Paper 15 – Business Strategy & Strategic Management

Section A

Full Marks: 100 **Time : 3 hours**

Question No. 1 & 2 are compulsory. Answer any two questions from the rest.

1. For more than ten years, Ananda Stores Ltd. was successfully running a number of retail stores selling cosmetics and skin care products. From, next year sales were stagnating and now after a year had started declining. The general manager of the company made enquiries from stores in charge at various location of stores. All of them reported that ladies, particularly the younger generation, were found to be highly discriminating about choice of products. Demand for certain branded items widely fluctuated due to movie artists' performances shown on the TV. The general manager decided to have environmental analysis carried out with a focus on changes in social and cultural factors among urban ladies. On that basis he even thought of recommending to the Board of Directors a complete change in the product lines to be decided.

(i) Do you think the GM was right in his approach regarding environmental scanning?

(ii) What other factors in the environment needed analysis?

(iii) If there was a clear change in the tastes and preferences of buyers of certain products, is it essential for the company to switch over to a different product line? (5+5+5=15)

Answer.

(i) Environmental scanning is one function of strategic management of analyzing external factors that can affect an organization. Environmental scanning is to scan the environment to monitor and identify the changes such as new trends that may cause an effect on the organization. In addition, environmental scanning with an internal analysis of the organization strengths, weakness, mission, and vision can assist management to formulate a strategic plan to gain control that may have potentially significant affect.

Environmental scanning is the acquisition and use of information about events, trends, and relationships in an organization's external environment, the knowledge of which would assist management in planning the organization's future course of action. Organizations scan the environment in order to understand the external forces of change so that they may develop effective responses which secure or improve their position in the future. They scan in order to avoid surprises, identify threats and opportunities, gain competitive advantage, and improve long-term and short-term planning). To the extent that an organization's ability to adapt to its outside environment is dependent on knowing and interpreting the external changes that are taking place, environmental scanning constitutes a primary mode of organizational learning. Environmental scanning includes both looking at information (viewing) and looking for information (searching). It could range from a casual conversation at the lunch table or a chance observation of an angry customer, to a formal market research programme or a scenario planning exercise.

So, the GM is right in his approach regarding environmental scanning. It will help them to understand the market preference and the reason behind the declining sales.

(ii) Marketing managers are confronted with many environmental concerns, such as those posed by technology, customers and competitors, ethics and law, the economy, politics, demographics, and social **trends**. All organizations should continuously appraise their situation and adjust their strategy to adapt to the environment.

One technique used by organizations to monitor the environment is known as environmental scanning. This term refers to activities directed toward obtaining information about events and trends that occur outside the organization and that can influence the organization's decision making.

In a sense, such data collection scanning acts as an early warning system for the organization. It allows marketers to understand the current state of the environment, so that the organization can predict trends.

Issues are often forerunners of trend breaks. A trend break could be a value shift in society, a technological innovation that might be permanent, or a paradigm change. Issues are less deep-seated and can be "a temporary short-lived reaction to a social phenomenon." A trend can be defined as an "environmental phenomenon that has adopted a structural character."

A formal but simple strategic information scanning system can enhance the effectiveness of the organization's environmental scanning efforts. An information system (part of marketing research) organizes the scanning effort so that information related to specific situations can be more readily obtained and used.

The Macro Environment

There are a number of common approaches for how the external factors, which describe the macro environment, can be identified and examined. These factors indirectly affect the organization but cannot be controlled by it. One approach is the PEST analysis.

PEST stands for political, economic, social and technological. Of the four categories explored in the PEST analysis, the company has the least control over economic factors.

Two more factors, the environmental and legal factor, are defined within the **PESTEL** analysis (or PESTLE analysis).

The segmentation of the macro environment according to the six presented factors of the PESTEL analysis is the starting point of the global environmental analysis.

PESTEL Analysis

The six environmental factors of the PESTEL analysis are the following:

Political factors

- Taxation policy;
- Trade regulations;
- Governmental stability;
- Unemployment policy.

Economical factors

- Inflation rate;
- Growth in spending power;
- Rate of people in a pensionable age;
- Recession or boom;
- Customer liquidations.

Socio-cultural

- Age distribution;
- Education levels;
- Income level;
- Consumerism.
- Diet and nutrition;
- Population growth;
- Life expectancies;

- Religion;
- Social class;
- Expectations of society about the business.

Technological factors
- Internet;
- E-commerce;
- Social media.
- Level of Automation

Environmental factors
- Competitive advantage;
- Waste disposal;
- Energy consumption;
- Pollution monitoring.

Legal factors
- Unemployment law;
- Health and safety;
- Product safety;
- Advertising regulations;
- Product labeling labor laws.

Ecology
- Affects customer's buying habits;
- Affects the production process of the firm.

Potential supplies
- Labor supply;
- Quantity of labor available;
- Quality of labor available;
- Material suppliers;
- Delivery delay;
- Level of competition to suppliers;
- Service provider;
- Special requirements.

(iii)

2. Subas Ltd. is engaged in the production of floral concentrates which have uses in a wide variety of fields from cosmetics to toiletries. At the moment the concentrates are produced and sold to perfume manufacturers, who in turn supply the producers of the ultimate products. The directors of Subas are concerned about the higher profitability at the product end of the trade compared with the production of the concentrates, and ask you to explore the possibilities of vertical expansion.

(i) What is Vertical Expansion? Explain with example.

(ii) In the given case what are the issues to be examined before deciding on vertical expansion? (10+5=15)

Answer.

(i) Vertical integration is the merging together of two businesses that are at different stages of production—for example, a food manufacturer and a chain of supermarkets. Merging in this way with something further on in the production process (and thus closer to the final consumer) is known as forward integration.

Vertical integration can be contrasted to horizontal integration, the merging together of businesses that are at the same stage of production, such as two supermarkets, or two food manufacturers. Merging with something further back in the process (if a food manufacturer were to merge with a farm, say) is known as backward integration. The integration of two organisations that are in completely different lines of business is sometimes referred to as conglomerate integration.

Businesses are downstream or upstream of each other depending on whether they are nearer to or further away from the final consumer (the "sea", as it were, to which the river of production flows).

Related items

- Vertical integration: Moving on upMar 27th 2009
- Idea: Planned obsolescenceMar 23rd 2009
- Idea: Strategic planningMar 16th 2009
- Idea: The Seven SsMar 9th 2009

Related topics

- United States
- Alaska
- Fossil fuels
- Energy industry
- BP

The benefits of vertical integration come from the greater capacity it gives organisations to control access to inputs (and to control the cost, quality and delivery times of those inputs). In line with the changing organisational structure of the late 20th century, however, this logic became less compelling. In the late 1990s, consultants McKinsey & Company wrote:

Whereas historically firms have vertically integrated in order to control access to scarce physical resources, modern firms are internally and externally disaggregated, participating in a variety of alliances and joint ventures and outsourcing even those activities normally regarded as core.

Some of the best known examples of vertical integration have been in the oil industry. In the 1970s and 1980s, many companies that were primarily engaged in exploration and the extraction of crude petroleum decided to acquire downstream refineries and distribution networks. Companies such as Shell and BP came to control every step involved in bringing a drop of oil from its North Sea or Alaskan origins to a vehicle's fuel tank.

The idea of vertical integration was taken a step further by Dell Computer, one of the most successful companies of the 1990s. Michael Dell, its founder, said that he combined the traditional vertical integration of the supply chain with the special characteristics of the virtual organisation to create something that he called "virtual integration". Dell assembles computers from other firms' parts, but it has relationships with those firms that are more binding than the traditional links between buyer and supplier. It does not own them in the way of the vertically integrated firm, but through exchanges of information and a variety of loose associations it achieves much the same aim—what Michael Dell calls "a tightly co-ordinated supply chain".

Vertical integration is a difficult strategy for companies to implement successfully. It is often expensive and hard to reverse. Upstream producers frequently integrate with downstream distributors to secure a market for their output. This is fine when times are good. But many firms

have found themselves cutting prices sharply to their downstream distributors when demand has fallen just so they can maintain targeted levels of plant utilisation.

The vertically integrated giants of the computer industry, firms such as IBM, Digital and Burroughs, were felled like young saplings when at the end of the 1970s Apple formed a network of independent specialists that produced machines far more efficiently than the do-it-all giants.

(ii) Two issues that should be considered when deciding whether to vertically integrate is cost and control. The cost aspect depends on the cost of market transactions between firms versus the cost of administering the same activities internally within a single firm. The second issue is the impact of asset control, which can impact barriers to entry and which can assure cooperation of key value-adding players.

Factors Favoring Vertical Integration
The following situational factors tend to favor vertical integration:

- Taxes and regulations on market transactions
- Obstacles to the formulation and monitoring of contracts.
- Strategic similarity between the vertically-related activities.
- Sufficiently large production quantities so that the firm can benefit from economies of scale.
- Reluctance of other firms to make investments specific to the transaction.

Factors Against Vertical Integration
The following situational factors tend to make vertical integration less attractive:

- The quantity required from a supplier is much less than the minimum efficient scale for producing the product.
- The product is a widely available commodity and its production cost decreases significantly as cumulative quantity increases.
- The core competencies between the activities are very different.
- The vertically adjacent activities are in very different types of industries. For example, manufacturing is very different from retailing.
- The addition of the new activity places the firm in competition with another player with which it needs to cooperate. The firm then may be viewed as a competitor rather than a partner

(iii) If there is a change in taste and preference of the buyer instead of introducing a altogether different line of product line the company can think of introducing different product for different customer groups.

They need to identify the taste, preference, buying habits for these particulars groups and accordingly they can introduce the suitable product for that particular group. Customers are people who buy products and services from other people (usually companies of one sort or another). What customers think and feel about a company and/or its products is a key aspect of business success. Attitudes are shaped by experience of the product, the opinions of friends, direct dealings with the company, and the advertising and other representations of the company.

Irrespective of whether a business' customers are consumers or organisations, it is the job of marketers to understand the needs of their customers. In doing so they can develop goods or services which meet their needs more precisely than their competitors. The problem is that the process of buying a product is more complex than it might at first appear.

Customers do not usually make purchases without thinking carefully about their requirements. Wherever there is choice, decisions are involved, and these may be influenced by constantly changing motives. The organisation that can understand why customers make decisions such as who buys, what they buy and how they buy will, by catering more closely for customers needs, become potentially more successful.

The supermarket industry provides a good example of the way in which different groups of customers will have different expectations. Some customers just want to buy standard products at the lowest possible prices. They will therefore shop from supermarkets that offer the lowest prices and provide a reasonable range of goods. In contrast, some supermarket shoppers are seeking such aspects as variety and quality. They will therefore choose to buy from an up-market supermarket. Additionally some customers will have special tastes such as wanting to buy FAIRTRADE products or organic fruit and vegetables. It is clear therefore that to be successful a business has to have a clear understanding of their target customers and the expectations of this group.

Most markets are made up of groups of customers with different sets of expectations about the products and services that they want to buy. Marketing oriented businesses will therefore need to carry out research into customer requirements to make sure that they provide those products and services which best meet customer expectations in the relevant market segment.

3. (a) What do you mean by strategic leadership? What are two approaches to leadership style? (2+2+2=6)

Answer.

Strategic leadership is the ability of influencing others to voluntarily make decisions that enhance prospects for the organisation‟s long-term success while maintaining short-term financial stability. It includes determining the firm‟s strategic direction, aligning the firm‟s strategy with its culture, modeling and communicating high ethical standards, and initiating changes in the firm‟s strategy, when necessary. Strategic leadership sets the firm‟s direction by developing and communicating a vision of future and inspire organization members to move in that direction. Unlike strategic leadership, managerial leadership is generally concerned with the short-term, day-to-day activities.

Two basic approaches to leadership can be transformational leadership style and transactional leadership style.

Transformational leadership style use charisma and enthusiasm to inspire people to exert them for the good of the organization. Transformational leadership style may be appropriate in turbulent environments, in industries at the very start or end of their life-cycles, in poorly performing organizations when there is a need to inspire a company to embrace major changes. Transformational leaders offer excitement, vision, intellectual stimulation and personal satisfaction. They inspire involvement in a mission, giving followers a „dream‟ or „vision‟ of a higher calling so as to elicit more dramatic changes in organizational performance. Such a leadership motivates followers to do more than originally affected to do by stretching their abilities and increasing their self-confidence, and also promote innovation throughout the organization.

Whereas, **transactional leadership** style focus more on designing systems and controlling the organization‟s activities and are more likely to be associated with improving the current situation. Transactional leaders try to build on the existing culture and enhance current practices. Transactional leadership style uses the authority of its office to exchange rewards, such as pay and status. They prefer a more formalized approach to motivation, setting clear goals with explicit rewards or penalties for achievement or non-achievement. Transactional leadership style may be appropriate in settled environment, in growing or mature industries, and in organizations that are performing well. The style is better suited in persuading people to work efficiently and run operations smoothly.

(b) Under what conditions would you recommend the use of Turnaround strategy in an organization ? (4)

Answer.

Rising competition, business cycles and economic volatility have created a climate where no business can take viability for granted. Turnaround strategy is a highly targeted effort to return an organization to profitability and increase positive cash flows to a sufficient level. Organizations those have faced a significant crisis that has negatively affected operations requires turnaround strategy. Turnaround strategy is used when both threats and weaknesses adversely affect the health of an organization so much that its basic survival is a question. When organization is facing both internal and external pressures making things difficult then it has to find something which is entirely new, innovative and different. Being organization‟s first objective is to survive and then grow in the market; turnaround strategy is used when organization‟s survival is under threat. Once turnaround is successful the organization may turn to focus on growth. Conditions for turnaround strategies When firms are losing their grips over market, profits due to several internal and external factors, and if they have to survive under the competitive environment they have to identify danger signals as early as possible and undertake rectification steps immediately. These conditions may be, inter alia cash flow problems, lower profit margins, high employee turnover and decline in market share, capacity underutilization, low morale of employees, recessionary conditions, mismanagement, raw material supply problems and so on.

4. What do you understand by "Strategy"? Explain the four generic strategies as discussed by Glueck and Jauch. (2+8=10)

Answer.

Businesses have to respond to a dynamic and often hostile environment for pursuit of their mission. Strategies provide an integral framework for management and negotiate their way through a complex and turbulent external environment. Strategy seeks to relate the goals of the organisation to the means of achieving them. A company‟s strategy is the game plan management is using to stake out market position and conduct its operations. A company‟s strategy consists of the combination of competitive moves and business approaches that managers employ to please customers compete successfully and achieve organisational objectives. Strategy may be defined as a long range blueprint of an organisation's desired image, direction and destination what it wants to be, what it wants to do and where it wants to go. Strategy is meant to fill in the need of organisations for a sense of dynamic direction, focus and cohesiveness.

The Generic Strategies : According to Glueck and Jauch there are four generic ways in which strategic alternatives can be considered. These are stability, expansion, retrenchment and combinations.

(i) Stability strategies: One of the important goals of a business enterprise is stability to safeguard its existing interests and strengths, to pursue well established and tested objectives, to continue in the chosen business path, to maintain operational efficiency on a sustained basis, to consolidate the commanding position already reached, and to optimize returns on the resources committed in the business.

(ii) Expansion Strategy: Expansion strategy is implemented by redefining the business by adding the scope of business substantially increasing the efforts of the current business. Expansion is a promising and popular strategy that tends to be equated with dynamism, vigor, promise and success. It is often characterised by significant reformulation of goals and directions, major initiatives and moves involving investments, exploration and onslaught into new products, new technology and new markets, innovative decisions and action programmes and so on. Expansion includes diversifying, acquiring and merging businesses.

(iii) Retrenchment Strategy: A business organisation can redefine its business by divesting a major product line or market. Retrenchment or retreat becomes necessary or expedient for coping with particularly hostile and adverse situations in the environment and when any other strategy is likely to be suicidal. In business parlance also, retreat is not always a bad proposition to save the enterprise's vital interests, to minimise the adverse environmental effects, or even to regroup and recoup the resources before a fresh assault and ascent on the growth ladder is launched.

(iv) Combination Strategies: Stability, expansion or retrenchment strategies are not mutually exclusive. It is possible to adopt a mix to suit particular situations. An enterprise may seek stability in some areas of activity, expansion in some and retrenchment in the others. Retrenchment of ailing products followed by stability and capped by expansion in some situations may be thought of. For some organisations, a strategy by diversification and/or acquisition may call for a retrenchment in some obsolete product lines, production facilities and plant locations.

5. (a) How emergent strategy is different from deliberate strategy? (3)

Answer.

Deliberate strategy is top-down, akin to strategic planning, and much needed for coordinating action upon 3 conditions:

(i) Management has to address all critical details in order for the strategy to succeed. Those implementing the strategy has to be aware of these details in light of the larger picture of senior management's deliberate strategy.

(ii) Management has to stress collective action and paint the picture of the strategy to align everyone so that actions will be consistent and appropriate.

(iii) Management has to take in account that there are some external influences that cannot be fully anticipated, arising from political, technological, and market forces. As such preparations must be made to as far as possible allow for the realisation of strategy with these influences in mind.

Emergent strategy on the other hand is more of a cumulative effect from bottom-up – the ground engineers, salespeople, and other executive staff. These are daily tactical operations decisions made by those who are not in the position or state of mind to conceptualise such strategies.

(b) What is competitor analysis ? (7)

Answer.

In formulating business strategy, managers must consider the strategies of the firm's competitors. While in highly fragmented commodity industries the moves of any single competitor may be less important, in concentrated industries **competitor analysis** becomes a vital part of strategic planning.

Competitor analysis has two primary activities, 1) obtaining information about important competitors, and 2) using that information to predict competitor behavior. The goal of competitor analysis is to understand:

- with which competitors to compete,
- competitors' strategies and planned actions,
- how competitors might react to a firm's actions,
- how to influence competitor behavior to the firm's own advantage.

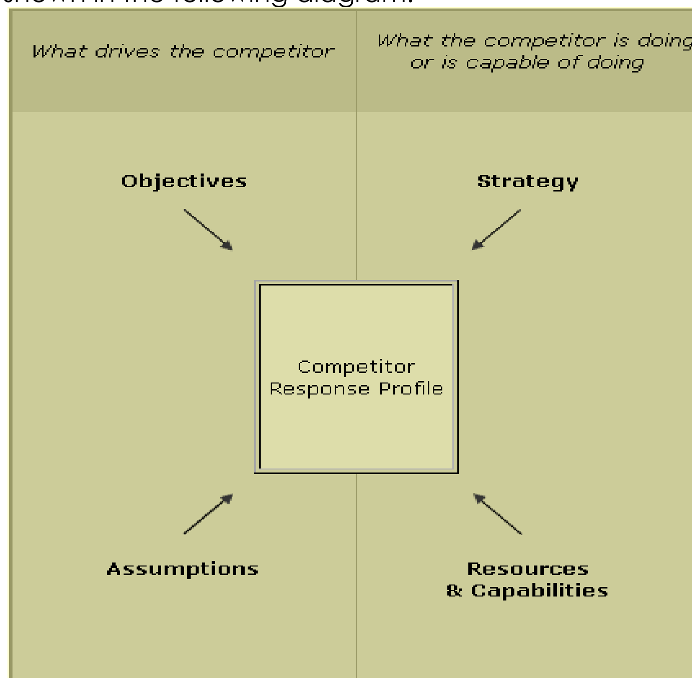
Casual knowledge about competitors usually is insufficient in competitor analysis. Rather, competitors should be analyzed systematically, using organized competitor intelligence-gathering to compile a wide array of information so that well informed strategy decisions can be made.

Competitor Analysis Framework

Michael Porter presented a framework for analyzing competitors. This framework is based on the following four key aspects of a competitor:

- Competitor's objectives
- Competitor's assumptions
- Competitor's strategy
- Competitor's capabilities

Objectives and assumptions are what drive the competitor, and strategy and capabilities are what the competitor is doing or is capable of doing. These components can be depicted as shown in the following diagram:



A competitor analysis should include the more important existing competitors as well as potential competitors such as those firms that might enter the industry, for example, by extending their present strategy or by vertically integrating.

Competitor's Current Strategy

The two main sources of information about a competitor's strategy is what the competitor says and what it does. What a competitor is saying about its strategy is revealed in:

- annual shareholder reports

- 10K reports
- interviews with analysts
- statements by managers
- press releases

However, this stated strategy often differs from what the competitor actually is doing. What the competitor is doing is evident in where its cash flow is directed, such as in the following tangible actions:

- hiring activity
- R & D projects
- capital investments
- promotional campaigns
- strategic partnerships
- mergers and acquisitions

Competitor's Objectives

Knowledge of a competitor's objectives facilitates a better prediction of the competitor's reaction to different competitive moves. For example, a competitor that is focused on reaching short-term financial goals might not be willing to spend much money responding to a competitive attack. Rather, such a competitor might favor focusing on the products that hold positions that better can be defended. On the other hand, a company that has no short term profitability objectives might be willing to participate in destructive price competition in which neither firm earns a profit.

Competitor objectives may be financial or other types. Some examples include growth rate, market share, and technology leadership. Goals may be associated with each hierarchical level of strategy - corporate, business unit, and functional level.

The competitor's organizational structure provides clues as to which functions of the company are deemed to be the more important. For example, those functions that report directly to the chief executive officer are likely to be given priority over those that report to a senior vice president.

Other aspects of the competitor that serve as indicators of its objectives include risk tolerance, management incentives, backgrounds of the executives, composition of the board of directors, legal or contractual restrictions, and any additional corporate-level goals that may influence the competing business unit.

Whether the competitor is meeting its objectives provides an indication of how likely it is to change its strategy.

Competitor's Assumptions

The assumptions that a competitor's managers hold about their firm and their industry help to define the moves that they will consider. For example, if in the past the industry introduced a new type of product that failed, the industry executives may assume that there is no market for the product. Such assumptions are not always accurate and if incorrect may present opportunities. For example, new entrants may have the opportunity to introduce a product similar to a previously unsuccessful one without retaliation because incumbant firms may not take their threat seriously. Honda was able to enter the U.S. motorcycle market with a small motorbike because U.S. manufacturers had assumed that there was no market for small bikes based on their past experience.

A competitor's assumptions may be based on a number of factors, including any of the following:

- beliefs about its competitive position

- past experience with a product
- regional factors
- industry trends
- rules of thumb

A thorough competitor analysis also would include assumptions that a competitor makes about its own competitors, and whether that assessment is accurate.

Competitor's Resources and Capabilities

Knowledge of the competitor's assumptions, objectives, and current strategy is useful in understanding how the competitor might want to respond to a competitive attack. However, its resources and capabilities determine its ability to respond effectively.

A competitor's capabilities can be analyzed according to its strengths and weaknesses in various functional areas, as is done in a SWOT analysis. The competitor's strengths define its capabilities. The analysis can be taken further to evaluate the competitor's ability to increase its capabilities in certain areas. A financial analysis can be performed to reveal its sustainable growth rate.

Finally, since the competitive environment is dynamic, the competitor's ability to react swiftly to change should be evaluated. Some firms have heavy momentum and may continue for many years in the same direction before adapting. Others are able to mobilize and adapt very quickly. Factors that slow a company down include low cash reserves, large investments in fixed assets, and an organizational structure that hinders quick action.

Competitor Response Profile

Information from an analysis of the competitor's objectives, assumptions, strategy, and capabilities can be compiled into a response profile of possible moves that might be made by the competitor. This profile includes both potential offensive and defensive moves. The specific moves and their expected strength can be estimated using information gleaned from the analysis.

The result of the competitor analysis should be an improved ability to predict the competitor's behavior and even to influence that behavior to the firm's advantage.

Section B

Question No.6 is compulsory. Answer any two Questions from the rest.

6. A confectioner sells confectionery items. Past data of demand/week in hundred kilograms with frequency is given below:

Demand/week	0	5	10	15	20	25
Frequency	2	11	8	21	5	3

Using the fallowing sequence of random numbers, generate the demand for the next 10 weeks. Also find out the average demand per week.

Random Numbers	35	52	13	90	23	73	34	57	35	83

(8+2=10)

Solution:

Random No. Range Table for Demand:

Demand/Week	frequency	Probability	Cum.Probability	Range
0	2	0.04	0.04	00-03
5	11	0.22	0.26	04-25
10	8	0.16	0.42	26-41
15	21	0.42	0.84	42-83
20	5	0.10	0.94	84-93
25	3	0.06	1.00	94-99
	$\sum f = 50$	$\sum f = 1.00$		

Simulated Value for the next 10Weeks:

Weeks	Random number	Demand
1	35	10
2	52	15
3	13	5
4	90	20
5	23	5
6	73	15
7	34	10
8	57	15
9	35	10
10	83	15
Total		120

Average Weekly demand=120/10=12 (Hundred Kilograms)

7. (a)A company is organized into divisions X produces a component, which is used by division Y in making a final product. The final product is sold for ₹ 540 each. Division X has a capacity to produce to produce 2,500 units and Division Y can purchase the production. The variable cost of Division X in manufacturing each component is ₹ 256.50.

Division X informed that due to installation of new machines, its depreciation cost had gone up and hence wanted to increase the price of component to be supplied to division Y to ₹ 297. However, division Y to ₹270 each. The variable cost of Division Y in manufacturing the final product by using the component is ₹ 202.50(excluding the component Cost).

Present a statement indicating the position of each division and the company as a whole, taking each of the following situations separately –

(i) If there is no alternative use of production facilities for Division X, will the company benefit, if division Y buys from outside suppliers at ₹270 per component?

(ii) If internal facilities of X are not otherwise idle and the alternative use of the facilities will given an annual cash operating saving of ₹ 50,625 to division X, should Division Y purchase the component from outside suppliers?

(iii) If there is no alternative use of the production facilities of Division X and selling price for the component in the outside market drops by ₹ 20.25, should Division Y purchase from outside suppliers?

(iv) What Transfer price (s) would you fix for the component in each of the above circumstances?" (4x3=12)

Solution:

Statements' showing relevant Costs of makes and buy for proper decisions

Particulars	Option (1)	Option (2)	Option (3)
Description	No alternative use for Division X facilities	Operating Savings to Division X ₹50,625	No alternative use for Divn X facilities and fall in mkt price by ₹20.50
Relevant Cost of make (i.e. internal transfer)	Variable Costs only =₹256.50 per unit	Var. Costs+ Opp. Costs=256.50+(50,625÷ 2,500)=₹276.75 p.u.	Variable Costs only =₹256.50 per unit
Relevant Cost of Buy (external purchase)	Market Price=₹270 per unit	Market Price=₹270 per unit	Market Price=₹249.75 per unit
Correct decision	Make (256.50<270)	Buy (276.75>270)	Buy (256.50>249.75)
Advantage of the correct decision to Company	Saving ₹13.50x2,500 units=₹33,750	Savings ₹6.75x2,500 units=₹16,875	Savings ₹6.75x2,500 units=₹16,875
Divisional Contribution: Division X	(540-256.50)x2,500 =1,01,250	Cash Saving=50,625	No Contribution
Division Y	(540-297-202.50)x2,500 =1,01,250	(540-270-202.50)x2,500 =1,68,750	(540-249.75-202.50)x2,500=2,19,375
Company Contribution	(See Note 1) 2,02,500	2,19,375	2,19,375
Transfer Price Range:			
Minimum TP per unit (from X viewpoint)	(Variable Costs only) ₹256.50	(Var. Costs+ Opp. Costs) ₹270.75	(Variable Costs only) ₹256.50
Maximum TP per unit (from Y viewpoint)	Market Price =₹270	Market Price =₹270	Market Price =₹249.75
Effect of the Transfer Price range on the correct decision.	Any price in the range ₹256.50 to ₹270 will lead to internal transfer.	Y will prefer to purchase externally since any price above ₹270 will not be agreeable to that division.	Y will prefer to purchase externally since any price above ₹270 will not be agreeable to that division.

Note:

1. Contribution of ₹2,02,500 in Option (1) is based on the assumption that Division Y takes the correct decision i.e. internal procurement of components. If in Option (1), Division Y takes the wrong decision i.e. buy from outside at ₹270, the Contribution will be [Division X=₹Nil, Division Y=(540-270-202.50)x2,500 units=₹1,68,750.
2. As observed in Options (2) and (3) above, sometimes the minimum Transfer Price may be a number higher than the maximum Transfer price also. This is because these minimum and maximum are not mere numbers from the arithmetical viewpoint. Rather, they represents the tolerance limits (indifference points) and viewpoints of two different divisions (Buying and selling Divisions), and are used as benchmarks for negotiation and economic decision-making.

(b) Four Products A, B, C and D have ₹5, ₹7, ₹3 and ₹9 profitability respectively.
First type of material (limited supply of 800 kgs.) is required by A, B, C and D at 4 kgs., 3 kgs., 8 kgs., and 2 kgs., respectively per unit.

Second type of material has a limited supply of 300 kgs., and is for A, B, c and D at 1 kgs., 2 kgs., 0 kgs and 1 kg. per unit. Supply of other type of materials consumed is not limited. Machine hrs. available are 500 hrs and the requirement are 8, 5, 0, 4 hours for A, B, C and D each per unit.
Labour hours are limited to 900 hours and requirements are 3, 2, 1 and 5 hours for A, B, C and D respectively.
How should the firm approach so as to maximize its profitability? Formulate this as a linear programming problem. You are not required to solve the LPP. (4)

Solution:

Linear Programming Problem

The given information is tabulated below:

Products	**A**	**B**	**C**	**D**
Profitability/Unit (₹)	5	7	3	9
Material requirement/unit (kg)				
First type (Total 800 kg.)	4	3	8	2
Second type (Total 300 kg.)	1	2	0	1
M/c Hrs. requirement/unit (Total 500 Hrs.)	8	5	0	4
Labour hrs. requirement/ unit (Total 900 Hrs.)	3	2	1	5

Taking X_1, X_2, X_3 and X_4 as optimal of A, B, C and D respectively.
Linear Programming Problem (LPP)
Maximize Objective Function (Total Profit):

$$Z=5X_1+7X_2+3X_3+9X_4$$

Subject to

$4X_1+3X_2+8X_3+2X_4 \leq 800$ (Material No-1 constraint)
$1X_1+2X_2+0X_3+1X_4 \leq 300$ (Material No-2 constraint)
$8X_1+5X_2+0X_3+4X_4 \leq 500$ (M/c Hrs. constraints)
$3X_1+2X_2+1X_3+5X_4 \leq 900$ (Labour Hrs. constraints)
X_1, X_2, X_3 and $X_4 \geq 0$ (Non-negativity constraints)

(c) List out ten steps of quality improvement as has been conceptualized by Philip Crosby. [4]

Answer: The following are the ten steps of Quality Improvement, as per Philip Crosby:

- **(i)** Management is committed to quality and this is clear to all.
- **(ii)** Create quality improvement teams, with representatives from all departments.
- **(iii)** Measure processes to determine current & potential quality issues.
- **(iv)** Calculate the cost of poor quality.
- **(v)** Raise quality awareness of all employees.
- **(vi)** Take action to correct quality issues.
- **(vii)** Monitor progress of quality improvement-Establish a zero-defect committee.
- **(viii)** Train supervisors in Quality improvement.
- **(ix)** Encourage employees to create their own quality improvement goals.
- **(x)** Recognize participants' efforts.

8. (a) A review, made by the top management of XYZ ltd., (which makes only one product), of the result of the first quarter of the year revealed the following:

Sales (in units) Loss Fixed cost (for the year ₹ 1,20,000)	10,000 ₹ 10,000 ₹30,000

Variable cost/unit	₹8.00

The finance Manager, who feels perturbed, suggests that the company should at least breakeven in the second quarter with a drive for increased sales. Towards this, the company should introduce better packing, which will increase the cost by re. 0.50 per unit.
The Sales Manager has an alternative proposal. For the second quarter, additional sales promotion expenses can be increased to the extent of ₹ 5,000 and a profit of ₹5,000 can be aimed at during the period with increased sales.
The production Manager feels otherwise. To improve the demand, the selling price/ unit has to be reduced by 3%. As a result, the sales volume can be increased to attain a profit level of ₹ 4,000 for the quarter.
The Manager Directors asks you, as a Cost and Management Accountant, to evaluate the three proposals and to calculate the additional sales volume that would be required in each case, in order to help him to take a decision. (10)

Solution:

Calculation of selling Price:

Variable Cost	(8x10,000)	80,000
Add: Fixed Cost		30,000
Total Cost		1,10,000
Profit		(10,000)
Sales		1,00,000
Selling Price	(1,00,000/10,000)	₹10

Statement showing evaluation of alternatives and the number of units require attain the targets of respective managers:

Particulars	Finance Manager	Sales Manager	Production Manager
Selling price (₹)	10.00	10.00	9.70
Variable Cost (₹)	8.50	8.00	8.00
Contribution/unit (₹)	1.50	2.0	1.70
Fixed Cost (₹)	30,000	35,000	30,000
Target (Units)	B.E.P	Profit of ₹5,000	Profit of ₹4,000
	30,000/1.5	35,000/2	34,000/1.7
	20,000	20,000	20,000
Additional units required	10,000	10,000	10,000

Conclusion: The additional sales volume that would be required in each case will be exactly the same, namely-10,000 units.

(b) Write short notes on: (Any two) (5+5)

a. Value Analysis
b. Supply Chain Management
c. Enterprise Risk Management

Answer:

(a) Value Analysis: Value analysis defines a 'basis function' as anything that makes the products work or sell. A function that is defined as 'basic' cannot change. Secondary functions, also called 'supporting functions, describe the manner in which basic functions were implemented. Secondary functions could be modified or eliminated or reduce product cost. The term value has four different meanings: Cost Value-Use Value-Esteem Value and Exchange Value. The first step in the value analysis process is to define the problem and its scope. Once this is done, the functions of the product and its terms are derived. These functions are 'basic' and 'secondary' functions. A cost function matrix or

value analysis matrix is prepared. Improvement opportunities are then brainstormed, analyzed and selected.

(b) Supply Chain Management: Supply Chain Management encompasses the planning and management of all activities involved in sourcing, procurement, conversion and logistics management activities. Supply Chain Management integrates supply and demand management within and across companies.
Five basic components integrate supply chain management are:-
- **(i)** Plan- develop strategy for managing all resources that go towards meeting customer demand
- **(ii)** Source- Choose the supplier
- **(iii)** Make- schedule activities for production
- **(iv)** Deliver- Co-ordinate receipt of order to delivery
- **(v)** Return- receive defectives and excess

(c) Enterprise Risk Management: Enterprise risk Management seeks to implement risk awareness and prevention programs throughout the Company, thus creating a corporate culture able to handle the risks associated with a rapidly changing business environment. Enterprise Risk Management deals with risks and opportunities affecting value creation and preservation. Enterprise risk management encompasses:-
- **(i)** Aligning risk appetite and strategy
- **(ii)** Enhancing risk response decisions
- **(iii)** Reducing operational surprises and losses
- **(iv)** Identifying and managing multiple and cross enterprise risk.
- **(v)** Seizing opportunities
- **(vi)** Improvement in deployment of capital

9. SV Ltd. manufactures a single product. The selling price of the product is ₹95 per unit. The following are the results obtained by the Company during the last two quarters –

Particulars	Quarter 1	Quarter 2
Sales	5,100 units	4,300 Units
Production	5,500 Units	4,500 Units
Direct Materials A	₹66,000	₹54,000
B	₹55,000	₹45,000
Manufacturing Wages	₹1,56,750	₹1,38,000
Factory Overheads	₹86,000	₹83,000
Selling Overheads	₹79,000	₹73,000

The Company estimates its sales for the next quarter to range between 5,500 units and 6,500 units, the most likely volume being 6,000 units. The manufacturing programme will match with the sales quantity such that no increase in inventory of Finished Goods is contemplated in the next quarter. The following price and cost changes will, however, apply to the next quarter –

- The price of direct Material B will increase by 10%. There will be no change in the price of direct material A.
- The wage Rates will go up by 8%. If the production volume increases beyond 5,500 units, overtime of 50% is payable on the increased volume due to overtime working to be done by the variable labour complement.
- The Fixed Factory and Selling Expenses will increase by 20% and 25% respectively.
- A discount in the selling price of 2% is allowed on all sales made at 6,500 units level of output. The selling price, however, will remain unaltered, if the volume of output is below 6,500 units.

While operating at a volume of output of 6,500 units in the next quarter, the company intents to quote for an additional volume of 2,000 units to be supplied to a Government department for its captive consumption. The Working Capital requirement of this order is estimated at 80% of the sales value of the Government order. The Company desires a return of 20% on the capital Employed in respect of this order.

Required:

(i) Prepare a Flexible Budget for the next quarter at 5,500; and 6,500 units levels and determine the profit at the respective volume.

(ii) Calculate the lowest price per unit to be quoted in respect of the Government order for 2,000 units. (12+8=20)

Solution:

1. Flexible Budget & Profit Statement for the next quarter at 5,500, 6,000 and 6,500 units

Level of output	5,500 units	6,000 units	6,500 units
Direct Material A at ₹12 pu (Note 1)	66,000	72,000	78,000
Direct Material B at ₹11 pu (Note 1)	60,500	66,000	71,500
Total Cost of Materials	1,26,500	1,38,000	1,49,500
Wages-Variable at ₹20.25 pu (Note 2)	1,11,375	1,21,500	1,31,625
Fixed Manufacturing Wages (Note 2)	57,915	57,915	57,915
Overtime premium: (50% payable on volume in excess of 5,500 Units)	--------	5,063 (500x20.25x50%)	10,125 (1,000x20.25x50%)
Total Manufacturing Wages	1,69,290	1,84,478	1,99,665
Variable FOH at ₹3 pu of prodn (Note 2)	16,500	18,000	19,500
Fixed Factory Overheads (Note 2)	83,400	83,400	83,400
Total factory Overheads	99,900	1,01,400	1,02,900
Variable SOH at ₹7.5 pu (Note 2)	41,250	45,000	48,750
Fixed Selling Overheads (Note 2)	50,938	50,938	50,938
Total Selling Overheads	92,188	95,938	99,688
Total Cost of sales	4,87,878	5,19,816	5,51,753
Sales Revenue	5,22,500 (5,500x₹95)	5,70,000 (6,000x₹95)	6,05,150 (6,500x₹95x98%)
Profit	34,622	50,184	53,397

2. Computation of lowest price to be quoted for 2,000 units of a Government Order

Statement of Variable Costs	₹
Material A	12.00
Material B	11.00
Wages-Normal Rates	20.25
Overtime Premium at 50% of above	10.12
Manufacturing OH	3.00
Selling OH	7.50
Total Variable Cost	**63.87**
Working Capital Requirement for above	=80% of Desired Sales Value, say X
Therefore, Working Capital Requirement	=0.80X
Required Return	=20% on Capital Employed or 20% of 0.80X or 0.16X
Therefore, Cost of units supplied	=Sales Value Less Required Return=X-0.16X=0.84

Therefore, lowest price to be quoted	=Total Variable Cost (Relevant Costs)÷0.84 =₹63.87÷0.84=₹76.03 or ₹76

Working Notes:

1. Computation of Cost of Materials

Particulars	Material A	Material B
Total Cost of Materials at production level of 4,500 units	₹54,000	₹45,000
Cost of Material per unit of output (divided by 4,500 units)	₹12	₹10
Add: 10% Increase for the next quarter	NA	Re. 1
Cost of Material for Budgeting Purpose	₹12	₹11

2. Computation of Wages, Factory Oh and Selling OH:

Particulars	Wages	Factory OH	Selling OH
Variable Cost per unit =Change in Cost÷ Change in production	₹(1,56,750-1,38,000)/ (5,500-4,500) units =₹18.75 per unit	₹(86,000-83,000)/ (5,500-4,500) units =₹3.00 per unit	₹(79,000-73,000)/ (5,100-4,300) uni8ts =₹7.50 per unit
Var Cost for budgeting	18.75+8%=₹20.25	₹3.00	₹7.50
Fixed Cost	₹1,56,750-(18.75pux5,500) =₹53,625	86,000-(3 pux5,500) =₹69,500	79,000-(7.5 pux5,100) =₹40,750
Add: Increase	8%=₹4,290	20%=₹13,900	25%=₹10,188
Fixed Cost for budgeting	₹57,915	₹83,400	₹50,938