UNIT V
DECISION MAKING

1. What is Decision Making? Explain the steps involved in decision-making process.

Ans. In management accounting, decision-making may be simply defined as choosing a course of action from among alternatives. If there are no alternatives, then no decision is required. A basis assumption is that the best decision is the one that involves the most revenue or the least amount of cost.

Decision making is a rational process comprising certain defined steps, which are discussed as follows:

(i)Identification of Decision Problem: In most of the cases, the problems are difficult to be identified and formulate the decision problem. Problems may be related to any area of management like planning, organising, directing and control. Problem may relate to the sectors, products or people. How the problems are perceived also indicates the degree of managerial effectiveness.

(ii)Diagnosis and Definition of the Decision Problem: On discovering the decision problem, diagnose and define it in clear terms so as to identify its scope and ramifications. To enable the different functional managers to tackle it effectively, break it down to sub-problems.

(iii)Specification of Objectives: Objectives are the end points towards which decisions are directed. Objectives may be quantitative or qualitative. They may be specific, multiple, flexible attainable and realistic. They serve as yardsticks for measuring and evaluating the outcomes. They can also be used for implementing the decisions and for assessing its effectiveness.

(iv)Collection of Relevant Information: To collect the relevant information, the manager has to design the information system. The information may be quantitative or qualitative, internal or external, historical or projected. The manager has to consider several issues such as – availability, adequacy, reliability, timeliness, cost and relevance, etc., while collecting the information.

(v)Search for Alternative Courses of Action: Based on the relevant information, the manager has to identify alternative courses of action that lead to desirable solution. The manager may relay on his own expertise, may talk to his staff or may even conduct a brains storming with experts. New alternatives or options have to be generated through creative thinking.

(vi)Evaluation of Alternative Courses of Action: Once the list of alternatives is available, it is necessary to assess, against an objective criteria, the merits and demerits of each alternative. This is a complex process that may call for statistical tools.

(vii) Making the Final Choice: Against the predetermined objective criteria, progressively eliminate the alternatives to narrow down best course of action.
The manager is expected to apply his judgmental skills in making the final choice considering the objectives and values of the organisation, the feasibility, acceptability of the decision, relative

simplicity of the likely outcomes, and so on. It is a matter of trade-off between risks and returns, costs and benefits, both quantitative and qualitative issues.
The manager optimises utility function in the context of his responsibility as a manager. Make use of organisational policies, strategies, and previous decisions, and committed resources, interpersonal and human factors as guiding factors for effective decision making.

(viii)Implementation of the Decision: This is the final step in the decision making process. Here the decisions are operationalised; putting them into action is the essence of the whole managerial effectiveness. The decisions can be implemented once necessary structural, administrative and logistic arrangements are made.
Adequate authority has to be delegated for operationalising the decisions taken. Also, commit the financial and other resources required. Take the staff into confidence; provide them an environment that is conducive to empower them for implementation. Establish adequate controls to ensure that decisions are implemented in a faithful but flexible manner.

2. What is Relevant Cost? State its features. Distinguish between Relevant Cost and Irrelevant Cost.

Ans. Relevant cost is a managerial accounting term that describes avoidable costs that are incurred only when making specific business decisions. The concept of relevant cost is used to eliminate unnecessary data that could complicate the decision-making process. As an example, relevant cost is used to determine whether to sell or keep a business unit. The opposite of a relevant cost is a sunk cost, which has already been incurred regardless of the outcome of the current decision.

Features of Relevant Cost

(i)Relevant cost is a cost that will be incurred in the future. Historical costs are sunk costs which has no relevancy in the decision making.

(ii)The costs must differ between alternatives. If a cost is the same whether we choose alternative A or B then this is an irrelevant cost. A good example is factory rental which remains the same irrespective of management wanting to manufacture product A or B.

(iii) Only CASH flow item And Incremental fixed costs are relevant. Non cash item like depreciation and absorbed fixed overheads are not relevant costs as they do not involve any additional cash flow.

Distinguish between Relevant Cost and Irrelevant Cost:

Basis	Relevant Cost	Irrelevant Cost
1.Nature	Relevant costs are usually variable in nature.	Irrelevant costs are usually fixed in nature.
2.Coverage	The relevant costs are mainly related to the operational or recurring expenditures.	The irrelevant costs are mainly related to the capital or one-off expenditures.
3.Time Horizon	The relevant costs are usually related to the short term.	The irrelevant costs are usually related to the long term.

4.Level	The relevant costs are incurred mainly by the lower management.	The irrelevant costs are mainly incurred by top management.
5.Scope	The relevant costs are usually related to a particular division or section.	The irrelevant costs are usually related to organization wide activities.

3. What is Relevant Benefits?

Ans. Relevant benefits are the additional gains or revenues a company will receive if it chooses a particular action. In other words, this is the additional income a company will earn if the management decides to pursue one course of action over another. Relevant benefits are used by management to evaluate different strategic options or actions a company can take.

4. What is Make or Buy Decision? Mention the factors which influencing make or buy decision.

Ans. A concern can utilise its idle capacity by making component parts instead of buying them from market. In arriving at such a make or buy decision, the price asked by the outside suppliers should be compared with the marginal cost of producing the component parts. If the marginal cost is lower than the price demanded by the outside suppliers, the component parts should be manufactured in the factory itself to utilise unused capacity.

Fixed expenses are not taken in the cost of manufacturing component parts on the assumption that they have been already incurred, the additional cost involved is only variable cost.

Factors that Influence Make or Buy Decision

In a make or buy decision the following cost and non-cost factors must be considered specifically.

Cost Factors

1. Availability of plant facility.

2. Quality and type of item – which affects the production schedule.

3. The space required for the production of item.

4. Any special machinery or equipment required.

5. Any transportation involved due to the location of production i.e. the 'Feeder Point.

6. Cost of acquiring special know how required for the item.

7. As to purchase of raw material the factors like market price, price trend, availability and other must be kept in view.

8. As to labour factors like availability of the required labour.

9. As to overhead expenses, adoption of lease for apportioning them must be taken into consideration including other factors.

10. As to application of the techniques of costing it must be viewed for marginal costing, differential costing or otherwise alike one.

In addition to the cost factors discussed above, the non-cost factors which are taken into consideration to influence the make or buy decision are as follows :

(i) Quality of goods supplied by the supplier.

(ii) Uninterrupted supply by the supplier meeting the delivery dates.

(iii) If secrecy is to be maintained and manufacturing know-how is not to be passed on to the supplier of the component part, the decision will be to manufacture part even though the manufacturing cost may be more than the price to be charged by the supplier.

(iv) Any adverse effect on labour relations if it is decided to buy from outside instead of making o the facility of wider selection in case of buy-decision.

5. Explain the Acceptance or Rejection of export offers/special offers.

Ans. Sometimes, the management is interested to operate the concern at full capacity as there may be offer from the foreign country to purchase the goods but at less price than is available from the local market. Under such circumstances first of all incremental revenue is calculated by deducting the existing sales from the proposed sales. Similarly incremental cost is calculated by deducting existing cost from the proposed cost. Incremental cost is matched against incremental revenue. If the incremental revenue is more than the incremental cost, the proposal should be accepted otherwise not.

Sometimes, a concern may receive special offers from its regular customers to sell its regular products. Special offers may be received from the home customers for one time quantity sales or sales to foreign customers. Such offers generally are received at lesser prices than the usual customary prices. The decision to accept or reject special offer is based entirely on differential cost and the contribution margin approach. The point to be considered is whether incremental revenue is more than the differential cost to be incurred. The use of absorption costing is not preferred as it may show misleading results.

While deciding about special offers rejection or acceptance the following factors should be taken into consideration:

(i) The impact on future earnings of temporarily reduction in the selling price.

(ii) The effect of reducing selling prices on the existing customers when it comes to their knowledge.

(iii) The possibility of selling additional units to the new customers beyond the special offer.

(iv)The reliability of cost estimates associated with the offer.

(v) The effect on current and future capacity in terms of an expansion of plant, personnel, financial requirements and other capacity constraints.

6. Explain operate or shut down decision.

Ans. Sometimes it becomes necessary for a firm to temporarily suspend or close the activities of a particular product, department or factory as a whole due to trade recession.

Differential cost analysis is also used when a business is confronted with the possibility of a temporary shutdown. This type of analysis has to determine whether in the short-run a firm is better off operating than not operating. As long as the products sold recover their variable costs and make a contribution towards the recovery of fixed costs, it may be preferable to operate and not to shutdown.

In addition to cost consideration, there may be some non-cost considerations which may weigh in taking the decision to close down or suspend its activities or not. Following non-cost considerations are relevant in this respect:

(i) Once the business is closed down, competitors may establish their products and our business may be lost. It may be difficult to recapture the lost market again; heavy advertisement charges may have to be incurred to recapture the business again.

(ii)Fear of retrenchment of worker. If workers are discharged it may be difficult to get experienced and skilled workers again at the restart of the business.

(iii) Plant may become obsolete with the closure of the business and heavy capital expenditure may have to be incurred on restart of the business.

(iv) Reputation of the firm may suffer if some activities are closed down or suspended.

(v) Temporary closing down or suspending activities may not be desirable if the relationship with the suppliers is adversely affected.

(vi) Fear of non-collection of dues from customers in case of close of business may not go in favour of closure of business.

7. Explain Drop or Add Product Decision.

Ans. The decision to eliminate an unprofitable product is a special case of segment or product profitability evaluation. To evaluate the financial consequences of eliminating a product, it is necessary to concentrate on the differential or incremental profit effect of the decision. An important factor in the decision to add or drop a product is whether it will increase or decrease the future income of the business. Appropriate cost and profit measures must be developed for each alternative.
Care must be taken not only to consider the profitability of the product being analyzed but also to evaluate the extent to which sales of other products will be adversely affected when one product is removed. An unprofitable product may be part of a line of products that must be complete in order to attract customers to more profitable products.

The unprofitable product may also be a complement to more profitable products, in which case some customers may buy the more profitable products because the unprofitable product is also available from the same company. If the expected sales decrease of related products is severe enough, it probably would be desirable to retain the product being scrutinized.

Management needs data that will permit development of **warning signals** for products that may be in trouble. Such warning signals include:

1. Increasing number of customer complaints.

2. Increasing number of dispatches returned.

3. Declining sales volume.

4. Product sales volume decreasing as a percentage of the firm’s total sales.

5. Decreasing market share.

6. Malfunctioning of the product or introduction of a superior competitive product.

7. Past sales volume not up to projected amounts.

8. Expected future sales and market potential not favourable.

9. Return on investment below a minimum acceptable level.

10. Variable costs approaching or exceeding revenue.

11. Various costs consistently increasing as a percentage of sales.

12. Increasing percentage of executive time required.

13. Price which must be constantly lowered to maintain sales.

14. Promotional budgets which must be consistently increased to maintain sales.

8. Explain Sell or Process Further Decision.

Ans. The decision whether a product should be sold at the split-off point or processed further is faced by many manufacturers. The choice between selling a product at split-off or processing it further is short-run operating decision. Additional processing adds value to a product and increases its selling price above the amount for which it could be sold at split-off. The decision to process further depends upon whether the increase in total revenues exceeds the additional costs incurred for processing beyond split-off.

Conditions for Sell or Process Further Decisions:
Generally speaking, there are two general conditions under which a sell or process further decision could occur:
(1) The company is evaluating the possibility of processing beyond split-off and must incur certain equipment costs and other fixed costs if additional processing is to occur.

(2) The company already processes a product beyond split-off and has invested in the equipment and required personnel.

The first situation is really a capital budgeting problem and here it is not sufficient to determine whether incremental revenues exceed incremental costs. Since new investment in machinery and building are involved, the rate of return on this investment must also be considered.

9. Explain Profitable Product Mix Decision.

Ans. When a factory manufactures more than one product, a problem is faced by the management as to which product mix will give the maximum profits. The best product mix is that which yields the maximum contribution. The products which give the maximum contribution are to be retained and their production should be increased. The products which give comparatively less contribution should be reduced or closed down altogether. The effect of sales mix can also be seen by comparing the PN ratio and breakeven point. The new sales mix will be favourable if it increases the P/V ratio and reduces the breakeven point.

10. Explain the factors influencing pricing decisions.

Ans. The factors influence pricing decisions may be divided into two categories:

(1) Internal factors and (2) External factors.

(1) Internal Factors: Internal factors are those factors that are under control of the organization. These factors are:

(i) Cost of Product: Cost of product plays an important role in pricing decision. If the product cost is high the price also remains high and cost of product is minimum price is also low. Various cost related policies like, cost-plus method, marginal cost-method, target cost pricing etc. are directly influence pricing, policy of a product.

(ii) Pricing Objectives: Various pricing objectives influence pricing decisions. These objectives may be classified into:

(a) Stability in prices (b) Meeting competition (c) To earn maximum profit (d) Target rate of return (e) Increase of the share of the market

Any one or more of the objectives listed above would be kept in mind before price fixation.

(iii) Marketing-Mix: Price is only one of marketing mix. But it is closely related with other elements of marketing mix. Other elements, i.e., product, promotion and place also effects pricing decisions in long-time.

(iv) Product life cycle: The different stages of PLC Introduction, growth, maturity, saturation and decline affect pricing decision. In introducing stage, product price should be low, in growth the product has high price and in maturity and decline stage, product may have comparatively low price.

(2) External Factors: External factors are beyond the control of an organization but they affect pricing of a product. These factors are:

(i) Estimating Demand: Price and demand has inverse relationship. Various degrees of elasticity of demand affect the price fixation of the product. For example, in case of elastic demand, marketers make minimum change in price but, for inelastic demand producers realize maximum profit with high price.

(ii) Competition: Competitive conditions affect the pricing decision. In this situation marketers can fix the price equal to or lower than the competitor's price. For example, cosmetic products have a wide range of such types of products.

(iii) Distribution Channels: Distribution channels also affect the pricing decision. If channel of distribution is long, the prices will be fixed higher making an allowance for the distribution expenses made by each middleman. If on the Contrary, channel is short, prices may be fixed lower.

(iv) Economic Environment: In money inflation the price are increased to cover the increasing cost of production and distribution. On the other hand, the prices are reduced in recession period.

(v) Government Policy: Government policies such as control of prices, levying of taxes, no profit no loss price, etc. are also affect the pricing of product. Sometimes, government starts selling through fair price shops and bound to producers to fix lower price in favour of public welfare.

11. Explain the products pricing strategies or methods.

Ans. Pricing method can be seen as the process of ascertaining the value of a product or service at which the manufacturer is willing to sell it in the market. The cost, market competition and demand are the three significant factors which influence a product's price.

(1)Cost-Oriented Methods: These are the traditional methods of product pricing. The major factors which influence the product price are the fixed cost, variable cost other overheads incurred in manufacturing the products.

The different cost-oriented pricing models below:

(i)Cost plus Pricing: Cost-plus pricing is one of the simplest ways of price determination. A certain percentage of cost is added as a profit margin to the value of the product to acquire the selling price.

(ii)Mark-up Pricing: It is a form of cost-plus pricing, but here the profit margin is presented as a percentage of expected return on sales. The formula for mark-up pricing is:

Mark-up Price= $\frac{\textbf{Unit Cost (Fixed + Variable)}}{\textbf{(1}-\textbf{Percentage of Expected Return on Sales)}}$

(iii)Marginal Cost Pricing: This method, also known as contribution approach, uses only variable costs as the basis for pricing. Fixed costs are not added to the product, service or contract. This pricing method emphasises the relationship between prices and costs that vary directly with sales. It ignores fixed costs altogether.

(iv)Target Return Pricing: The pricing objective in target return method is to attain a certain level of ROI (Return on Investment). The formula for determining the target return price is:

Target Return Price= $\frac{(\textbf{Total Cost + Desired Return on Investment})}{(\textbf{Total sales in Units})}$

(v) Break-Even Pricing: This method is similar to break-even analysis, here the company needs to price the products such that it generates profit after recovering the fixed and variable costs. The selling price should be equal to or more than the break-even price (the point at which the sales revenue matches the cost of goods sold).

The formula for ascertaining the break-even limit is:

Break-Even Point= $\frac{(\textbf{Total Fixed Cost})}{(\textbf{Selling Price per unit –Variable Cost per unit})}$

(vi)Early Cash Recovery Pricing: When it comes to rapidly growing technological products or the ones with a short life cycle, the cost needs to recover as early as possible. This method is very similar to target return pricing; the only difference is that it considers a high value of return on investment owing to a short recovery period.

(2)Market-Oriented Methods: In a highly competitive market, the company cannot survive with cost-oriented pricing. Hence, it needs to price its products according to the market demand and competitor's pricing strategy.

(i)Going Rate Method: 'Follow the crowd' method is based on market competition, where the company price its product similar to the competitor's product price. If the market leader reduces the price of its product, the organization also needs to decrease its product price, even if the latter's cost of production is high.

(ii)Sealed Bid Pricing Method: When it comes to industrial marketing or government projects, the supplier needs to bid specific product price, which he/she assumes to be the lowest, in a sealed quotation.

In other words, the organization needs to fill a tender, which indicates its costing and competitiveness. The pricing should be done smartly by estimating the profit margin at different price levels and enclosing the most competitive price.

(3)Customer-Oriented Method: This method is also called perceived value pricing. It is demand-based pricing where the company determines the product price on value perception in terms of consumer demand for the particular goods or service.

(4)Other Pricing Methods: There are specific other methods for determining the price of a product or service, other than considering the cost or market competition as the basis. These are explained in detail below:

(i) Leader Pricing Policy: Under leader pricing policy firms try to capture the market by setting up a low price for a popular product. This is also known as 'Loss Leader Pricing'. On the other hand, a high price may be fixed for a prestigious product to improve the image. This prestigious pricing is known as 'profit leader pricing

(ii)A Penetration Pricing Policy: The basic objective of penetration pricing is to help the product penetrate into markets to hold a position. The price of the product is kept at a low level until such time as the product is finally accepted by the customers. Such a policy is adopted to capture a market share from a competing product.

(iii) Skimming the Cream Pricing Policy or Prestige Pricing Policy: Under this policy, a very high price is fixed by an industrial enterprise for its products at the very outset. Thus this policy involves the setting of a very high initial price of the product the market and then reducing the price gradually as the competitors enter the field.

(iv) Bait Pricing Policy: This is a very interesting pricing policy. Under this policy, two products are manufactured. The price of one product is kept low and the price of another product is kept high. When a consumer comes, low price product is presented before him and when he shows some interest in buying this product, the product of high price is presented before him and the merits of high price product are explained to him. Thus, efforts are made to sell high price product by initially showing low price product. Low price products are products only to bait the consumers.

(v) Psychological Pricing Policy: Under this policy, some manufacturers fix the prices of their products in the manner that it may create an impression in the mind of consumers that the prices are low. For example, the prices of shoes of Bata are determined as Rs. 19.95, 29.95, 39.95 and so on.