small topics not covered here(check below Syllabus) can be prepared from here -

> https://drive.google.com/drive/folders/15mO_0D0frJbQ0za4MXXMWryGh2C5HgDd

Unit IV- Financial Accounting

Financial Accounting: Accounting concepts and Conventions, Accounting Equation, Double-Entry system of Accounting, Rules for maintaining Books of Accounts, Journal, Posting to Ledger.

Preparation of Trial Balance, Elements of Financial Statements, Preparation of Final Accounts (Simple Problems).

contd...2

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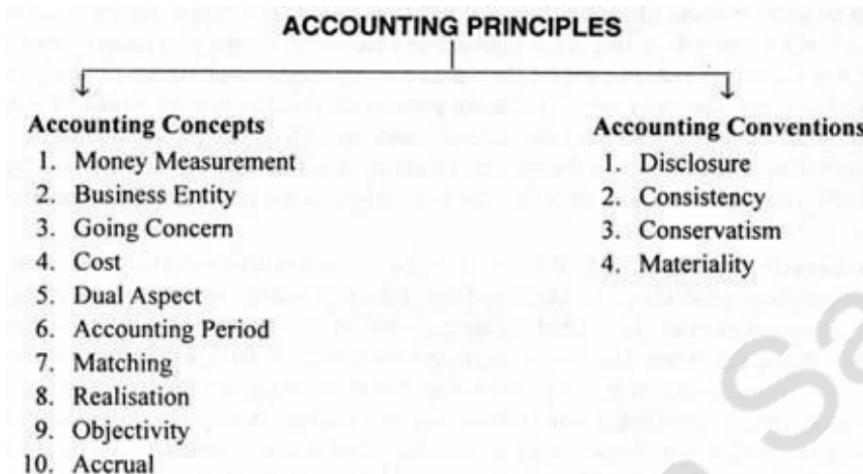
Unit 4 Answers

1. Concepts and conventions of accounting or Generally Accepted Accounting Principles

Answer :

- **Accounting**

- can be defined as the process of recording, summarising, reporting and analyzing required financial information relating to the economic events of an organization to the interested users for making decisions



- **Accounting Concepts**

- they are basic accounting assumptions which acts as a foundation for the preparation of financial statement of an enterprise
- The major Accounting Concepts are as follows

- 1. **Business entity concept**

- A business and its owner should be treated separately as far as their financial transactions are concerned.
 - This concept is applicable to all forms of business organisations
 - In accounting it is the "business" with which we are concerned

- 2. **Money measurement concept**

- Only business transactions that can be expressed in terms of money are recorded in accounting, though records of other types of transactions may be kept separately

- 3. **Dual aspect concept**

- For every credit, a corresponding debit is made
 - The recording of a transaction is complete only with this dual aspect

- 4. **Going concern concept**

- business is expected to continue for a fairly long time and carry out its commitments and obligations

- 5. **Cost concept**

- The fixed assets of a business are recorded on the basis of their original cost in the first year of accounting.
 - Subsequently, these assets are recorded minus depreciation.
 - No rise or fall in market price is taken into account.
 - The concept applies only to fixed assets

- 6. **Accounting year concept**

- Each business chooses a specific time period to complete a cycle of the accounting process—for example, monthly, quarterly, or annually—as per a fiscal or a calendar year

- 7. **Matching concept**

- This principle dictates that for every entry of revenue recorded in a given accounting period, an equal expense entry has to be recorded for correctly calculating profit or loss in a given period

- 8. **Realisation concept**

- profit is recognised only when it is earned.
 - An advance or fee paid is not considered a profit until the goods or services have been delivered to the buyer

- **Accounting Conventions**

- They are the practice adopted by an enterprise over a period of time, that rely on the general agreement between the accounting bodies and helps in assisting the accountant at the time of preparation of financial statement of the company.
- There are four main conventions in practice in accounting
 1. **conservatism**
 - when two values of a transaction are available, the lower-value transaction is recorded
 - profit should never be overestimated, and there should always be a provision for losses
 2. **consistency**
 - company should apply the same accounting principles across different accounting cycles
 - Without this convention, investors ability to compare and assess how the company performs from one period to the next is made much more challenging
 3. **full disclosure**
 - entails the revelation of all information, both favourable and detrimental to a business enterprise, and which are of material value to creditors and debtors
 4. **materiality**
 - all material facts should be recorded in accounting
 - If an item or event is material ie important, it should be disclosed
 - any information that could influence the decision of a person looking at the financial statement must be included
 - Accountants should record important data and leave out insignificant information

2. double entry book keeping

Answer :

- For

- problem refer this -> <https://youtu.be/7dCdBATk9E>
- theory refer pdf (from Pg 4)-> https://drive.google.com/drive/folders/15mO_0D0frJbQ0za4MXXMWryGh2C5HgDd

3. problems in journal entries, ledger

Answer :

- **Journal Entry example** -> <https://youtu.be/l3VYr8FRZs8>

- **Question**

Journalise the following transaction in the books of Sagar.

2002

- March 1 Started business with Rs. 4,000 in cash
" 3 Bought goods from Prasad Rs. 3,271.
" 6 Sold goods to Hari Krishna Rs. 1,293.
" 9 Cash sales Rs. 372.
" 12 Sold goods to Babulal Rs. 631.
" 15 Paid to Prasad on Account Rs. 1,500.
" 18 Paid Salary to Manager Rs. 500.
" 29 Office rent paid to Land Lord Kumar Rs. 400.

- **Answer**

- using above given data we prepare below journal entries table

Journal entries in the books of Sagar

Date	Particulars	L.F.	Debit Rs.	Credit Rs.
2002 Jan. 1	Cash a/c. To Capital a/c (Being cash invested to start the business)	Dr.	4,000	4,000
3	Purchases a/c To Prasad a/c (Being goods purchased for credit)	Dr.	3,271	3,271
6	Hari Krishna a/c To sales account (Being goods sold for credit)	Dr.	1,293	1,293
9	Cash a/c To sales a/c (Being goods sold for cash)	Dr.	372	372
12	Babulal a/c To sales a/c (Being goods sold on credit)	Dr.	631	631
15	Prasad a/c To Cash a/c (Being cash paid on a/c)	Dr.	1,500	1,500
18	Salary a/c To Cash a/c (Being salary paid)	Dr.	500	500
29	Rent a/c To Cash a/c (Being rent paid)	Dr.	400	400

- **ledger example -> <https://youtu.be/FIndzsBGI6M>**

- **Steps to solve this**

- First Prepare Journal entries and then using it prepare a ledger

- **Question**

Enter the following transactions in the Journal of Kumar Swamy and post them into ledger accounts.

1999		Rs.
March	1.	Commenced Business with cash 28,000
	2.	Bought goods for cash 18,000
	3.	Paid Wages 200
	5.	Paid for stationery 100
	8.	Purchased goods from Rama 16,000
	9.	Goods returned to Rama 1,500
	11.	Goods sold to Bhaskar 4,000
	13.	Received cash from Bhanu on account 4,000
	16.	Cash paid to Tarun 1,000
	18.	Purchased goods from Sharma 4,000
	21.	Cash paid into Bank 3,000
	24.	Kumar withdraw for personal use 1,250
	31.	Paid office rent 200
	31.	Paid Salaries 400

- **Answer**

1. **First Prepare Journal entries for the given transaction**

Journal entries is the books of Kumar Swamy

Date	Particulars	L.F.	Debit Rs.	Credit Rs.
1999 Mar.1	Cash a/c To Capital a/c (Being cash invested to start the business)	Dr.	48,000	48,000
2	Purchases a/c To Cash a/c (Being goods purchased for cash)	Dr.	18,000	18,000
3	Wages a/c To Cash account (Being wages paid)	Dr.	200	200
5	Stationery a/c To Cash a/c (Being cash paid to stationery a/c)	Dr.	100	100
8	Purchases a/c To Rama's a/c (Being goods purchased from Rama)	Dr.	16,000	16,000
9	Rama a/c To Purchases returns a/c (Being goods returned to Rama)	Dr.	1,500	1,500
11	Bhaskar a/c To Sales a/c (Being goods sold to Bhaskar)	Dr	4,000	4,000
13	Cash a/c To Bhanu a/c (Being cash received from Bhanu a/c)	Dr.	4,000	4,000
16	Tarun a/c To Cash a/c (Being Cash paid to Tarun)	Dr.	1,000	1,000
18	Purchases a/c To Sharma a/c (Being goods purchased)	Dr.	4,000	4,000
21	Bank a/c To Cash a/c (Being goods returned)	Dr.	3,000	3,000
24	Drawing's account To Cash a/c (Being Cash withdrawn personal use)	Dr.	1,250	1,250
31	Rent a/c To Cash a/c (Being Rent paid)	Dr.	200	200
31	Salaries account To Cash a/c (Being salaries paid)	Dr.	400	400

2. Now use the above Journal entries table and prepare below ledgers

Dr.	Cash Account					Cr.	
Date	Particulars	L.F.	Amount	Date	Particulars	L.F.	Amount
1999			Rs.	1999			Rs.
Mar. 1	To			Mar. 2	By Purchases		
	Capital a/c		28,000	3	a/c		18,000
13	" Bhanu a/c		4,000	5	" Wages a/c		200
				16	" Stationery a/c		100
				21	" Tarun a/c		1,000
				24	" Bank a/c		3,000
				31	" Drawings		1,250
				31	" Rent a/c		200
				31	" Salaries a/c		400

Capital Account						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
			1999			
			Mar.	By Cash a/c		48,000
Purchase Account						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999			1999			
Mar.2	To Cash a/c		18,000			
8	"Rama a/c		16,000			
18	"Sharma a/c		4,000			
Sales A/C						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
			1999			
			Mar.9	By Rama a/c		1,500
			Mar.9	By Bhaskar a/c		4,000
Wages Account						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999						
Mar.3	To Cash a/c		200			
Stationary Account						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999						
Mar.5	To Cash a/c		100			
Rama Account						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999	Sales			1999		
Mar.9	To a/c		1,500	Mar.8	By Purchase A/c	16,000
Bhaskar Account						
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999						
Mar. 11	To Sale a/c		4,000			

Dr. Bhanu Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 18	By Cash a/c	4,000
Dr. Tarun Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 16	To Cash a/c	1,000
Dr. Sharma Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 18	By Purchases a/c	4,000
Dr. Bank Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 21	To Cash a/c	3,000
Dr. Drawings Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 24	To Cash a/c	250
Dr. Rent Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 31	To Cash a/c	200
Dr. Salaries Account				Cr.		
Date	Particulars	L.F.	Amount (Rs)	Date	Particulars	L.F. Amount (Rs)
1999				Mar. 31	To Cash a/c	400

4. problems in Final Accounts

Answer :

- o Refer

1. Without adjustments -> <https://youtu.be/Yn70n37sLxE>
2. With adjustments -> <https://youtu.be/umttvGKOi8g>

- o Question

12. From the following trial balance taken from the books of Ramana and company. Prepare trading and profit loss account for the year ended 31-12-2000 and a balance sheet as on that date.

Particulars	Debit	Credit
Drawing and capital	12,000	80,000
Opening stock	12,000	—
Investments	30,600	—
Salaries	12,000	—
Carriage	3,000	—
Returns	6,000	2,600
Purchases & sales	1,20,000	1,60,000
Debtors & creditors	60,000	—
Discount allowed	2,200	—
Cash	16,400	—
Wages	28,000	—
Reserve for doubtful debts	—	2,000
Bank overdraft	—	25,000
Loans	2,400	10,000
	3,04,600	3,04,600

Adjustments

1. Closing stock was valued Rs. 1,20,000.
2. Wages & salaries were outstanding by Rs. 10,000 & Rs. 6,000.
3. Appreciate investments by 10%.
4. Maintain reserve for doubtful debts at the rate of 5% per annum.

o Answer :

Solution

Trading and profit loss a/c of Ramana & co. for the year ended 31st Dec.2000.

Particulars	Rs.	Rs.	Particulars	Rs.	Rs.
To opening stock		12,000	By sales	1,60,000	
To purchases	1,20,000		(-) returns	6,000	1,54,000
(-) returns	2,600	1,17,400	By closing stock		1,20,000
To carriage		3,000			
To wages	28,000				
(-) Outstanding wages	10,000	38,000			
To gross profit c/d		1,03,600			
		2,74,000			2,74,000
To salaries	12,000		By gross profit b/d		1,03,600
(+) Outstanding salaries	6,000	18,000	By appreciation on investments		3,060
To Doubtful debts		3,000	By reserve for doubtful debts (given in trail balance)		2,000
To Net profit		85,460			
		1,08,660			1,08,660

Balance sheet of Ramana & co as on 31st Dec.2000.

Capital	80,000	investments	30,600
(+) Net profit	85,460	(+) Depreciation on investments	3,060
	1,65,460		33,660
(-) Drawings	12,000	Loans (Dr)	2400
Outstanding salaries	6,000	Debtors	60,000
Loans (Cr)	10,000	(-) Doubtful debtors	3,000
Creditors	25,000	Cash	16,400
Bank overdraft	25,000	Closing stock	1,20,000
	2,29,460		

Unit 5 Questions

NOTE: These are POSSIBLE Essay Questions from this Unit

1. Financial Analysis
2. Types of Ratios / Ratio Analysis
3. Significance of Ratios / importance of ratios and Limitations of Ratio Analysis
4. Problems on ratio analysis

Other small topics not covered here(check below Syllabus) can be prepared from here -

> https://drive.google.com/drive/folders/15mO_0D0frJbQ0za4MXXMWryGh2C5HgDd

Unit V- Financial Analysis through Ratios

Financial Analysis: Meaning, Significance, Methods of Financial Analysis.

Concept of Ratio Analysis, Liquidity Ratios, Solvency/Leverage Ratios, Turnover/Activity Ratios, Profitability Ratios.

R18 CSE Team

Unit 5 Answers

1. Financial Analysis

Answer :

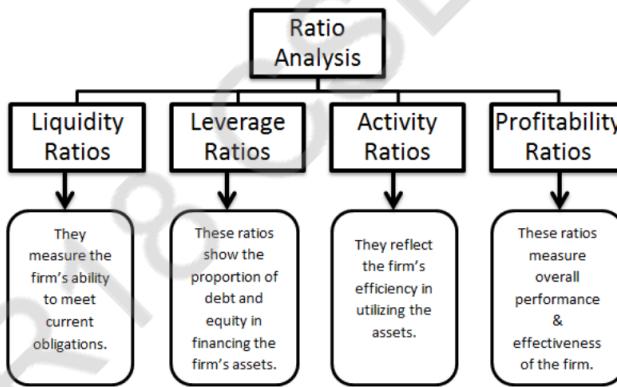
- **Financial Analysis** - if Financial Analysis is asked start with this intro
 - Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability.
 - financial analysis is used to analyze whether an entity is stable, solvent, liquid, or profitable enough to warrant a monetary investment
- **Some of the Tools and techniques of financial statement analysis are**
 1. Comparative Statement or Comparative Financial
 2. Operating Statements.
 3. Common Size Statements.
 4. **Ratio Analysis**
 5. Average Analysis

After this write complete 2nd answer for this

2. Types of Ratios / Ratio Analysis

Answer:

- **Ratio Analysis**
 - Ratio analysis is a technique of analysis and interpretation of financial statements.
 - It is the process of establishing and interpreting various ratios for helping in making certain decisions
 - It gives better understanding of financial strengths and weaknesses of a firm
- **Types of Ratio Analysis**



1. Liquidity Ratio

- Liquidity is the ability of the business to pay the amount due to stakeholders as and when it is due
- the ratios calculated to measure liquidity are known as 'Liquidity Ratios'
- These are essentially short-term in nature

o **Types of Liquidity Ratios**

1. Current ratio

$$\text{Current ratio} = \text{Current assets} / \text{Current liabilities}$$

- provides a measure of degree to which current assets cover current liabilities

- The excess of current assets over current liabilities provides a measure of **safety margin** available against uncertainty in realisation of current assets and flow of funds Normally,
- it is safe to have this ratio within the range of 2:1

2. Quick ratio

$$\text{Quick ratio} = \frac{\text{Quick assets}}{\text{Current liabilities}}$$

$$\text{Quick assets} = \text{current assets} - (\text{stock} + \text{prepaid expenses})$$

- provides a measure of the capacity of the business to meet its short-term obligations without any flaw
- Normally, it is advocated to be safe to have a ratio of 1:1
- low ratio will be very risky and a high ratio suggests unnecessarily deployment of resources in otherwise less profitable short-term investments

2. Leverage / Solvency Ratio

- is the financial ratio, which focuses on the long term solvency of the firm
- long term solvency of the firm means its ability to meet its long term commitment such as payment of interest periodically without fail, repayment of principal as and when due
- **Types of Leverage / Solvency Ratio**

1. Debt-Equity ratio

$$\text{Debt-Equity ratio} = \frac{\text{Debt}}{\text{Equity}}$$

- Debt=Debenture capital +Long term loans from banks and financial institution +public deposits
- Equity= Equity share capital +reserve and surpluses+ Preferences share capital

3. Activity / Turn Over Ratio

- express how active the firm is in terms of selling its stock, collecting its receivables and paying its creditors
- **Types of Activity / Turn Over Ratios**

1. Debtors turnover ratio

$$\text{DTR} = \frac{\text{Credit sales}}{\text{Average Debtors}}$$

$$\text{Average Debtors} = \frac{\text{Opening Debtors} + \text{closing debtors}}{2}$$

- Debt collection period= $365/\text{DTR}$

2. Inventory turnover ratio

$$\text{Inventory turn over ratio} = \frac{\text{Cost of goods sold}}{\text{Average Inventory}}$$

- Cost of good sold =sales- Gross Profit

$$\text{Average Inventory} = \frac{\text{opening inventory} + \text{closing inventory}}{2}$$

- Inventory Holding period= $365/\text{ITR}$

4. Profitability Ratio

- used by financial manager to measure efficiency of the company in terms of profits
- is important as company should earn profits to survive and grow over a period of time
- **Types of Profitability Ratios**

1. Gross profit ratio

$$\text{Gross profit ratio} = \frac{\text{Gross profit}}{\text{Sales}} \times 100$$

2. Net profit ratio

$$\text{Net profit ratio} = \frac{\text{Net profit}}{\text{Sales}} \times 100$$

3. Operating profit

$$\text{Operating profit ratio} = \frac{\text{Operating Expenses}}{\text{Sales}}$$

- Operating expenses=(Cost of good sold+ Administrative expenses +selling and distribution expenses)

4. P/E (Price/earning ratio) ratio

$$\text{P/E ratio} = \frac{\text{Market price per share}}{\text{Earning per share}}$$

- is the share price divided by the earning per share

5. EPS (Price/earning ratio)

- is the relationship between net profits and the number of outstanding

$$\text{EPS} = \frac{\text{Net Profits after taxes}}{\text{No of shares}}$$

3. Significance of Ratios / importance of ratios and Limitations of Ratio Analysis

Answer :

- **Significance of Ratios / importance / advantages of ratio analysis**

1. **Helps to understand efficacy of decisions**

- indicates how far decision taken have helped in improving the performance

2. **Simplify complex figures and establish relationships**

- help in simplifying the complex accounting figures and bring out their relationships.
- They help summarise the financial information effectively and assess the managerial efficiency, firm's credit worthiness, earning capacity, etc.

3. **Helpful in comparative analysis**

- When many year figures are kept side by side, they help a great deal in exploring the trends visible in the business.
- The knowledge of trend helps in making projections about the business which is a very useful feature.

4. **Identification of problem areas**

- ratios helps in identifying the problem areas as well as the bright areas of the business

5. **Enables SWOT analysis**

- allows business to do its own SWOT (Strength Weakness-Opportunity-Threat) analysis

6. **Various comparisons**

- Ratios help comparisons with certain benchmarks to assess as to whether firm's performance is better or otherwise.
- For this purpose, the profitability, liquidity, solvency, etc. of a business, may be compared:
 1. over several accounting periods with itself (Intra-firm Comparison/Time Series Analysis),
 2. with other business enterprises (Inter-firm Comparison/Cross-sectional Analysis)
 3. (iii) with standards set for that firm/industry (comparison with standard (or industry expectations)).

- **Limitations of Ratio Analysis**

1. Since the ratios are derived from the **financial statements**, any weakness in the original financial statements will also creep in the derived analysis in the form of ratio analysis

2. **Means and not the End**

- Ratios are means to an end rather than the end by itself

3. **Lack of ability to resolve problems**

- Their role is essentially indicative and of whistle blowing and not providing a solution to the problem

4. **Lack of standardised definitions**

- There is a lack of standardised definitions of various concepts used in ratio analysis
- **Eg :** there is no standard definition of liquid liabilities

5. **Lack of universally accepted standard levels**

- There is no universal yardstick which specifies the level of ideal ratios

6. **Ratios based on unrelated figures**

- A ratio calculated for unrelated figures would essentially be a meaningless exercise

4. Problems on ratio analysis

Answer:

Below Problems are for reference

→ Calculate Current Ratio & Quick ratio from the following info.

Land & Buildings = 50,000

Plant & Machinery = 1,00,000

Furniture & fixtures = 25,000

Closing Stock = 25,000

Sunday debtors = 12,500

Wages Prepaid = 2,500

Sunday creditors = 8,000

Rent out standing = 2,000

↓
Unpaid

AEST
i) Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$

Current Assets = Sunday debtors + wages prepaid
+ closing stock
= 12,500 + 2,500 + 25,000
= 40,000

Current Liability = Sunday creditors
+ Rent unpaid
= 8,000 + 2,000 = 10,000

$$\text{i) Quick Asset Ratio} = \frac{CA - (\text{Stock} + \text{Prepaid})}{CL}$$

$$= \frac{40,000 - (25,000 + 2500)}{10,000}$$

$$= \frac{12500}{10000} = 1.25$$

\Rightarrow Inventory turnover ratio: - & Average Time period

Given,

Sales = 400,000

Sales return = 20,000

Gross profit = 20% of Net Sales

Stock as on 1.1.2000 = 40,000

Stock as on 31.12.2000 = 60,000

Cost ITR = $\frac{\text{Cost of goods sales}}{\text{Average Inventory}}$

Cost of goods sales = Sales - Gross profit

Gross profit = 20% of Net Sales

Net Sales = 4,00,000 - 20,000

$$= 3,80,000$$

Gross profit = $\frac{20}{100} \times 3,80,000 = 76,000$

Cost of goods sales = 3,80,000 - 76,000

$$= 304000$$

$$\text{Average Inventory} = \frac{\text{opening stock} + \text{closing stock}}{2}$$

$$= \frac{40,000 + 60,000}{2} \\ = 50,000$$

$$\text{ITR} = \frac{304,000}{50,000} = 6.08$$

$$\text{Average time period} = \frac{365}{6.08} = 60 \text{ days}$$

→ 50 every 60 days, the stock are sold out.

→ 50 6 times in a year.

⇒ Calculate debtors turnover ratio & creditors turnover ratio for the following financial info of both firm X & Y.

	<u>X</u>	<u>Y</u>
Debtors (1.1.2013)	8,000	12,000
II (31.12.2013)	16,000	14,000
Creditors (1.1.2013)	32,000	28,000
Sales (75% Profit)	2,50,000	3,60,000
Purchases (60% Profit)	1,50,000	2,25,000
Furniture & fixtures	25,000	35,000
Cast	5000	8000
Creditors (31.12.2013)	26,000	42,000

$$\text{Ans:} \\ \text{DTR} = \frac{\text{credit sales}}{\text{Average debtors}}$$

$$\text{credit sales}(X) = 75\% \text{ of } 2,50,000 \\ = 187500$$

$$\text{Credit Sales}(Y) = 75\% \text{ of } 3,60,000 \\ = 270000$$

$$\text{Avg Debtors}(X) = \frac{\text{opening debts} + \text{closing debtors}}{2} \\ = \frac{8,000 + 16,000}{2} = 12,000$$

$$\text{Avg Debtors}(Y) = \frac{12,000 + 14,000}{2} = 13,000$$

$$\text{DTR}(X) = \frac{187500}{12000} = 15.6 \text{ days}$$

$$\text{DTR}(Y) = \frac{270000}{13,000} = 20.76$$

$$\text{Avg Time Debts}(X) = \frac{365}{\text{DTR}(X)} = 23.40 \text{ days}$$

$$\text{Avg Time Debts}(Y) = \frac{365}{\text{DTR}(Y)} = 17.58 \text{ days}$$

$$\text{CTR}(X) = \frac{\text{credit purchases}}{\text{Avg Debtors}} = \frac{90,000}{29000} = 3.1$$

$$\text{CTR}(Y) = \frac{1,35,000}{26,000} = 3.9$$

⇒ Net sales is 50,000 for a firm & the cost of goods sold is 20,000. The details of expenditure are as follows:

Administrative Expenses - 3,000
 Selling & distribution - 4,000
 Loss on sale of expenses - 3,000
 Interest on investment - 2,000
 Tax - 20%

a) Calculate Gross, Net & Operating profit ratios

b) The company's capital investment is Rs 30,000 @ Rs 10 per share & Market per share = 80.

Calculate EPS & P/E Ratio?

$$\text{Ans} \text{ a) Gross profit ratio} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

Gross profit = Sales - cost of goods

$$= 50,000 - 20,000 \\ = 30,000$$

$$\text{Gross profit ratio} = \frac{30,000}{50,000} \times 100 \\ = 60\%$$

$$\text{operating profit ratio} = \frac{\text{Operating Profit}}{\text{Sales}} \times 100$$

$$\text{operating profit} = \text{Gross profit} - \text{Admin expn}$$

- selling

$$= 30,000 - 3000 - 4000$$

$$= 23,000$$

$$\text{OPR} = \frac{23,000}{50,000} \times 100$$

$$= 46\%$$

$$\text{Net profit Ratio} = \frac{\text{Net profit}}{\text{Sales}} \times 100$$

$$\text{Net profit} = \text{Gross profit} + \text{Interest} - \text{Loss}$$

$$= 23,000 + 2000 - 3000$$

$$= 22,000$$

$$\text{TAX} = 20\% (22,000) = 4400$$

$$\text{Net profit} = 22,000 - 4400$$

$$= 17,600$$

$$\text{NPR} = \frac{17600}{50000} \times 100 = 35.2\%$$

$$b) EPS = \frac{\text{Net Profit after tax}}{\text{No of shares}}$$

$$= \frac{17600}{\left(\frac{30,000}{10}\right)} = 5.86$$

$$P/E \text{ Ratio} = \frac{\text{Market Share}}{\text{EPS}}$$

$$= \frac{80}{5.86} = 13.65$$

$$\Rightarrow \text{Debt-Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

→ Debt is outsiders fund, Equity is insiders fund.

⇒ calculate debt-equity ratio from the following

$$\text{Debentures} = 4,20,000$$

$$\text{equity shares} = 3,00,000$$

$$\text{Reserve funds} = 2,40,000$$

$$\text{Total insiders fund or equity} = \frac{5,40,000}{}$$

$$Ans \leftarrow DER = \frac{\text{Debt}}{\text{Equity}} = \frac{4,20,000}{5,40,000} = 0.77:1$$

1. Alpha Manufacturing Company Ltd. has drawn up the following profit and loss account for the year ended March 31, 2015.

	Rs.		Rs.
To Opening Stock	26,000	By Sales	1,60,000
To Purchases	80,000	By Closing Stock	38,000
To Wages	24,000		
To Manufacturing Exp.	16,000		
To Gross Profit	52,000		
	1, 98,000		1, 98,000
To Selling and distribution Expenses	4,000	By Gross profit	52,000
To Administrative expenses	22,800	By Profit on sale of land	4,800
To General Expenses	1,200		
To Bad Debts	800		
	56,800		56,800

You are required to find out

- a) Gross Profit ratio b) Operating expenses ratio
 c) Operating profit ratio d) Net profit ratio.

a) Gross profit ratio	$\frac{G.P}{Sales} \times 100$
	$= \frac{52,000}{1,60,000} \times 100$
	$= 32.5\%$
b) Net profit Ratio	$\frac{\text{Net profit}}{\text{Sales}} \times 100$
	$= \frac{28,000}{1,60,000} \times 100 = 17.5\%$
c) operating Expenses Ratio	$\frac{\text{cost of goods sales + other expenses}}{\text{Sales}} \times 100$
	$\text{COGS} = \text{Sales} - \text{G.P} = 160,000 - 52,000 = 1,08,000$
	$OE = \frac{1,08,000 + 28,000}{1,60,000} \times 100$
	$= 0.855$
d) operating profit Ratio	$(1 - \text{operating Expenses Ratio}) \times 100$
	$= (1 - 0.855) \times 100$

3. M/s. Madhuri Sisters present you the following Balance Sheet as on	31.03.2015.
Liabilities	Assets
Equity share capital	10,00,000
Reserve fund	1,00,000
7% debentures	3,00,000
Bank Overdraft	2,00,000
Creditors	3,00,000
	19,00,000
Fixed Assets	10,00,000
Stock	4,00,000
Debtors	3,00,000
Cash	2,00,000
	19,00,000
Calculate:	
a) Current ratio	b) Proprietary ratio c) Quick ratio

$$3) \text{ a) } CR = \frac{CA}{CL}$$

$$\begin{aligned} CA &= \text{Stock} + \text{Debtors} + \text{Cash} \\ &= 4,00,000 + 3,00,000 + 2,00,000 \\ &= 9,00,000 \end{aligned}$$

$$\begin{aligned} CL &= \text{Reserve fund} + 7\% \text{ Debentures} + \\ &\quad \text{Bank Overdraft} + \text{Creditors} \\ &= 1 + 3 + 2 + 3 \\ &= 9,00,000 \end{aligned}$$

$$CR = \frac{9,00,000}{9,00,000} = 1 : 1$$

$$\text{c) Quick Ratio} = \frac{9,00,000 - 4,00,000}{9,00,000} = \frac{5}{9}$$

$$\text{b) Proprietary ratio} = \frac{\text{Stockholders Equity}}{\text{Total Assets}} = \frac{10,00,000}{10,00,000} = 1$$