PAPER-15 Business Strategy & Strategic Cost Management

Section A – Business Strategy

1. Them postal Department of GOI is trying to develop competitive strategies to make better profits. The chief of the postal department presents the following facts:

(i) There are many couriers who operate in major cities and offer guaranteed delivery at very marginally higher prices than the postal department and yet manage to make a lot of profits.

(ii) Couriers offer tracking facilities on the e-computer so that a customer knows when his consignment is getting delivered or where it is located at any point of time.

(iii) Many pick up points are available for customers. Even retail customers find it convenient to book their requirements without having to travel much. For bulk booking, the couriers provided pick up facility at no further cost.

(iv) Couriers are not available in rural and sub-urban areas whereas postal network is very good in these places.

(v) Couriers in the cities operate until 7 p.m. whereas the corresponding speed posts or registered posts close at 2-30 p.m. / 4 p.m. in most areas and 6 p.m. / 8 p.m. in big Post Offices in Metro Cities/GPO respectively. There are one or at most two centres which operate speed post counters for 24 hours, but there are no 24×7 courier facilities.

(vi) Postal services for parcels are much cheaper than the courier services.

(vii) International courier charges very highly priced for documents and parcels, whereas postal charges are up to 70% cheaper, but delivery is at least 50% slower. Retail customers prefer postal services while corporate houses prefer couriers.

(viii) International courier is mainly parcel services. Documents are not prominent revenue makers due to electronic mode of communication.

(ix) Staff in courier services is more customer-friendly than the Postal Dept. staff, whereas the Postal Dept. staffs are paid much more.

(x) While wondering how different the scale of profits could be between similar services, the Chief of Postal Department considers that for a Post Office to operate, in addition to document/parcel bookings, banking services like MIS/PF/Savings Account, etc. telephone bill payment services, stamp sale services and other services are being rendered, requiring the necessary hierarchy of approving authority to be present. He is considering opening of more centres exclusively for the equivalent of courier services.

Required:

(a) Identify threats to the Postal Department, GOI.

(b) What would you consider as important strengths of the Postal Department, GOI?

(c) Mention the opportunities that the Postal Department, GOI can profitably consider.

(d) Apart from (x) suggest appropriate business strategies that the Postal Department, GOI may practically apply to successfully run a long-term profitable document/parcel service on the lines of the courier service.

Answer:

(a) Threats:

(i) Couriers are almost replacing document delivery by postal department.

(ii) Couriers could cut price to increase the market share in parcel delivery segment.

(iii) Couriers may fast expand to capture some of the more viable rural areas and

(iv) Satellite towns also. Loss of such customers is a big threat.

(v) More courier operators could get together to achieve better coverage and lower cost and offer stiff competition as bundled operators.

(vi) International couriers may reset their prices and offer stiffer competition, since already in

terms of delivery schedules they have a higher preference. The only prohibited aspect is the price, which may soon be reset.

(b) Strengths:

(i) There is a huge network in rural and sub-urban areas which is no easily affordable by couriers.
(ii) Cheaper pricing tactics with the help of government support and infrastructure usage and inter governmental rates.
(iii) International parcel/document services have a lot of retail customers who prefer this system.
(iv) 24×7 service in select centres which is yet to be copied by competitor effectively.

(c) Opportunities:

(i) Pick up facilities could lure more users.
(ii) Established 24×7 round the clock services in more centres to service more customers in different areas of the country.
(iii) Lower the rates for documents and offer stiffer competition like stay out pricing.
(iv) Parcel packing and pick up services at the customers' door step.
(v) Faster international delivery for embracing corporate clients from competing services, together with mobile phone updates on tracking.
(vi) Extended working timings for collection centres, especially those that are near railway stations or airports.

(d) Business Strategy:

(i) Tie up with couriers for subcontracting delivery of bundled bulk bags to rural areas by train.
(ii) Set up shift system at strategic centres. Get data on volume of services at different times and enhance availability of services.
(iii) Establish tracking facility on the mobile phones at a price - for example, with BSNL at cheaper rates.
(iv) Create better pick up facilities at more number of intervals, extend the last cut-off time.
(v) Cut overhead costs by using skeletal staff at non-pick hours.
(vi) Award incentives for timely service of staff at critical points. Extra reward for better customer satisfaction.
(vii) Establish a monitoring system and fix responsibility among staff - by customer analysis, repeat customers, customer feedback on why some bulk customers have shifted, etc.
(viii) Additional transport can be outsourced under proper supervision. Fixed costs can be reduced by removing staff without much work or by redistributing and aggregating work so that there no idle time.
(ix) Establish mobile counters in vans for many areas so that more comfort is given for nearby pick up facility and more customers are attracted.

2 (a) Explain in brief the different competitive strategies for competition globally in global industries. Give one example in each strategy.

Answer:

Competition in global industries poses a different kind of challenges because it cuts across national boundaries and international or global forces come into play. These forces create, among others, two distinctive pressures:

- ❖ Cost pressure because of global competition, and
- ❖ Pressure for local responsiveness that is adoption to local needs or values and consumer tastes and preferences. For some products costs pressure may be more, and for some others, the need for local adoption is more.

Guided by these two factors and production structure, companies, companies which wise to compete globally, generally adopt one of the four strategies:

(i) International strategy;
(ii) Multi-domestic strategy;
(iii) Global strategy, and
(iv) Transnational strategy.

International strategy can be adopted for those products and services which are not available in some countries and can be transferred from other countries. Some examples are: Kellogg's, Indian software and Indian handicrafts.

Multi-domestic strategy is almost opposite of international strategy it involves high degree of local responsiveness or local content. Products are highly customized to suit local requirements or conditions. Some examples are: Asian Paints (paints in general) and Indian garments.

Global strategy suits companies which make highly standardized sophisticated products, and are in a position to reap benefits of economies of scale and experience effects. These also include high technology products which have universal applicability and hardly require any local adoption. Examples are: Intel, Motorola, Microsoft, Wal-Mart and Marks & Spenser also.

Transnational strategy is the most difficult strategy to follow because this is based on a combination of two apparently contradictory factors, i.e., cost effectiveness and local adoption but this may be a global strategy, because in global business, there is always a price pressure or cost pressure; and also the need to make the product as close to a particular country's expectation as possible to maximize value offering. Some good examples are: Caterpillar, McDonald's, Coca-Cola. Pepsi, Domino's Pizza, etc.

(b) Mention the factors by which the choice of strategy is influenced.

Answer:

Choice of strategy is a decision making process from among alternative strategies. These decisions involve focusing on a few alternatives, considering the selection factors, evaluating the alternatives and making the actual choice.

Choice of strategy is influenced by following factors :-

(i) **External Constraints: -** Choice of strategy is governed by the extent and degree of the firm's dependence on owners, customers, suppliers, and the government.

(ii) **Intra-Organizational Forces: -** Decisions are influenced by the power play among different interest groups and by the degree of uncertainty.

(iii) **Values and preferences and managerial attitudes towards risk: -** Evaluation of strategy is determined by personal values (truth, knowledge etc.) and attitude towards risk. Risk lover prefers high risky projects with high return. Risk averse prefers safer options.

(iv) **Impact of past strategy: -** The choice of strategy may be influenced by the earlier strategy because it is starting point in the formulation of new strategy and decision maker is involved in past strategy.

(v) **Time constraint: -** Choice of strategy is influenced by the time dimension i.e., whether it will be short term or long term, whether it has immediate action or not.

(c) Mention specific uses of loss leaders.

Answer:

Loss leaders are product priced below cost price in order to attract consumers into a shop or online store to buy some of the more profitable products being sold.

The following are some uses:

(i) To prevent or restrict competition.
(ii) To lure the customers from another company's products.
(iii) Existing customers become loyal.
(iv) To enhance bulk sales and achieve advantages of volume.
(v) To realize as much value as possible in case of perishable products.

3 (a) Discuss the four levels of the residual uncertainty facing most strategic-decision makers.

Answer:

Four levels of the residual uncertainty:

(i) **Level one: A clear enough future -** The residual uncertainty is irrelevant to making strategic decisions at level one, so managers can develop a single forecast that is a sufficiently precise basis for their strategies. To help generate this useful precise prediction of the future, managers can use the standard strategy toolkit: market research, analyses of competitors" costs and capacity, value chain analysis, Poter's five-force framework, and so on. A DCF model that incorporates those predictions can then be used to determine the value of alternative strategies.

(ii) **Level two: Alternative futures -**The future can be described as one of a few discrete scenarios at level two. Analysis cannot identify which outcome will actually come to pass, though it may help establish probabilities. Most important. some, if not all, elements of the strategy would change if the outcome were predictable.

(iii) **Level three: A range of future -** A range of potential futures can be identified at level three. A limited number of key variables define that range, but the actual outcome may lie anywhere within it. There are no natural discrete scenarios

(iv) **Level four: True ambiguity -** A number of dimensions of uncertainty interact to create an environment that is virtually impossible to predict at level four. In contrast to level three situations, it is impossible to identify a range of potential outcomes, let alone scenarios within a range. It might not even be possible to identify, much less predict, at all the relevant variables that will define the future. Level four situations are quite rare, and they tend to migrate toward one of the others over time. Situational analysis at level four is highly qualitative.

(b) Distinction between Strategic Management and Strategic Planning.

Answer:

The basic difference between Strategic management and Strategic planning are as follows:

Strategic Management	Strategic Planning
It is focused on producing strategic results; new markets, new products, new technologies.	It is focused on making optimal strategic decisions.
It is management by results.	It is management by plans.
It is an organizational action process.	It is an analytical process.
It is broadens focus to include psychological, sociological and political variables.	It is focused on business, economic and technological variables.
It is about choosing things to do and also about the people who will do them.	It is about choosing things to do.

(c) Discuss about the Organizational Development and its characteristics.

Answer:

Organizational Development: - Organizational development (OD) is a complex educational strategy designed to increase organizational effectiveness and wealth through planned involvement by a consultant using theory and techniques of applied behavioural science.

Characteristics of OD

- It is educational strategy, which attempts to bring about a planned change.
- It is concerned with improving organizational climate and culture.
- It related to real organizational problems instead of hypothetical classroom cases.
- It uses sensitivity training methods and emphasizes the importance of experimentally based training.
- Its change agents are almost external consultants outside of the organization.
- External change agents and internal organization executives establish a collaborative relationship involving mutual trust and influence, and jointly determined goals.
- It provides feedback data and information to the participants.
- It is a long-term approach concerned with people for increasing organizational effectiveness.
- It is research based as most of its interventions are based on research findings.

4. Meters Limited is a company engaged in the designing, manufacturing, and marketing of instruments like speed meters, oil pressure gauges, and so on, that are fitted into two and four wheelers. Their current investment in assets is around ₹5 crores and their last year turnover were ₹15 crores, just adequate enough to breakeven. The company has been witnessing over the last couple of years, a fall in their market share prices since many customers are switching over to a new range of electronic instruments from the range of mechanical instruments that have been the mainstay of Meters Limited.

The company has received a firm offer of cooperation from a competitor who is similarly placed in respect of product range. The offer implies the following:

(i) Transfer of the manufacturing line from the competitor to Meters Limited;

(ii) Manufacture of mechanical instruments by Meters Limited for the competitor to the latter's specifications and brand name; and

(iii) Marketing by the competitor.

The benefits that will accrue to Meters Limited will be better utilization of its installed capacity and appropriate financial compensation for the manufacturing effort.

The production manager of Meters Limited has welcomed the proposal and points out that it will enable the company to make profits. The sales manager is doubtful about the same since the demand for mechanical instruments is shrinking. The Chief Executive is studying the offer.

Required:

(a) Discuss about divestment strategy. Do you see it being practised in the given case? Explain.

(b) Discuss about stability strategy. Should Meters Limited adopt it?

(c) Explain about expansion strategy. What are the implications for Meters Limited in case it is adopted?

(d) What is your suggestion to the Chief Executive?

Answer:

(a) Divestment strategy implies exiting from one or more of existing business activities or lines due to strategic reasons. Divestment strategy involves the sale or liquidation of a portion of business, or a major division, profit centre or SBU. Divestment is usually a part of rehabilitation or restructuring plan and is adopted when a turnaround has been attempted but has

proved to be unsuccessful. The option of a turnaround may even be ignored if it is obvious that divestment is the only answer.
In the given case study, technological obsolescence appears to be a major reason leading to divestment. The competitor firm making offer to Meters Limited seems to be interested in divesting in manufacturing activities and concentrate on marketing.

(b) 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 optimise returns on the resources committed in the business.
A stability strategy is pursued by a firm when:

- It continues to serve in the same or similar markets and deals in same products and services
- The strategic decisions focus on incremental improvement of functional Performance.

Stability strategy doesn't seem to be the appropriate strategy for Meters Limited. In view of fast approaching product obsolescence, Meters Limited should look for such strategy that would help in gaining market share in the new segment rather than battling in a segment that is declining. They cannot afford to maintain the same market posture and maintain same level of effort. As there are significant changes in their external environment, they need to make adjustments for their sustenance.

(c) Expansion Strategy is a proactive strategy implying making new investments and venturing into new business, products and/or markets. It is true growth strategy, having lot of business risk but nevertheless resulting in good rewards. 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.
The markets for products of Meters Ltd with their existing technology are in the state of decline. They are being replaced by newer electronic technology. It would be a good idea to acquire the electronic technology and move out of the market that is reducing and has little scope. They may also consider expanding through diversification in other related and unrelated products.

(d) A combination Strategy is recommended for Meters Limited .The competitor is trying to adopt divestment. They are outsourcing manufacturing and retaining marketing with them. It would be very convenient for them to get out of the market in future. If Meters Limited accepts this preposition, they run the risk of continuing manufacturing in dwindling market followed by product obsolescence. At the same time, they have a medium - term objective of utilizing their installed capacity and making some profits. The Following package is recommended:

(i) Invest in new product development to facilitate quick switchover to the new technology.
(ii) Meters Ltd also need time to invest in emerging new technology and pursue expansion strategy. The offer of competitor may be considered for acceptance, in case there is clear buy - back arrangement for bringing in sales revenue and profits with less competition.
(iii) In longer run, they should divest the existing products.
(iv) They should identify other areas for expansion. This will enable Meters Ltd to spread their risks

5. (a) Discuss how a firm can create and sustain 'Competitive Advantage'.

Answer:

Competitive advantage is creating better value for the customers of an organization for the same or lower cost than that of its competitors or creating equivalent Value for its customers for the lower cost than that of its competitors. The difference between what a customer receives (customer's realization) and what the customer gives up (customer's sacrifice) is the customer's value what a customer receives is called 'total product'. The total product is the complete range of tangible and intangible benefits that a customer receives from a purchased product.

According to Porter, there are two generic strategies capable of producing a sustainable competitive advantage, viz., (i) a low-cost strategy (cost leadership), and (ii) a differentiation strategy.

A low-cost strategy aims at providing the same or better value to the customers of an organisation at a low cost than its competitors. If one defines customer value as the difference between realization and sacrifice, a low-cost-strategy tries to increase customers' value by minimizing the sacrifice of the customers. On the other hand, a differentiation strategy strives to increase the customers' value by increasing what the customers receive. Providing something to the customers that is not provided by the competitors creates competitive advantage. The product characteristic(s) must be such that it/they set the product different from that of the organization's competitors. To be of value, the customers should appreciate that same variation has been made in the product/service. Furthermore, the value added to the customers by differentiation must exceed the organization's costs of providing the difference (variation). If the customers appreciate the variation made and if the value added to the customers exceed the cost of providing the difference, then a competitive advantage has been accomplished.

(b) Successful pursuit of competitive advantage requires an understanding of the 'industrial value chain'. — Discuss.

Answer:

Industrial value chain is the linked set of value-creating activities right from the basic raw materials to the disposal of the finished product/service by the end-user customers. That apart, in order to create and sustain a competitive advantage, an organisation must understand the entire value chain and not just the portion in which it operates. Breaking down the value chain into its strategically relevant activities is basic to successful implementation of cost leadership and differentiation strategies. A value chain framework is a must for understanding an organization's strategically-important activities. Basic to a value-chain framework is the recognition that there exists complex linkages and interrelationship among activities both internal and external to the organisation. Internal linkages are, relationships among the activities that are performed within an organization's portion (sphere of activities) of the value chain. On the other hand, external linkages describe the relationships among the organization's value chain activities that are performed with respect to its suppliers and customers.

To gainfully exploit an organization's internal and external linkages, one must identify the organization's activities and select those that can be used to create and sustain a competitive advantage. This process of selection requires knowledge of the cost and value of each activity.

(c) Explain the concept of 'value-chain' and discuss the limitations of value-chain analysis.

Answer:

Value chain is defined as "the linked set of value-creating activities all the way from basic raw material sources for component suppliers to the ultimate end-use product or service delivered to the customer."

Value chain analysis is defined as "a means of segregating various activities of a business and identify them with respect to their contribution towards value generation by identifying the cost i.e. inputs consumed by that activity and output generated by that activity."

Value chain analysis' is a strategic managerial tool to assess and review the various business functions in which utility is added to the products or services. The various business functions include research and development, design of products, services or process, production, marketing, distribution, customer service and strategy and administration. Value chain analysis not only describes these as an essential and valued contributor but also integrates and coordinates the efforts of all these business functions in addition to developing the capabilities of each individual business function. By this way value chain analysis helps the management towards proper planning, operation, performance evaluation and decision making.

Limitations of Value of Chain Analysis

The important drawbacks of value chain analysis are as follows:

(i) Finding the costs, revenues and assets for each value chain activity poses/gives rise to serious difficulties. There is no scientific approach and much depends upon trial and error and experimentation methods.

(ii) Value chain analysis is not easily understandable to all employees and hence may face resistance from employees as well as managers.

(iii) Internal data on costs, revenues and assets used for value chain analysis are derived from financial information of a single period. For long-term strategic decision-making changes in cost structures, market prices and capital investments etc. may not be readily available.

(iv) Isolating cost drivers for each value creating activity, identifying value chain linkage across activities and computing supplier and customer profit margins present serious challenges.

(v) Identifying stages in an industry's value chain are limited by the ability to locate at least one firm that particulars in a specific stage.

(vi) Value chain analysis is not an exact science. It is more an 'art' than preparing precise accounting reports. Certain judgment and factors of analysis are purely subjective and differ from person to person.

6 (a) Discuss the limitations of a PEST Analysis.

Answer:

Limitations of a PEST Analysis

If you're planning to use PEST analysis during strategy planning – it's important that you understand the limitations of a Pest Analysis before relying completely on its results. Here's a list of some of the limitations which can cloud the results of a PEST analysis.

PEST, or what is also known as PESTLE, is a strategic management tool used to study and analyze how Political, Economic, Social, Technological, Legal and Environmental factors affect a business or a project. This strategic planning tool is quite an effective way of scanning the operating environment of a project.

(i) The external factors considered during PEST analysis are dynamic and they change at a very fast pace. At times, these changes may occur in less than a day's time, thus making it tricky to predict why and how these factors may affect the present or future of the project. On many occasions, environmental changes that may have an adverse effect on the project may not be noticeable during their initial stages. All that indicates that a certain amount of uncertainty still remains even after carrying out a detailed PEST analysis, which to some extent defeats the prime purpose of this analysis – cutting down the uncertainty.

(ii) It's simple presentation can also be considered a limitation. For PEST analysis, the usual procedure is to present a simple list of the environmental factors that can affect the project.

Unless the attributing factors are critically examined in terms of the degree of impact, the findings of the analysis don't seem to be of much value.

(iii) Collecting enormous amounts of relevant data from the right sources becomes a bit of a problem, especially since most of the pertinent data must be collected from external agencies. This makes PEST analysis not only time consuming but costly as well. Also, getting the latest data and keeping the analysis updated with it becomes a problem.

(iv) The lack of easily available updated information, as mentioned in the point above, leads to one more problem – making too many assumptions. Oftentimes, the factors mentioned in the analysis are based more on assumptions and less on actual facts. An analysis based on unfounded assumptions can lead to planning disasters. So, it's important to device some method to cross-verify whether the factors mentioned in the PEST analysis are not merely based on tenuous assumptions.

(v) A proper PEST analysis requires a lot of information to be collected. But when handling too much information, the users tend to get confused and lose sight of what factors are more critical. This ambiguity in prioritizing the affecting factors can put the entire planning on the wrong track.

(vi) PEST analysis is insufficient for the purpose of strategic planning, since it scans only the external environment while completely ignoring the internal environment and the competitive scenario.

Nonetheless, there sure are ways to overcome this limitation. For PEST analysis to make some worthwhile contributions towards strategic planning it must be in conjunction with other tools like SWOT analysis to get a more realistic overall picture. PEST does offer a viable technique for carrying out an environmental scan for a project, however, its effectiveness depends on the accuracy of the data collected, timely updates to accommodate changes and the use of additional tools that can trim down the limitations of a PEST analysis to some extent.

(b) "Strategic Planning is not without Pitfalls." - Identify the common pitfalls.

Answer:

The common pitfalls in strategic planning are as follows:

(i) Non-availability of correct and accurate data.

(ii) Doing strategic planning only to satisfy accredition or regulatory requirements.

(iii) Failing to communicate the plan to the people who execute the plan.

(iv) Top management making intuitive decisions that conflict with formal plan.

(v) Failing to use plans as a standard for measuring performance.

(vi) Delegating tasks to a few persons rather than involving all managers.

(vii) Failing to involve key employees in all phases of planning,

(viii) Failing to create an environment conducive of change.

(ix) Lack of flexibility and creativity.

(x) Strategic planning usually restricted to hard business concerns, leaving without proper attention for soft issues like customer, quality, labour productivity, social concerns etc.

(xi) Strategy planning sometimes becomes a routine exercise, without having proper attention to strategic issues.

(xii) The planning process is isolated from the external groups that critically affect the company like labour unions, consumer advocates, social service organizations etc.

(c) "There may however be other reasons for companies to use a diversification strategy and companies may very well benefit from a diversification strategy for other reasons." - Discuss it.

Answer:

Diversification is a corporate strategy to increase sales volume from new products and new markets. Diversification can be expanding into a new segment of an industry that the business is already in, or investing in a promising business outside of the scope of the existing business.

Companies may choose a diversification strategy for different reasons in following -
Firstly, companies might wish to create and exploit economics of scope, in which the company tries to utilize its exciting resources and capabilities in other markets. This can oftentimes be the case if companies have under-utilized resources or capabilities that cannot be easily disposed or closed. Using a diversification strategy, companies may therefore be able to utilize all its capabilities or resources, and above to attract new business from market segments not catered to earlier.
Secondly, managerial skills found within the company may be successfully used in other markets, where the dominant logic and managerial procedures of management can be successfully transferred to other markets.

Thirdly, companies pursuing a diversification strategy may be able to cross-subsidize one product with the surplus of another. This way, companies with a very diverse portfolio of products catering to different markets may potentially, grow in power, and be able to withstand a prolonged period of price competition etc. when have subsidized one product for a substantial period of time, the company might possibly be able to win a monopoly, making it the only supplier in the respective market.

Fourthly, companies may also want to use a diversification strategy to spread financial risk over different markets and products, so that the entire success of the company is not reliant on one market or product only.

However, it is important for companies to realize the possible danger of diversifying its scope of operations too much. Companies might risk neglecting its core capabilities and become too diversified, where too many different products supplied to different markets might have negative effects on products and services, where e.g., product quality or uniqueness might suffer due to the shift in focus on different products and markets.

7. Chawama Enterprises was established twenty-five years ago. The organization was formed to provide mining tools to the mines on the Copper belt and the neighbouring country of Democratic Republic of Congo. The organization has faced mixed fortunes in its business over the period of its existence. This is directly attributable to external forces faced over its life cycle both at macro and competitive environment levels.

There are times when macro environment has been favourable and times when factors relating to political and economical environment had almost threatened the survival of the organization.

During the world credit crunch, fall in copper prices and ever increasing importation prices of tools due to weaker kwacha has once again created acute challenges for the organisation.

In wake of the above background:

(a) Evaluate how environmental analysis can help Chawama Enterprises deal with the business environment?

(b) Explain how Chawama Enterprises can use the Five Forces Model to evaluate how competitive the firm is.

Answer.

(a) An environmental analysis in strategic management plays a crucial role in businesses by pinpointing current and potential opportunities or threats outside the company in its external environment. The external environment includes political, environmental, technological and sociological events or trends that can affect the business directly or indirectly. An environmental analysis is generally conducted as part of an analysis of strengths, weaknesses, opportunities, and threats (SWOT) when a strategic plan is being developed. Managers practicing strategic management must conduct an environmental analysis quarterly, semi-annually, or annually, depending on the nature of the business's industry. Being able to identify events or conditions in the external environments helps businesses achieve a competitive advantage and decrease its risk of not being prepared when faced with oncoming threats.

The purpose of an environmental analysis is to help in strategy development by keeping decision-makers within an organization informed on the external environment. This may include changing of political parties, increasing regulations to reduce pollution, technological developments, and shifting demographics. If a new technology is developed and is being used in a different industry, a strategic manager would see how this technology could also be used to improve processes within his business. An analysis allows businesses to gain an overview of their environment to find opportunities or threats.

Chawama must actively and consistently conduct environmental analysis by analyzing the political, legal, economical, social, environmental and technological environments.

This analysis will be invaluable as follows:

(i) Chawama will be become **knowledgeable** about the macro environmental forces that are affecting the organization.

(ii) Chawama will be able to establish a **trend analysis** of these forces in terms of how the forces have affected the firm over its life cycle. Are we faced with opportunities or threats, is the question to answer?

(iii) Chawama will know at any given point which force has **high, medium or low impact.** Currently most firms must deal with the economic environment. During 1991, the firm had to deal with the political environment.

(iv) Chawama can then construct **scenarios** representing possible future occurrences. This is applicable in times of acute uncertainty.

(v) Chawama will then **develop strategies** of dealing with each scenario should it occur in future.

(vi) The above will result in Chawama overcoming the **negative implications** of not taking the environment seriously.

(vii) Eventually environment analysis ensures long term survival as the organization is able to gain **strategic foresight.**

Strategic management must address the environment in knowing what opportunities and threats are being posed by the environment.

(b) The five forces model helps organizations to analyze and evaluate their competitive position by looking at the impact of these forces.

These forces include:

Threat of rivalry amongst current competitors- Chawama will have to look at the number of competing firms, are these firms supplying a homogenous product, are firms competing on price or quality and what are the exit barriers.
For example, too many competitors increase competition. High exit barriers can also increase competition, while differentiation can reduce competition.
Threat of new entrants-the extent to which new entrants can establish similar business will result in Chawama finding its position undermined. Factors relating to entry barriers will have to be analyzed. Ease with which new entrants can get business from mines, ease of raising capital and ease of having access to sources of these tools can make it easy for new firms to set up the business in which Chawama is.
Threat of substitute products-this relates to whether mines can find alternative tools or methods of extracting minerals. In times where Chawama tools are getting expensive, the mines may be forced to get innovative or look at alternative tools.
Threat of bargaining power of suppliers- Chawama will have to ask themselves the extent to which the firm can force suppliers to reduce prices. This will depend on the quantities bought, the number of customers buying from the same supplier and the extent to which Chawama can easily switch to other sources of tools.
Threat of bargaining power of customers-this relates to mines. Can they drive the prices down? Under current economic problems, mines are finding strength in the crisis by citing economic wows as reducing their ability to pay and in the process forcing suppliers to reduce prices or be threatened with loss of business.
The extent to which Chawama can deal with these forces will affect the level of profits, value and long term survival of the firm.

8. (a) Distinguish between 'Strategy' and 'Policy'.

Answer:
Strategy: Strategy refers to the determination of the purpose or mission and the basic long-term objectives of an enterprise, and the adoption of courses of action and allocation of resources necessary to achieve these aims. Therefore, objectives are a part of strategy formulation.

Policy: Policies are general statements or understandings that guide managers thinking in decision making. They ensure that decisions fall within certain boundaries. They usually do not require action but are intended to guide managers in their commitment to the decision they ultimately make. The essence of policy is discretion. Strategy, on the other hand, concerns the direction in which human and material resources will be applied in order to increase the chance of achieving selected objectives.

Certain major policies and strategies may be essentially the same. A policy of developing only through retailers may be an essential element of a company's strategy for new product development or marketing. One company may have a policy of growth through the acquisition of other companies, while another may have a policy of growing only by expanding present markets and products. While these are policies, they are also essential elements of major strategies. Perhaps one way to draw a meaningful distinction is to say that policies will guide a manager's thinking in decision - making if a decision is to be made while a strategy implies the commitment of resources in a give direction.

(b) "BCG Growth-Share Matrix is developed to analyze the problem of resource deployment among the business units or products of multi-business firms." — Describe BCG Growth-Share Matrix on the basis of the significance of its four cells – Stars, Question Marks, Cash Cows and Dogs. List out the problems which can be found in using this matrix.

Answer:

BCG Growth-Share Matrix: Companies that are large enough to be organized into strategic business units face the challenge of allocating resources among those units. In the early 1970's the Boston Consulting Group developed a model for managing a portfolio of different business units (or major product lines). BCG matrix is developed on the basis of two factors: (a) Relative market share, and (b) Business growth rate. These two factors are used to plot all the business (products) in which the firm is involved. It can be depicted by the following diagram:

		Relative market Share	
		High	Low
Market Growth Rate	High	Stars	Question Marks
	Low	Cash Cows	Dogs

In the above figure the vertical axis measure the annual growth rate of the market and the horizontal axis shows the relative market share of the firm. Each of these dimensions is divided into two categories of high and low, making up a matrix of four cells; and the products are graphed as Stars, Question Marks, Cash Cows and Dogs in these four cells.

Resources are allocated to business units according to where they are situated on the grid as follows:

High Growth-High Market Share: Stars — Star represents those products, which have successfully passed the introduction stage and are on the path of growth. They are self sufficient for cash requirements i.e. cash generated is almost equal to cash used. Stars are the products that are rapidly growing with large market share. They earn high profits but they require substantial investment to maintain their dominant position in a growing market. Stars are usually profitable and would be the future cash cows. Since the stars are growing rapidly and have the advantage of already having achieved a high share of the market, they provide the firms best profit and growth opportunities. Stars are leaders in the business and generate large amounts of cash. The stars will entail huge cash outflows to maintain the market share and to ward off competition. Star is a market leader (i.e. high market share) in a high growth market. When the market growth rate slows, stars become cash cows.

Low Growth-High Market Share: Cash Cows — A cash cow produces a lot of cash for the company. The company does not have to finance for capacity expansion as the market's growth rate has slowed down. It enjoys economies of scale and higher profit margins. When a market's annual growth rate falls, a star becomes a cash cow if it still has the largest relative market share. The important strategic feature of cash cows is that they are generating high cash returns, which can be used to finance the stars or for use elsewhere in the business. Cash cows have a strong market position in the industry that has matured. In comparison with the position of the star performer, cash cows can expect little serious competition because of their relatively low expected industry growth rate. Cash cows are units with high market share in a slow-growing industry. Cash cows are ideal for providing the funds needed to pay dividends and debts, recover overheads and supply of funds for investment in other growth areas. Cash cows are established, successful and need less investment to maintain their market share.

High Growth-Low Market Share: Question Marks — Question marks are the products/ businesses whose relative market share is low but have high growth potential. The area question mark identifies those products which are at introduction stage in the market and the cash generated

is less than cash used for these products. Their competitive position is weak but they work for long-term profit and growth. These products require additional funds to improve their market share so that the question mark becomes a star. If no improvement is made in market share, question marks will absorb large amount of cash and later, as the growth stops, turn into dogs. If the question mark business becomes successful, it becomes a star. A question mark denotes a new entrant into the market and growth prospects will be tremendous but will have a very low market share and its success or failure cannot be judged easily. Question marks are yet to establish their competitive viability although they usually operate in a rapidly growing market. Therefore, they require huge cash outflow. Strategy must be evolved whether to try for a star or hold the current position or divest. Question marks must be analyzed carefully in order to determine whether they are worth the investment required to achieve market share.

Low Growth-Low Market Share: Dogs — Dogs describe company business that has weak market shares in low-growth markets. Products with low market share and limited growth potential are referred to as dogs. It is better to phase them out rather than continue with them. Dogs should be allowed to die or should be killed off. Although they will show only a modest net cash outflow or even a modest cash inflow, they are cash traps. They provide a poor return on investment and not enough to achieve the organization's target rate of return. These units are typically 'break-even', generating barely enough cash to maintain the market share. They depress the company's overall 'return on assets ratio', used by the investors, financial institutions and banks in judging how well the company is being managed. Since Dogs hold little promise for the future and may not even pay their own way, they are prime candidates for divestiture. The only way for dog is to increase its rate of sales growth by taking sales away from competitors.

Problems in using BCG Matrix — The BCG matrix is criticized for the following reasons:

(i) It does not talk about profitability at all.

(ii) It fails to correctly define market share and market growth.

(iii) It ignores competition factors and trends in markets.

(iv) It considers only two factors viz., market growth rate and market share, ignoring all other factors.

(v) It does not say how long a product will continue in each phase.

(vi) It fails to consider globalization factor, where markets are not limited to a particular area or place.

(c) Explain the importance and problems of Strategic Evaluation.

Answer:

Importance of Strategic Evaluation

SEC helps an organisation in several ways.

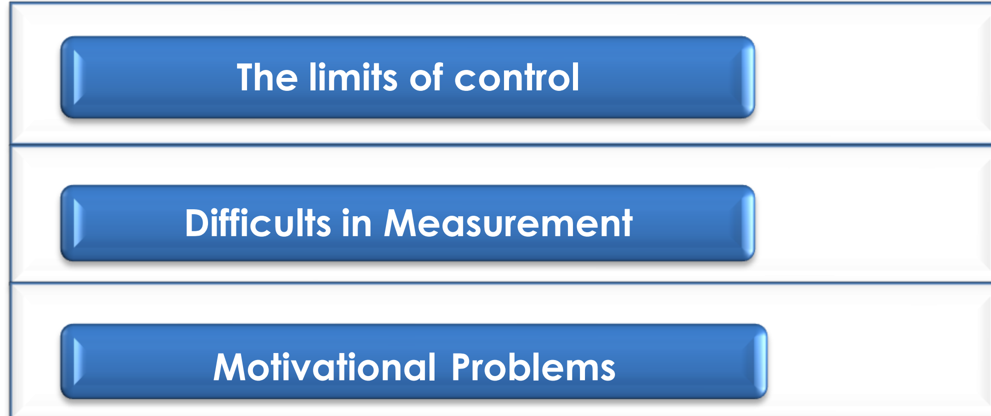
(i) Feedback: SEC offers valuable feedback on how well things are moving ahead. It also throws light on the relevance and validity of strategic choice. It helps to answer critical questions such as: Are we moving in the proper direction? Are our assumptions about major trends are correct? Should we adjust or abort strategy?

(ii) Reward: SEC helps in identifying rewarding behaviours that are in tune with formulated strategies. It helps in pinpointing responsibilities for failure as well. Where people find it difficult to stick to a planned course of action due to circumstances beyond their control, managers can take note of such things and initiate suitable rectification steps immediately.

(iii) Future Planning: SEC offers a considerable amount of information and experience to decision makers that can be quite valuable in the formulation of new strategic plans.

Problems of Strategic Evaluation

There are three types of barriers in evaluation the limits of control, difficulties in measurement, and motivational problems.



(i) The limits of Control: It is not easy for strategists to decide the limits of control. Too much control prevents mangers from taking initiative, experiment with their creative ideas and gain through calculated risk taking. O n the other hand, when there is very little control people tend to go off the hook, waste resources without any fear of punishment and work at cross purposes – putting a big question mark on the very survival of the firm.

(ii) Difficulties in Measurement: It is not easy to find measurement techniques that are valid and reliable. Validity is the extent to which an instrument measures what it intends to measure (for example measuring the speed and accuracy of a typist in a typing test). Reliability is the confidence that an indicator will measure the same thing every time. In the absence of reliability and validity, the control system gets distorted. I t may fail to measure results uniformly or measure attributes that are not required to be measured. When people are not confident about the measures used for judgement, they resist the whole process vehemently.

(iii) Motivational Problems: Having taken a position while formulating and implementing the strategy, strategists are often reluctant to admit their mistakes when things go off the track. They tend to shift the blame on others. This may also prevent them from hiving off unprofitable divisions, reversing wrong decisions and go in search of more viable alternations quickly.

9 (a) Describe the factors influencing the Business Strategy.

Answer:

Factors influencing Business Strategy

Businesses are affected by an external environment as much as they are affected by the competitors. Global factors influencing business are legal, political, social, technological and economic. Understanding of these factors is important while developing a business strategy.

(i) Social factors - These factors are related to changes in social structures. These factors provide insights into behaviour, tastes, and lifestyles patterns of a population. Buying patterns are greatly influenced by the changes in the structure of the population, and in consumer lifestyles. Age, gender, etc all determine the buying patterns and understanding of such changes is critical for developing strategies which are in line with the market situations. In a global environment it is important that business strategies are designed keeping in mind the social and cultural differences that vary from country to country. Consumer religion, language, lifestyle patterns are all important information for successful business management.

(ii) Legal factors - These factors that influence business strategies are related to changes in government laws and regulations. For a successful business operation it is important that the businesses consider the legal issues involved in a particular situation and should have the capability to anticipate ways in which changes in laws will affect the way they must behave. Laws keep changing over a period of time. From the point of view of business it is important that they are aware of these changes in the areas of consumer protection legislation, environmental legislation, health & safety and employment law, etc.

(iii) Economic factors - These factors involve changes in the global economy. A rise in living standards would ultimately imply an increase in demand for products thereby, providing greater opportunities for businesses to make profits. An economy witnesses fluctuations in economic activities. This would imply that in case of a rise in economic activity the demand of the product will increase and hence the price will increase. In case of reduction in demand the prices will go down. Business strategies should be developed keeping in mind these fluctuations. Other economic changes that affect business include changes in the interest rate, wage rates, and the rate of inflation. In case of low interest rates and increase in demand Businesses will be encouraged to expand and take risks. Therefore, business strategies should have room for such fluctuations.

(iv) Political factors - This refers to the changes in government and government policies. Political factors greatly influence the operation of business. This has gained significant importance of late. For example: companies operating in the European Union have to adopt directives and regulations created by the EU. The political arena has a huge influence upon the regulation of businesses, and the spending power of consumers and other businesses. Business must consider the stability of the political environment, government's policy on the economy etc.

(v) Technological factors - These factors greatly influence business strategies as they provide opportunities for businesses to adopt new innovations, and inventions. This helps the business to reduce costs and develop new products. With the advent of modern communication technologies, technological factors have gained great impetus in the business arena. Huge volumes of information can be securely shared by means of databases thereby enabling vast cost reductions, and improvements in service. Organisations need to consider the latest relevant technological advancements for their business and to stay competitive. Technology helps business to gain competitive advantage, and is a major driver of globalization. While designing the business strategies firms must consider if use of technology will allow the firm to manufacture products and services at a lower cost. Firms can select new modes of distributions with the help of technology. It has become easier for companies to communicate with their customer in any part of the world.

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

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 organizations 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.

(c) Explain the methods of Internal Development.

Answer:

(i) Changing price
If there are only a few substitutes for a firm's products, then the business will earn more sales revenue by raising prices.

(ii) Advertising and promoting
If the customers are more informed, remained or persuaded about the information and benefits of products, people will buy more.

(iii) Producing improved or better products
Such as innovation, new design of products, business can produce improved products.

(iv) Selling in different location (placement)
If a product is widely available, customers are more likely to make a purchase
For example, Coca-Cola is widely available throughout the world in different places, such as supermarkets, restaurants and cinemas.

(v) Offering credit payment terms to customer
For the purchase of expensive products such as motor vehicles, allow customer to 'buy now but pay later'. However, the firms need to be careful about offering too much credit as this will affect their cash flow position.

(vi) Increasing capital expenditure (investment)
It can be formed in expanding of business in new location and technologies to productivity

(vii) Improving training and development (T&D)
It can help to make staff more confident and competent in their jobs

10 (a) There are three types of Merger. One of them is Conglomerate Merger. What is Conglomerate Merger? Describe the different types of Conglomerate Merger. State the reasons of Conglomerate Merger. Also state the benefits of the Conglomerate Merger.

Answer:

Conglomerate Merger: Conglomerate Merger is a type of combination, which a firm established in one industry combines with another firm in another unrelated industry. Conglomerate mergers are affected among firms that are in different or unrelated business activity. Firms that plan to increase their product lines carry out these types of mergers. Firms opting for conglomerate merger control a range of activities in various industries that require different skills in the specific managerial functions of research, applied engineering, production, marketing and so on. This type of diversification can be achieved mainly by external acquisition and mergers and is not generally possible through internal development. These types of mergers are also called concentric mergers.

Types of Conglomerate Merger: There are three types of Conglomerate Merger, such as:

1. **Financial Conglomerates:** These conglomerates provide a flow of funds to every segment of their operations, exercise control and are the ultimate financial risk takers. They not only assume financial responsibility and control but also play a chief role in operating decisions.

2. **Managerial Conglomerates:** Managerial conglomerates provide managerial counsel and interaction on decisions thereby, increasing potential for improving performance. When two firms of unequal managerial competence combine, the performance of the combined firm will be greater than the sum of equal parts that provide large economic benefits.

3. **Concentric Companies**: The primary difference between managerial conglomerate and concentric company is its distinction between respective general and specific management functions. The merger is termed as concentric when there is a carry-over of specific management functions or any complementarities in relative strengths between management functions.

   Reasons of Conglomerate Merger: There are several reasons as to why a company may go for a conglomerate merger. Among the more common reasons are adding to the share of the market that is owned by the company and indulging in cross selling. The companies also look to add to their overall synergy and productivity by adopting the method of conglomerate mergers.

   Benefits of the Conglomerate Merger: There are several advantages of the conglomerate mergers. One of the major benefits is that conglomerate mergers assist the companies to diversify. As a result of conglomerate mergers the merging companies can also bring down the levels of their exposure to risks.

(b) List the benefits of Contingency Planning

Answer:

Benefits of Contingency Planning

(i) It will make the future through their proactive planning and advanced preparation.
(ii) It will introduce original action by removing present difficulties.
(iii) It enables to anticipate future problems.
(iv) It will change the goals to suit internal and external changes.
(v) It experiments with creative ideas and take initiative.
(vi) It will attempt to shape the future and create a more desirable environment.
(vii) It permits quick response to change,
(viii) It prevents panic in crisis situations.
(ix) It makes managers more adaptable to unforeseen changes.

(c) Mention Merits and Demerits of Benchmarking.

Answer:

Merits

The important merits of benchmarking are summarized as follows:

(a) It increases customer satisfaction.
(b) It leads to significant cost savings and improvements in products and services.
(c) It helps in improving strategic planning by providing assessment of strengths and weaknesses of current process.

Demerits

(a) I t increases the diversity of information which must be monitored by management. This increases the potential for information overload.

(b) I t may reduce managerial motivation if they are compared with a better resourced rival.
(c) There is a danger that confidentiality of data will be compromised.
(d) It encourages management to focus on increasing the efficiency of their existing business instead of developing new lines of business.
(e) Successful benchmarking firms may find that they are later overloaded with requests for information form much less able firms whom they can learn little.

11. Read the Caselet and answer the following questions:
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.

You are required to:
(i) Do you think the GM was right in his approach regarding environmental scanning?
(ii) Discuss the 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?

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) 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 (usuallycompanies 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.

12.(a) "Many organizations in order to achieve quick growth use strategies such as mergers and acquisitions."- Justify. Also discuss various types of mergers.

Answer:
Many organizations in order to achieve quick growth, expand or diversify use strategies such as mergers and acquisitions. This also helps in deploying surplus funds.
Merger and Acquisition Strategy
Merger and acquisition in simple words are defined as a process of combining two or more organizations together. There is a thin line of difference between the two terms but the impact of combination is completely different in both the cases.
Some organizations prefer to grow through mergers. Merger is considered to be a process when two or more organizations join together to expand their business operations. In such a case the deal gets finalized on friendly terms. Owners of pre-merged entities have right over the profits of new entity. In a merger two organizations combine to increase their strength and financial gains.
When one organization takes over the other organization and controls all its business operations, it is known as acquisition. In the process of acquisition, one financially strong organization overpowers the weaker one. Acquisitions often happen during recession in economy or during declining profit margins. In this process, one that is financially stronger and bigger establishes it power. The combined operations then run under the name of the powerful entity. A deal in case of an acquisition is often done in an unfriendly manner, it is more or less a forced association where the powerful organization takes over a weaker entity.

Types of Mergers
There are three types of Merger: - 1.Horizontal Merger, 2.Vertical Merger and 3. Conglomerate Merger
- **Horizontal merger:** Horizontal mergers are combinations of firms engaged in the same industry. It is a merger with a direct competitor. The principal objective behind this type of

mergers is to achieve economies of scale in the production process by shedding duplication of installations and functions, widening the line of products, decrease in working capital and fixed assets investment, getting rid of competition and so on. For example, formation of Brook Bond Lipton India Ltd. through the merger of Lipton India and Brook Bond.

- **Vertical merger:** It is a merger of two organizations that are operating in the same industry but at different stages of production or distribution system. This often leads to increased synergies with the merging firms. If an organization takes over its supplier/producers of raw material, then it leads to backward integration. On the other hand, forward integration happens when an organization decides to take over its buyer organizations or distribution channels. Vertical merger results in operating and financial economies. Vertical mergers help to create an advantageous position by restricting the supply of inputs or by providing them at a higher cost to other players.
- **Conglomerate merger:** Conglomerate mergers are the combination of organizations that are unrelated to each other. There are no linkages with respect to customer groups, customer functions and technologies being used. There are no important common factors between the organizations in production, marketing, research and development and technology. In practice, however, there is some degree of overlap in one or more of these factors.

  Conglomerate mergers have been sub-divided into:
  - Financial Conglomerates
  - Managerial Conglomerates
  - Concentric Companies

(b) Distinguish between Vertical Integration and Horizontal Integration.

Answer:

In vertically integrated diversification, firms opt to engage in businesses that are related to their existing businesses. The firm remains vertically within the same process. The firm remains vertically within the same process. Sequence moves forward or backward in the chain and enters specific product/ process steps with the intention of making them into new business for the firm.

On the other hand, horizontal Integrated Diversification is the acquisition of one or more similar business operating at the same stage of the production – marketing chain that is going into complementary products, by-products or taking over competitors' businesses.

(c) Discuss the advantages of Strategic Management.

Answer:

The Advantages of Strategic Management

- **Discharges Board Responsibility**

  The first reason that most organizations state for having a strategic management process is that it discharges the responsibility of the Board of Directors.

- **Forces an Objective Assessment**

  Strategic management provides a discipline that enables the board and senior management to actually take a step back from the day-to-day business to think about the future of the organization. Without this discipline, the organization can become solely consumed with working through the next issue or problem without consideration of the larger picture.

- **Provides a Framework for Decision-Making**

Strategy provides a framework within which all staff can make day-to-day operational decisions and understand that those decisions are all moving the organization in a single direction. It is not possible (nor realistic or appropriate) for the board to know all the decisions the executive director will have to make, nor is it possible (nor realistic or practical) for the executive director to know all the decisions the staff will make. Strategy provides a vision of the future, confirms the purpose and values of an organization, sets objectives, clarifies threats and opportunities, determines methods to leverage strengths, and mitigate weaknesses (at a minimum). As such, it sets a framework and clear boundaries within which decisions can be made. The cumulative effect of these decisions (which can add up to thousands over the year) can have a significant impact on the success of the organization. Providing a framework within which the executive director and staff can make these decisions helps them better focus their efforts on those things that will best support the organization's success.

- **Supports Understanding & Buy-In**
  Allowing the board and staff participation in the strategic discussion enables them to better understand the direction, why that direction was chosen, and the associated benefits. For some people simply knowing is enough; for many people, to gain their full support requires them to understand.

- **Enables Measurement of Progress**
  A strategic management process forces an organization to set objectives and measures of success. The setting of measures of success requires that the organization first determine what is critical to its ongoing success and then forces the establishment of objectives and keeps these critical measures in front of the board and senior management.

- **Provides an Organizational Perspective**
  Addressing operational issues rarely looks at the whole organization and the interrelatedness of its varying components. Strategic management takes an organizational perspective and looks at all the components and the interrelationship between those components in order to develop a strategy that is optimal for the whole organization and not a single component.

13. Explain the strategic option that takes the organization away from its existing products and markets showing its main advantages and disadvantages.

Answer:
Diversification as a description of strategy is used in different ways by different people. It will be used in a fairly general way to identify all directions of development which take the company away from its present products and market at the same time. However, it is convenient to divide the consideration of diversification into two types; related diversification and unrelated diversification.

Related diversification:
Related Diversification is the most popular distinction between the different types of diversification and is made with regard to how close the field of diversification is to the field of the existing business activities.
Related Diversification occurs when the company adds to or expands its existing line of production or markets. In these cases, the company starts manufacturing a new product or penetrates a new market related to its business activity. Under related diversification the company makes easier the consumption of its products by producing complementing goods or offering complementing services.

For example, a shoe producer starts a line of purses and other leather accessories; an electronics repair shop adds to its portfolio of services the renting of appliances to the customers for temporary use until their own are repaired.
Experts have formulated two basic fields in relation to:

- Opportunities for sharing resources: when all kinds of tangible and intangible resources can be shared or "copied" and the same trademark can be used.
- Opportunities for strategic integration: when the integration of marketing strategies of two businesses brings benefits and the integrated efforts provide additional competitive advantages.

This type of diversification is used mostly by small businesses because it is less risky. In the majority of cases it does not require big investments and owners feel more secure because they know the opportunities and threats in the field of their main business activities. However, sometimes this diversification does not bring the expected results and profits. Most often the reason for this is the underestimation of accompanying problems and the need of knowledge and skills in the field of change management, cultural differences, human resource management (layoffs, quitting, promoting, hiring) and so on.

However, the reason for not meeting the results and expectations of the diversification may be the overestimation of the expected benefits and profits from the synergy, during the preliminary analysis.

The **major advantages** of related diversification are:

- Control of suppliers because of quality, quantity, and price.
- Control of market.
- Access to information because of technological change and market trends.
- Cost saving.
- Profit or growth.
- Indirect competition.
- Spreading risk.
- Resources utilization.

The **major disadvantages** of related diversification are:

- Management control: the recipe for success in managing a manufacturing company may not be transferable to a supplier or distribution company.
- Inefficiencies: in declining industries companies may need to dis-integrate as the scale of production declines.

Unrelated Diversification

Unrelated Diversification is a form of diversification when the business adds new or unrelated product lines and penetrates new markets. For example, if the shoe producer enters the business of clothing manufacturing. In this case there is no direct connection with the company's existing business - this diversification is classified as unrelated.
The unrelated diversification is based on the concept that any new business or company, which can be acquired under favorable financial conditions and has the potential for high revenues, is suitable for diversification. This is essentially a financial approach; it is implemented when the research determines that this unrelated diversification in a completely new field would bring significantly higher revenues compared to the related diversification on the basis of similar products, services, markets or complementing strategies. A good example of this kind of diversification, that brought high profits for a certain period of time, is that during recent years of growth many companies entered the construction market despite their significantly different

field of main business activity. In this case, however, the lack of expertise and experience, and the insufficient knowledge of the market can lead to serious problems.

Advantages of unrelated diversification:
- Values and aspiration of decision making.
- The opportunity to employ existing under-utilized resources in a new field.
- The desire to move into different area of activity perhaps because the present one is decline.

Disadvantages of unrelated diversification:
- Diversification as related or unrelated is not straightforward matter.
- Strategies of diversification can raise many of the problems for product development:
  - The process of creating a broad product line is expensive and potentially unprofitable.
  - Product development is likely to require a commitment to high levels of spending on R&D.

14(a) Write about the four perspectives of Balanced Scorecard.

Answer:
Balanced scorecard is a framework of financial and non financial measures that can be made ahead of the traditional financial measures. The four perspectives associated with it are as follows:

1. **Financial** — satisfying the stakeholders in the company - owners, employees, suppliers. The objectives of this perspective would be to achieve a certain level of profitability, or growth.

2. **Customer or Market** — satisfying the customers such that they buy product and services to support the financial perspective. e.g. increase customer satisfaction, introduce a new product.

3. **Internal Business Processes** — supporting the Financial and Customer perspectives through having appropriate and well operated processes or procedures e.g. the sales process, the product implementation process etc.

4. **Learning, Innovation and Growth** — supporting the Financial, Customer and Internal Business Process perspectives through having the ability to change, improve and innovate through the acquisition of new knowledge, skills and technology.

(b) Discuss the different types of Benchmarking.

Answer:
Internal Benchmarking - It involves looking within the organization to determine other departments, locations and projects which have similar activities and then defining the best practices amongst them. It involves seeking partners from within the same organization. For example, from business units located in different areas. The main advantages of internal benchmarking are that access to sensitive data and information are easier; standardized data is often readily available; and usually less time and resources are needed. There may be fewer barriers to implementation as practices maybe relatively easy to transfer across the same organization. However real innovation may be lacking and best in class performance is more likely to be found through external benchmarking.
External Benchmarking - External benchmarking involves seeking help of outside organizations that are known to be best in class. External benchmarking provides opportunities of learning

from those who are at the leading edge, although it must be remembered that not every best practice solution can be transferred to others. In addition, this type of benchmarking may take up more time and resource to ensure the comparability of data and information, the credibility of the findings and the development of sound recommendations.
Generic Benchmarking - Generic benchmarking involves comparing with organizations that have similar processes. It involves the comparison of an organization's critical business processes and operations against best practice organization that performs similar work or delivers similar services. For example, how do best practice organization process customers' orders? It extends the benchmarking process outside
the organization and its industry to get inspiration from organizations in dissimilar industry.

Functional Benchmarking- This type of benchmarking is used when organizations look to benchmark with partners drawn from different business sectors or areas of activity to find ways of improving similar functions or work processes. This sort of benchmarking can lead to innovation and dramatic improvements.

Competitive Benchmarking - It involves examining the products, services and processes of competitors and then comparing them with their own. It involves the comparison of competitors' products, process and business results with own. It requires that the company perform a detailed analysis of its competitors' products, services, and processes. Benchmarking partners are drawn from the same sector. However to protect confidentiality it is common for the companies to undertake this type of benchmarking through trade associations or third parties.

Compatible Industry Benchmarking - Compatible industry will include those companies that are not directly competing for the same customer. It make comparisons within A general industry category. For example, a company, which is manufacturing automobile spare parts, compares itself with another company which is manufacturing automobile accessories.

Strategic Benchmarking - It is similar to the process benchmarking in nature but differed in its scope and depth. It involves a systematic process by which a company seeks to improve their overall performance by examining the long-term strategies. It involves comparing high-level aspects such as developing new products and services, core competencies etc.

Global Benchmarking - It is a benchmarking through which distinction in international culture, business processes and trade practices across companies are bridged and their ramification for business process improvement are understood and utilized. Globalization and advances in information technology leads to use this type of benchmarking.

(c) Strategic control, financial control, and strategic planning are three ways of dividing responsibilities between corporate centre and its business units. Discuss these three ways and contrast them.

Answer:
The responsibilities for strategic decision making between business units and corporate centre are divided in the following three ways:

Strategic planning: It refers to the particular style of relationship between the centre and business units. This is the most centralized form in among all the three styles. The centre is the master planner recommending detailed roles for departments and business units, whose roe is basically limited to the operational delivery of the plan. The centre orchestrates, coordinates and controls all of business unit activities through the extensive use of the formal planning and

control system. The centre also directly manages the infrastructure and provides many corporate services.

Financial Control: It is the most extreme form of decentralization, dissolving the organization into highly independent business units. In this style, the role of the centre is limited to setting financial targets, allocating resources, appraising performance and dominant to avoid or correct poor performance. These involvements would usually be replacing business unit managers rather than dictating changes in strategies. Therefore, the dominant processes are performance targets and business unit managers and held strictly responsible for meeting these targets.

Strategic control: This style is mostly operates in the organizations. It lies between the two extremes of the strategic planning and financial control styles. The relationship between the centre and the business units is one of a parent who behaves as a strategic shaper. Influencing the behavior in business units and forming the context within which manages are operating.

Contrast:

- Strategic planning is more appropriate where corporate managers have a detailed working knowledge of each business units whereas financial control is more appropriate to organizations operating in suitable where the centre has little knowledge about business unit strategies and operations.
- Strategic planning is more suitable where business unit strategies are of a size of sensitivity that can have major implication for the whole corporate whereas financial control is only a short time lag between management decisions and the financial consequences. Similarly strategic control is built through the processes of supportive strategic with business units but within central boundaries and guidelines.
- In strategic planning, there are bureaucratic costs of centralization and de-motivating effects on business unit manager who may feel little commitment to strategies handed down from the centres but in financial control, the business units are focused on meeting tough short term target set by a centre that does not have the resources or the competences to manage the knowledge creations and integration process. In strategic control the biggest risk would be the centre which tries to shape strategies without being clear about the corporate logic or having the competencies essentially to add value in these ways.

15. Lenovo Group is one of the leading IT companies in China and it has now become the 3rd PC provider in the world market after the acquisition of IBM's Personal Computing Division. As a global company after the alliance with IBM, it has a number of more than 19,000 employees worldwide. Lenovo has always aspired to become a global company. On December 8th, 2004, Lenovo announced that it would acquire IBM's global PC business for US$ 1.25 billion and a five-year brand licensing agreement. According to the terms of the agreement, the acquisition included IBM's desktop and notebook computer business, as well as its PC-related R&D centers, manufacturing plants, global marketing networks, and service centers. As part of the transaction, Lenovo and IBM also entered a broad-based, strategic alliance of warranty and maintenance services and preferred supplier of customer leasing and channel financing services to Lenovo. On April 30th, 2005, Lenovo completed the landmark acquisition with IBM and entered a new era of globalization, making the new Lenovo a PC leader in the global market, with approximately 8 per cent of the worldwide PC market by shipments, followed after Dell (16.4%) and HP (13.9%).

Answer the following questions —

(a) Describe the motives of a company toward Strategic Alliances.

(b) What are reasons can be considered for the failure of strategic alliance among different companies? State in details.

(c) What was the necessity to form the strategic alliance between Lenovo and IBM? Also state the motives toward Lenovo & IBM's Strategic Alliance.

Answer:

(a) Motives toward Strategic Alliances:

Most important reason for the surge in strategic alliance has been under the recognition of the fact that no corporation has enough capital to acquire all of the companies and assets needed to compete everywhere in the world. While with alliances, companies can access global markets and contribute to economic development without steep exposure to market and political turmoil. The motivations for the formation of an alliance can range from purely economic reasons (e.g., search for scale, efficiency, or risk sharing) to more complex strategic ones (e.g., learning new technologies, seeking political advantage).

Forces that drive the formation of strategic alliances can be categorized into three aspects. Firstly, companies are seeking for co-option during its globalizing process. Co-option turns potential competitors into allies and providers the complementary goods and services that allow new business to develop and usually multinational companies seek partners with similar products who have a good knowledge of local market and channels of distribution in order to share the risk during the expansion of the global market. The privileged market access of some countries sometimes can be a reason for MNC to search for alliance under the globalization movement.

Secondly, co-specialization has become a more and more attractive force behind the strategic alliance. It is the synergistic value creation that results from the combination of previously separate resources, positions, skills and knowledge sources. By bringing the resources of two or more companies together, strategic alliances often provide the most efficient size to conduct a particular business. Through the way of alliances, partners can contribute their unique and differentiated resources to the success of their allies, i.e. skills, R&D, brands, networks, as well as tangible and intangible assets.

Alliance may also be an avenue for learning and internalizing new skills from its partners, in particular those that are tacit, collective and embedded. Therefore, it is self-evident that strategic alliance is central to the corporate strategy and it is significant and unavoidable for the global reaching step in the world economy. To international managers, the strategic benefits are compelling under the synergy effects among partners; and it is a flexible and efficient channel to crack new markets, to gain skills, know-how, or products, and to share risks or resources.

(b) Reasons for the failure of strategic alliance —

The initial stage of an alliance is a critical shakeout period fraught with uncertainties and ambiguities, managers need to find ways to tackle the early shown or potential problems to lay the foundation for a good relationship later. Studies have shown that two thirds of all alliances experience severe leadership and financing problems during the first two years.

There are many reasons for the high rate alliance failures. An inadequate capability to manage the alliance is the main reason. Leadership played a key role to the success of alliances. Drawing specially trained strategic alliance leaders from outside the organization, as many companies do, can be problematic; strategic alliance managers need the knowledge, relationship and credibility that only an insider can bring to the table. Another frequently cited reason is poor selection of alliance partners; due to competitive pressures,

many firms rush into alliances without adequate preparation or understanding of their needs, the in compatibility of partners will lead to insurmountable problems. Other reasons that are often cited for the alliances failure include lack of trust between partners, cultural conflicts, incompatible chemistry, and unique risks inherent in strategic alliances, and lastly focusing on alliance formation rather than sustaining the alliance.

International alliances are increasingly central to the corporate success; however, they often end up in divorce. In many cross-border alliances, the failure stems from the deal maker's concentration on strategies, financial, and legal complexities, while largely ignoring issues of "cultural compatibility" among the alliance partners. Therefore, cultural differences could become a barrier to success, especially at the initial stage. Besides that, the failure to build trust between partners in the early stage of the alliance could be detrimental to further development to the next stage. Trust building is also closely linked to the cultural compatibility between partners. If partners lack compatible cultures and expectations, the trust between partners employees may not materialized, which will lead to inter-partner employee conflicts.

(c) The necessity to form the strategic alliance between Lenovo and IBM:

Lenovo was known as one of China's most promising companies in the early 1990s. Before the declaration of the alliance with IBM, the company had encountered with obstacles for its further expansion and development. Though Lenovo is the largest PC maker in China with more than a quarter of the market share, it does little business outside the country. The increasing fierce competition from aggressive foreign rivals such as Dell and HP in the past few years in Chinese market has put further pressures on Lenovo's margins. Apart from that, the company might also suffer financial problems and its performance over the past years might have fallen short of internal targets.

The motives toward Lenovo & IBM's Strategic Alliance:

Lenovo's takeover of IBM's PC division has been described as "snake ate the elephant", and the deal pulls Lenovo to the third-largest just behind Dell and HP. The two computer firms have formed a strategic alliance in PC business worldwide. The motivations that drive the formation of the strategic alliance between Lenovo and IBM can be analyzed from three perspectives.

For Lenovo's aspect, though Lenovo is the largest IT Company in China, its products are mainly within China. Lenovo's distribution network is its biggest problem, and it is not well adapted to serving the small and medium-sized companies who usually buy directly. Thus, in the first place, with an intention to expand its business globally, the firm needs a well-developed worldwide distribution network, which happens to be the advantage of IBM. As what has been announced by Lenovo, the agreement between the two firms includes broad-based strategic alliance under which Lenovo's products will be integrated into IBM's global service offerings, which also became the impetus to the deal.

Secondly, as a world-leading company like IBM, it has specialized and advanced skills in sales and marketing functions, for Lenovo, the sales and marketing support, as well as the R&D support are significant and of a necessity in its way to a multinational enterprise, which is also part of the agreement. Lenovo could get access to some of the world's most popular laptop designs, access to the U.S. market, and technological centers as advanced as any of its rivals after the establishing the alliance with IBM. Strategic alliance comes along with the learning from its partners and the internalization of the new knowledge, thereby benefits the firm. In this case, IBM provides such model and as an iconic enterprise for Lenovo, who is heading its way globally.

Thirdly, the use of IBM's globally recognized brand is an impetus to accelerate the alliance. The local brand 'Lenovo' will become more valuable in the market after its association with the IBM. And also, Lenovo's right to use the IBM brand on the computers for five years adds more value and trustworthiness to the brand.

Through acquiring IBM's global PC business and forming a strategic alliance with IBM, Lenovo would absorb and integrate the skills from both sides and acquire global brand recognition, an international and diversified customer base, a world-class distribution network with global reach, more diversified product offerings, enhanced operational excellence and leading-edge technology. The alliance with IBM would also help establish Lenovo's international recognition by leveraging IBM's powerful global brand through a five-year brand licensing agreement.

For IBM's aspect, it expects that the deal with Lenovo, China's largest PC maker will further consolidate its presence in the world's fastest growing IT market. The strategic alliance with Lenovo might become a move towards the shifting of demographics. As a market, China is a tough nut to crack especially for outsiders. Much of the competition comes from Lenovo, which is far and away the market leader in China in order to expand Chinese market and enjoy a slice of Lenovo ownership, IBM chooses Lenovo as its strategic partner. Therefore, the driving forces behind the alliance reflect the two company's desires of seeking for co-option, co-specialization during its globalizing process, with an attempt to learn and internalize within its own organization, which are also the main three motivations for strategic alliances.

Section B - Strategic Cost Management

16. (a) Distinguish between Traditional Cost Management & Strategic Cost management.

Answer:

The difference between Traditional Cost management and Strategic Cost Management is explained below:

	Traditional Cost Management	**Strategic Cost Management**
Focus	Internal	External
Perspective	Value-added	Value chain
Cost analysis-way	In term of: product, customer, and function With a strongly internal focus Value added is a key concept	In terms of the various stages of the overall value chain of which the firm is a part With a strongly external focus Value-added is seen as a dangerously narrow concept
Cost analysis- objective	Three objectives will apply, without regard to the strategic context: Score keeping, attention directing, and problem solving.	Although the three objectives are always present, the design of cost management system changes dramatically depending on the basic strategic positioning of the firm: either under a cost leadership strategy, or under a product differentiation strategy.

Cost driver concept	A single fundamental cost driver pervades literature - cost is a function of volume. Applied too often only at the overall firm level.	Multiple cost drivers such as: Structural drivers (e.g. scale, scope, experience, technology, complexity) Executional drivers (e.g. participative management, total quality management) Each value activity has a set of unique cost drivers.
Cost containment philosophy	Cost reduction approached via responsibility centers or products cost issues	Cost containment is a function of the cost driver(s) regulating value activity.
Primary concern	Cost impact	Cost/value/Revenue relationship
Key disciplines	Finance/Accounting	Marketing/Economies

16. (b) Write a note on kaizen Costing.

Answer:

Kaizen Costing

Yashihuro Moden defines kaizen costing as "the maintenance of present cost levels for products currently being manufactured via systematic efforts to achieve the desired cost level." The word kaizen is a Japanese word meaning continuous improvement.

Moden has described two types of kaizen costing:

- Asset and organisation specific kaizen costing activities planned according to the exegencies of each deal
- Product model specific **costing** activities carried out in special projects with added emphasis on **value analysis**

Kaizen costing is applied to products that are already in production phase. Prior to kaizen costing, when the products are under development phase, target costing is applied.

'Kaizen costing is based on the belief that nothing is ever perfect, so improvements and reductions in the variable costs are always possible'

The cost-plus method is one of the most traditional and common pricing techniques. In fact, virtually all companies in the UK used cost-plus pricing until they started to realise that they were operating in price-competitive markets. Until then, they had naively assumed that consumers would be willing to pay whatever price they arrived at by adding a percentage to the estimated cost of the product or service. This cost-plus approach has gradually been replaced by target costing. This addresses the pricing issue from the other direction. It must be accepted that in a competitive market a company has little influence over the selling price of its product.

Organisations use market research to establish the number of units they are likely to sell and the unit price that customers are willing to pay for the product. From this selling price, a company subtracts the profit required to meet its profit objective, arriving at a target cost. In most cases this cost will be lower than the current cost, especially if the product is subject to the learning-curve phenomenon, which would result in a "cost gap". The firm's objective is to bridge this gap - i.e., to cut the cost by using tools such as value analysis and functional analysis. Achieving the target cost requires a concerted effort from the whole company. Some firms choose a team of managers from all the main departments, whose main aim is to examine every aspect of the product and the manufacturing process to remove

unnecessary costs and anything that does not add value, while maintaining quality and functionality. In some cases this may lead to a complete product redesign.

Once the design has been approved, production can begin, which is where Kaizen costing starts. The method can be defined as a focus on obtaining small, incremental cost reductions (rather than big changes at longer intervals) during the production phase of the product's life cycle. Kaizen costing is based on the belief that nothing is ever perfect, so improvements and reductions in the variable costs are always possible. Like its big brother TQM, it becomes part of the culture, involving all members of the organisation. Everyone is encouraged to offer ideas that, however small, could lead to a reduction in variable costs, which could in turn lead to a reduction in the selling price and, hopefully, a growth in sales. Alternatively, the price could be maintained and the resulting increase in profits could be used to reward the shareholders or be reinvested in other projects. It's easy to see how Kaizen costing is aligned closely with lean manufacturing, whose main aim is to cut waste through continuous improvement. This is achieved by identifying the best resources and most efficient processes to remove waste from production.

16. (c) List out the objectives of BRP.

Answer:

When applying the BPR management technique to a business organization the implementation team effort is focused on the following objectives:

- **Customer focus:** Customer service oriented processes aiming to eliminate customer complaints.
- **Speed:** Dramatic compression of the time it takes to complete a task for key business processes. For instance, if process before BPR had an average cycle time 5 hours, after BPR the average cycle time should be cut down to half an hour.
- **Compression:** Cutting major tasks of cost and capital, throughout the value chain. Organizing the processes a company develops transparency throughout the operational level reducing cost. For instance the decision to buy a large amount of raw material at 50% discount is connected to eleven cross checkings in the organizational structure from cash flow, inventory, to production planning and marketing. These checkings become easily implemented within the cross-functional teams, optimizing the decision making and cutting operational cost.
- **Flexibility:** Adaptive processes and structures to changing conditions and competition. Being closer to the customer the company can develop the awareness mechanisms to rapidly spot the weak points and adapt to new requirements of the market.
- **Quality:** Obsession with the superior service and value to the customers. The level of quality is always the same controlled and monitored by the processes, and does not depend mainly on the person, who servicing the customer.
- **Innovation:** Leadership through imaginative change providing to organization competitive advantage.
- **Productivity:** Improve drastically effectiveness and efficiency.

17. (a) Distinguish between Cost Reduction & Cost Control.

Answer:

Particulars	Cost Reduction	Cost Control
1. Permanence	Permanent, Real and genuine savings in cost	Could be a temporary saving also
2. Nature of Saving	Saving in Cost per unit	Saving either in Total Cost or Cost per unit
3. Nature of process	It presumes the existence of concerned potential savings in norms or standards and therefore it is a corrective process.	It does not focus on costs independent of revenue nor considers product attributes as given. It is a wholistic control process.
4. Performance Evaluation	It is not concerned with maintenance of performance according to standards.	The process involves setting up a target, investigating variances and taking remedial measures to correct them.
5. Nature of Standards	Continuous process of critical examination includes analysis and challenge of standards.	Control is achieved through compliance with standards. Standards by themselves are not examined.
6. Dynamism	Fully dynamic approach.	Lacks dynamism when compared to cost reduction.
7. Coverage	Universally applicable to all areas of business. Does not depend upon standards, though target amounts may be set.	Limited applicability to those items of cost for which standards can be set.
8. Nature of Costs	Emphasis here is partly on present costs and largely on future costs.	Emphasis on present and past behavior of costs.

17. (b) Distinguish between Cost Reduction & Cost Management.

Answer:

Particulars	Cost Reduction	Cost Management
Meaning	It is the permanent reduction in the unit cost of goods or services without affecting their quality or suitability for their intended use.	It is a system that establishes linkages between costs and revenues and relates them with the product to maximize Firm's profits.
Objective	Critical examination of each aspect of business and their analysis and review to improve the efficiency and effectiveness so as to reduce costs through techniques of Value Analysis, Work Study, Standardisation etc.	Optimal utilization of resources to enhance the operating income of the business entity.
Nature of process	It presumes the existence of concealed potential savings in norms or standards and therefore it is a corrective process.	It does not focus on costs independent of revenue nor considers product attributes as given. It is a wholistic control process.

18. (a) RAVI is the manager of the engineering development division of GOLDCOAST PRODUCTS Ltd. This division provides contract research for the operating divisions of the Company. RAVI has just received a proposal signed by all of his 10 engineers to replace the existing mainframe computing system with 10 workstations. Workstations are minicomputers with extensive memory capacity and work capabilities. RAVI is not enthusiastic about the proposal. The mainframe was purchased only 2 years ago for ₹3,00,000 and has a remaining useful life of 3 years.

The workstations will cost ₹1,35,000 and have a useful life of 3 years. Straight-line depreciation is provided for all computer equipment at the Company. Given the pace of technology, RAVI believes both the mainframe and the workstations will have zero disposal prices in three years' time. Annual cash operating costs for the mainframe are ₹40,000. Annual cash operating costs for the 10 workstations are ₹10,000. The current disposal price of the mainframe is ₹95,000.

Annual revenue of the engineering development division is ₹10,00,000 and non-computer related cost is ₹8,80,000. Both revenue and non-computer related costs are expected to be unaffected by the computer equipment replacement decision.

RAVI'S annual bonus includes a component based on division operating income. He is keen to maintain his track record of the last three years of increasing operating income of division each year. He has a promotion possibility next year that would make him Group Vice-President of the Company.

Required:

1. **Prepare a statement showing the past & future costs and revenue for two alternatives, (a) Keep the mainframe computing system (b) Replace the mainframe computing system with 10 workstations.**
2. **Prepare a statement showing profit/loss for both alternatives for a period of 3 years.**
3. **Prepare a statement showing the relevant costs for three years together.**
4. **Why was RAVI reluctant to purchase 10 workstations? Give reasons.**

Answer:

1. **Basic data**

Particulars	Retain Mainframe	Replace with work-stations
Original Cost	₹3,00,000	₹ 1,35,000
Scrap Value	Nil	Nil
Total Useful Life	5 years	3 years
Remaining Useful Life	3 years	3 years
Depreciation per annum	₹60,000	₹45,000
Total Depreciation written off in last 2 years	₹ 1,20,000	Nil
Current Book Value	₹ 1,80,000	Purchased afresh
Current Disposal Value	₹95,000	Not Applicable
Revenue per annum	₹ 10,00,000	₹ 10,00,000
Non - Computer related costs per annum	₹8,80,000	₹8,80,000
Computed related costs (Cash Exps.) per annum	₹40,000	₹ 10,000

2. **Profit or Loss for 3 years for "Retain Mainframe" Option**

Particulars	Year 1	Year 2	Year 3	Total
Revenue	10,00.000	10,00,000	10,00,000	30.00.000
Less: Non-Computer related costs	8,80,000	8,80.000	8,80,000	26.40,000
Computer related costs	40.000	40,000	40,000	1,20,000
Depreciation	60,000	60.000	60,000	1,80.000

Net Profit	**20,000**	**20,000**	**20,000**	**60,000**

Profit or Loss for 3 years under "Purchase 10 workstations" Option

Particulars	**Year 1**	**Year 2**	**Year 3**	**Total**
Revenue	10,00,000	10,00,000	10,00,000	30,00,000
Less: Non -Computer related costs	8,80,000	8,80,000	8,80,000	26,40,000
Computer related costs	10,000	10,000	10,000	30,000
Loss on sale of mainframe *	85,000	Nil	Nil	85,000
Depreciation	45,000	45,000	45,000	1,35,000
Net Profit	**(20,000)**	**65,000**	**65,000**	**1,10,000**

Note: Loss on sale of mainframe = ₹ 1,80,000 - ₹95,000 = ₹85,000

3. Relevant Cost for 3 years

Particulars	Retain Mainframe	Replace with work-stations
Initial Investment / Purchase Cost	Nil	₹ 1,35,000
Disposal Value of old mainframe	Nil	(₹95,000)
Computer related costs for 3 years	₹ 1,20,000	₹30.000
Total	₹1,20,000	₹70,000

4. **RAVI's reluctance**: It is observed that Profit Statement for the Division shows a loss of ₹20,000 for Year 1 only under replacement decision. RAVI may perceive this to affect his promotion chances. Hence he may be reluctant to choose the replacement option, even if it is available from the Company's viewpoint.

18. (b) Which type of company would benefit from target costing?

Answer:

Whenever a new and innovative approach to doing business is discovered, the question arises as to which clients and potential clients might this methodology provide an appropriate fit. In addition, and consistent with many new financial or operational approaches, target costing may not be for everyone. Some companies, which seem to benefit most from target costing, are those, which maintain the following criteria:

- Assembly-oriented industries, as opposed to repetitive-process industries that produce homogeneous products;
- Involved heavily with the diversification of the product lines;
- Use technologies of factory automation, including computer-aided design, flexible manufacturing systems, office automation, and computer-aided manufacturing;
- Have experienced shorter product life cycles where the pay-back for factory automation typically must be achieved in less than eight years;
- Must develop systems for reducing costs during the planning, design and development stages of a product’s life cycle;
- Are implementing management methods such as just-in-time, value engineering, and total quality control.

19. (a) Develop the formula for Economic Order quantity.

$$E = \sqrt{\frac{2U \times P}{S}}$$

Answer:

Where:

E = EOQ. U = Annual consumption

P = Cost of placing an order and receiving the goods

S = Annual storage costs per unit per annum.

Number of orders to be placed in a year = U/E

Total cost of placing the orders in a year = $\frac{U}{E} \times P = \frac{UP}{E}$

Annual storage costs = $\frac{E}{2*} \times S = \frac{ES}{2}$

* Since on an average 50% of E will be in stock.

At the Economic Order Quantity Level, the total storage costs are equal to total order placing costs.

Thus $\frac{ES}{2} = \frac{UP}{E}$ OR $E^2S = 2UP$

19. (b) In view of increasing cost of operating own fleet of cars, your company is presently considering two proposals, viz.

(i) To hire cars with drivers from an agency @ ₹ 800 per car per month. The company will bear the cost of petrol, oil and tyres.

(ii) The executive will be given ₹ 25,000 interest free loan repayable in 5 years to buy his own car.

The company will, however, provide him with free petrol and ₹500 per month for maintenance and driver's wages.

If the present cost of a car is ₹ 50,000 and monthly average running is 2,000 kilometers, find out the most economic way with the help of the following data:

	Paise per km.
Petrol	**65**
Oil	**8**
Tyre	**7**
Repair	**10**
Tax and Insurance ₹ 560 per year. Driver's wages and bonus ₹ 720 per month.	
Life of a car	**5 years**
Resale value at the end of 5th year	**₹10,000**
Assume interest @ 18% per annum.	

Answer:

Statement showing comparative cost of operation per car per month

Items of cost	Company's own car	Hired car	Executive car
Petrol	₹1,300.00	₹1,300.00	₹1,300.00
Oil	160.00	160.00	-
Tyre	140.00	140.00	-
Repair	200.00	-	-

Taxes and Insurance	46.67	-	-
Wages and bonus	720.00	-	-
Depreciation $\frac{(₹50,000 - ₹10,000)}{5} \times \frac{1}{12} =$	666.67	-	-
Hire charges	-	800.00	-
Maintenance allowance	-	-	500.00
Interest on loan	-	-	375.00
Total cost	3,233.34*	2,400.00	2,175.00
Cost per km.	₹1.62	₹1.20	₹1.09

* This cost will still go up, because company would have earned interest, if it had invested ₹ 50,000 elsewhere. On the basis of above analysis, third alternative is recommended.

20. The XYZ Company manufactures and sells 10,000 boom boxes per year. The Assembly Division assembles the boom boxes. It buys the cassette deck for the boom box from the Cassette Deck Division. The Cassette Deck Division can manufacture at most 12,000 cassette decks. The demand for cassette decks is strong. Any cassette deck not sold to the Assembly Division can be sold in the outside market for ₹ 350 per unit. The Cassette Deck Division currently sells 10,000 cassette decks to the Assembly Division and 2,000 cassette decks in the outside market. The incremental cost of manufacturing the cassette deck is ₹ 250 per unit.

A crucial component for producing high-quality cassette decks is the (cassette) head mechanism. The Cassette Deck Division manufactures the head mechanism for its cassette decks. Many outside suppliers have offered to supply cassette decks to XYZ Company. To ensure quality, XYZ Company requires that any outside supplier wanting to supply cassette decks to XYZ Company must purchase the head mechanism from the Cassette Deck Division. The Cassette Deck Division will charge ₹ 180 per unit for the head mechanism. The incremental cost of manufacturing the head mechanism is ₹ 120 per unit out of the total incremental costs of ₹ 250 per unit to manufacture the cassette deck. The Cassette Deck Division has unused capacity for manufacturing the head mechanism. That is, even if the Cassette Deck Division manufactures the head mechanism for outside suppliers, it will still be able to manufacture 12,000 cassette decks for sale in the outside market at ₹350 per unit.

An outside supplier is currently negotiating to supply 10,000 cassette decks to the Assembly Division for a price in the range of ₹ 370 to ₹ 430. If the outside supplier gets the business, it will buy the head mechanism from the Cassette Deck Division for ₹ 180 per unit.

Consider each question independently.

Required:

1. **From the standpoint of XYZ Company as a whole, should the Assembly Division accept outside vendor's offer (a) at a price of ₹ 370 per cassette deck? (b) at a price of ₹ 430 per cassette deck? Show your computations.**
2. **What transfer price for cassette decks will result in the Cassette Deck Division and the Assembly Division taking actions that are optimal for XYZ Company as a whole? Explain your answer.**

Answer:

Transfer pricing, goal congruence.

1a. & b. As the following calculations show, if the outside supplier offers a price of ₹ 370 per cassette deck, XYZ Company should purchase the cassette decks from the outside supplier. If the outside supplier Corporation offers a price of ₹ 430 per cassette deck, XYZ Company should manufacture the cassette decks in-house.

	Transfer 10,000 cassette decks to Assembly Sell 2,000 in outside market	**Buy 10,000 cassette decks from the outside supplier at ₹370. Sell 12,000 cassette decks in outside market**	**Buy 10,000 cassette decks from the outside supplier at ₹430 Sell 12,000 cassette decks in outside market**
	(1)	**(2)**	**(3)**
Incremental cost of Cassette Deck Division supplying 10,000 cassette decks to Assembly ₹250 × 10,000; 0; 0	₹ (25,00,000)	Re.0	Re.0
Incremental costs of buying 10,000 cassette decks from the outside supplier Re0; ₹370 ×10,000; ₹430 ×10,000	0	(37,00,000)	(43,00,000)
Revenue from selling cassette decks in outside market ₹ 350 × 2,000; 12,000; 12,000	7,00,000	42,00,000	42,00,000
Incremental costs of manufacturing cassette decks for sale in outside market ₹ 250 × 2,000; 12,000; 12,000	(5,00,000)	(30,00,000)	(30,00,000)
Revenue from supplying cassette-head mechanism to the outside supplier ₹180 × 0; 10,000; 10,000	0	18,00,000	18,00,000
Incremental costs of supplying cassette-head mechanism to the outside supplier ₹ 120 ×0; 10,000; 10,000	0	(12,00,000)	(12,00,000)
Net costs	₹(23,00,000)	₹(19,00,000)	₹(25,00,000)

At a price of ₹ 370 per cassette deck, the net cost of ₹ 19,00,000 is less than the net cost of ₹ 23,00,000 if XYZ Company made the cassette decks inhouse. Hence, XYZ Company should outsource to the outside vendor.

At a price of ₹ 430 per cassette deck, the net cost of ₹ 25,00,000 is greater than the net cost of ₹ 23,00,000 if XYZ Company made the cassette decks inhouse. Hence, XYZ Company should reject the outside supplier's offer.

2. For the Cassette Deck Division and the Assembly Division to take actions that are optimal for XYZ Company as a whole, the transfer price should be set at ₹ 410, calculated as follows:

   The Cassette Deck Division can manufacture at most 12,000 cassette decks and is currently operating at capacity. The incremental costs of manufacturing a cassette deck are ₹ 250

per deck. The opportunity cost of manufacturing cassette decks for the Assembly Division is (1) the contribution margin of ₹100 (selling price, ₹350 minus incremental costs ₹ 250) that the Cassette Deck Division would forgo by not selling cassette decks in the outside market and (2) the contribution margin of ₹60 (selling price, ₹180 minus incremental costs, ₹120) that the Cassette Deck Division would forgo by not being able to sell the cassette-head mechanism to outside suppliers of cassette decks (as is the present situation). Thus, the total opportunity cost of the Cassette Deck Division of supplying cassette decks to Assembly is ₹ 100 + ₹ 60 = ₹ 160 per unit. Using the general guideline,

Minimum transfer price per cassette deck = Incremental cost per cassette deck up to the point of transfer + Opprtunity costs per Cesette deck to the selling division

= ₹250 + ₹160 = ₹410

Note that, at a price of ₹ 410, XYZ Company is indifferent between manufacturing cassette decks inhouse or purchasing them from an outside supplier. Each results in a net cost of ₹ 23,00,000. For an outside price per cassette deck below Rs 410, the Assembly Division would prefer to purchase from outside; above it, the Assembly Division would prefer to purchase from the Cassette Deck Division.

When selling prices are uncertain, the transfer price should be set at the minimum acceptable transfer price. For example, if the transfer price were set above the minimum transfer price at ₹ 420 per cassette deck, say, and an outside supplier offered to supply the cassette decks at ₹ 415 per unit, the Assembly Division would purchase the cassette deck from the outside supplier. In fact, as the following calculations show, XYZ Company, as a whole, would be better off had the Assembly Division purchased the cassette decks from the Cassette Deck Division. The net cost to XYZ Company if the Cassette Deck Division transfers 10,000 cassette decks to the Assembly Division is ₹ 230,000 as calculated in Column 1 of the table presented in requirement 1. If an outside supplier supplies cassette decks at ₹ 415 each, we simply substitute ₹ 415 × 10,000 = ₹ 41,50,000 for the incremental costs of buying 10,000 cassette decks in column 2 or 3 and leave everything else unchanged. This gives a higher net cost of ₹ 23,50,000 to XYZ Company as a whole.

It is only if the price charged by the outside supplier falls below ₹ 410 that XYZ Company as a whole is better off purchasing from the outside market. Setting the transfer price at ₹ 410 per unit achieves goal congruence.

21. (a) Discuss the advantages and disadvantages of Target costing .

Answer:

Target Costing has the following main advantages or benefits:

1. Proactive approach to cost management.
2. Orients organizations towards customers.
3. Breaks down barriers between departments.
4. **Implementation** enhances employee awareness and empowerment.
5. Foster partnerships with suppliers.
6. Minimize non value-added activities.
7. Encourages selection of lowest cost value added activities.
8. Reduced time to market.

Target costing approach has the following main disadvantages or limitations:

1. Effective implementation and use requires the development of detailed cost data.
2. its implementation requires willingness to cooperate
3. Requires many meetings for coordination
4. May reduce the quality of products due to the use of cheep components which may be of inferior quality.

21. (b) The costs per unit of the three products, A, B & C of a Company are given below:

Products	A ₹	B ₹	C ₹
Direct Materials	**20**	**16**	**18**
Direct labour	**12**	**14**	**12**
Variable expenses	**8**	**10**	**6**
Fixed Expenses	**6**	**6**	**4**
	46	**46**	**40**
Profit	**18**	**14**	**12**
Selling Price	**64**	**60**	**52**
No. of units produced	**10,000**	**5,000**	**8,000**

Production arrangements are such that if one product is given up, the production of the others can be raised by 50%. The directors propose that C should be given up because the contribution from that product is the lowest. Present suitable analysis of the data indicating whether the proposal should be accepted.

Answer:

Fixed Expenses:	Units Rate	Amount
A	10,000 × ₹6	= ₹60,000
B	5,000 × ₹6	= ₹30,000
C	8,000 × ₹4	= ₹32,000
Total		₹ 1,22,000

Product wise Contribution	Products		
	A	B	C
Selling Price	₹64	60	52
Marginal cost	40	40	36
Contribution per unit	24	20	16
Total Contribution	2,40,000	1,00,000	1,28,000

(a) Total profit if A given up:

	A	B	C	Total ₹
Units	-	5,000	8,000	
Addl. Units	-	2,500	4,000	
Total	-	7,500	12,000	
Contribution (₹)	-	1,50,000	1,92,000	3,42,000
Less: Fixed Cost				1,22,000
Total Profit				2,20,000

(b) **Total profit if B is given up:**

	A	B	C	Total ₹
Units	10,000	-	8,000	
Addl. Units	5,000	-	4,000	
Total	15,000		12,000	
Contribution (₹)	3,60,000	-	1,92,000	5,52,000
Less: Fixed Cost				1,22,000
Total Profit				4,30,000

(c) **Total profit if C is given up:**

	A	B	C	Total ₹
Units	10,000	5,000	-	
Addl. Units	5,000	2,500	-	
Total	15,000	7,500	-	
Contribution (₹)	3,60,000	1,50,000	-	5,10,000
Less: Fixed Cost				1,22,000
Total Profit				3,88,000

If product B is given up, the profit is the maximum since the total contribution of B is lowest. The proposal to give up product C, is, there, not advisable.

22. (a) Explain the step of Zero- base Budgeting.

Answer

ZBB involves the following steps –

1. **Objectives**: determine a set of objectives.
2. **Coverage**: Decide about the extent to which the technique of ZBB is to be applied, whether in all areas of firm's activities or only in a few selected areas on trial basis.
3. **Decision areas**: identification areas where decision are required to be taken.
4. **Ranking:** develop decision package and rank them in order or preference.
5. **Budgeting:** Prepare the budget i.e. translating decision packages into practicable units/items and allocating financial resources.

22. (b) V Ltd. produces two products M and N. The draft budget for the next month is as under:

Budgeted production and sale (units)	**40,000**	**80,000**
Selling price ₹/unit	**25**	**50**
Total costs ₹/unit	**20**	**40**
Machine hours/unit	**2**	**1**
Max. sale potential (units)	**60,000**	**1,00,000**

The fixed expenses are estimated at ₹9,60,000 per month. The co. absorbs fixed Overheads on the basis of machine hours which are fully utilised by the budgeted production and cannot be further increased.

When the budget was discussed, the managing director states that the product mix should be altered to yield optimum profit. The marketing director suggests that he could introduce a new product C each unit of which take 1.5 machine hour. However a processing vat involving a capital outlay of ₹2,00,000 is to be installed for processing product C. The additional fixed overheads relating to the processing vat was estimated at ₹60,000 per month. The variable costs of product C was estimated at ₹ 21 per unit.

Required:

(i) Calculate the profit as per draft budget for the next month.

(ii) Revise the product mix based on data given M and N to yield optimum profit.

(iii) The company decides to discontinue either product M or N whichever is giving lower profit and proposes to substitute product C instead. Fix the selling price of C in such a way to yield 15% return on additional capital employed besides maintaining the same overall profit as envisaged in (ii) above.

Answer:

(i) Computation of profit as per draft budget:

	M	N	Total
	₹	₹	₹
Selling Price	25	50	
Total Cost	20	40	
Profit	5	10	
Budgeted Units	40,000	80,000	
Profit	2,00,000	8,00,000	10,00,000

(ii) Statement showing computation of contribution per machine hr.

	M	N
Fixed Cost P. U.	12	6
Variable Cost P. U.	8	34
Contribution P. U. (S.P.-V.C.)	17	16
Contribution Per machine hour	8.5	16
Priority	II	1

Fixed Cost per machine hour = [9,60,000/(40,000 × 2) + (80,000 × 1) = ₹6 per machine hour

Statement showing optimum mix and relevant profit:

		M	N	Total
No. of units		30,000	1,00,000	
Contribution P. U.	₹	17	16	
Total Contribution	₹	5,10,000	1 6,00,000	21,10,000
Fixed Cost	₹			9,60,000
Profit	₹			11,50,000

Working Notes:

Available hours = (40,000 × 2) + (80,000 × 1) = ₹1,60,000

(-) Utilised for N = ₹1,00,000

Balance Available hours = **₹ 60,000**

No. of units of M = 60,000 / 2 = 30,000 units

(iii) Computation of Selling Price of product C:

Out of products M & N is less profitable and hence can be replaced by c.

Variable Cost ₹21

FC ₹60,000

Machine hours released = 60,000 hrs.

No. of units of C = 60,000 / 1.5 = 40,000 units

In order to get the profit as above, the contribution to be recovered is as follows:

	₹
Total Contribution	21,10,000
(+) Fixed Cost (addnl.)	60,000
(+) Return on capital employed (@ 15% of 2,00,000)	30,000
Total required contribution	22,00,000
(-) Recovered from Q	16,00,000
	6,00,000

C per unit = 6,00,000/40,000 = ₹15

(+) variable cost = ₹21

Selling Price ₹36

23. (a) To produce 1,000 units of product X, the standard materials input is 1,200 units at a standard price of ₹6 per unit. The standard allows for rejects at the rate of 25% of input; it is estimated that one-third of total rejects can be reworked at an additional standard cost of ₹2 per unit. Scrapped units can be sold for Re. 0.50p each.

During the period just ended, 19,500 units of X were produced. 24,000 units of material were issued to production, at the cost of ₹6 per unit; 7,000 units were rejected on initial inspection and of these, 2,500 were reworked, at a cost of ₹5,100. The remainder were sold as scrap for Re.0.50 per unit.

Calculate the relevant variances.

Answer:

The standard cost of product X is as follows:

		Units	Price (₹)	Cost (₹)
Material		1,200	6	7,200
Rejection	(25% of 1,200)	300		
		900		
Reworked	(1/3 × 25% × 1,200)	100	2	200
		1,000		7,400
Scrapped proceeds from 200 units i.e.	(200 ×0.50)			(100)

Net processing cost		1,000		7,300
The standard yield for the process is 5/6 of input				
Material cost variance is:				
Material		24,000	6	1,44,000
Rejection		7,000		
		1 7,000		
Reworked		2,500		5,100
		19,500		1,49,100
Less: Scraped proceeds (4,500 * Re. 0.50)				(2,250)
Actual cost		19,500		1,46,850

In this situation material cost variance is called "Quality cost variances" which comprise of material usage variance, scrap variance and rework cost variance.

M_1	Actual cost of material		1,46,850
M_2	Actual material cost	(19,500 × 7.3)	1,42,350

Material Quality variance=M_1 - M_2=₹1,46,850- ₹1,42,350=4,500 (A)

For material usage variance

(1) Actual quantity used at standard rate	24,000 ×₹6	₹1,44,000
(2) Standard quantity for output of 19,500 at standard rate	(19,500 × *6/5)* × ₹6	₹1 ,40,400
Material usage variance	₹1,44,000 - ₹1,40,400	₹3,600 (A)

For Scrap variance

(1) Actual Scrap at actual disposal value	4,500 × Re. 0.50	₹2,250
(2) Scrap value as per standard	19,500 × (100 ÷1,000)	1,950
Scrap variance	₹2,250 - ₹1,950	₹300 (F)

For Rework cost variance

(1) Actual rework cost		₹5,100
(2) Standard rework cost	19,500 × (200 ÷1,000)	₹3,900
Rework cost variance	₹5,100 – ₹3,900	₹ 1,200 (A)

The three variances should total back to quality cost variance i.e.,

Quality Cost variance= Material usage variance + Scrap variance + Rework cost variance
= 3,600 (A)+ 300 (F) + 1,200 (A) = 4,500 (A)

23. (b) Discuss the advantages & disadvantages of Responsibility Accounting.

Answer:

Advantage of responsibility Accounting:

The following advantages can be expected from responsibility accounting system:

(a) Allocation is made of all the activities of the organization, all the items of income and expenditure including capital expenditure to the well defined responsibility centers. Profit of each responsibility center is also identified. It should be understood by the

manager of the centre what has to be performed by him with what resources and in what time period. He gets the things done by making his own way without any interference. Thus much importance is given to human resources.

(b) The managers of responsibility centers worked independently which helps in achieving the ultimate goal.

(c) There is a relationship between efforts and achievement, thereby, loopholes, if any, in the operations gets easily detected.

(d) The overall goals of the organization and individual goals of responsibility centers are communicated to all so that by keeping a view on that, guidance can be given to the managers in their respective centers of the operations.

(e) Among the managers and their subordinates, cost-consciousness gets generated which results in automatically reducing cost.

Disadvantages of responsibility Accounting:

The following are the apprehended disadvantages of responsibility accounting:

(a) Solely upon the sincere efforts put in by the managers of the responsibility centers, the success of the responsibility accounting depends. Whether the system will succeed or not shall be decided by the personal factors of the managers.

(b) The place of good management cannot be ever taken by the responsibility accounting because the latter is only a tool in the hands of the former.

(c) Although theoretically, the manager of each organization is given free hand, in actual practice, neglect of employees' reaction, interference etc. is often noticed. Thus, in the way of proper discharging of responsibility, this stands.

(d) In modern organizations, among the departments, inter-relations & inter-departments are mostly observed. So it becomes almost impossible to demarcate responsibility centers by clear-cut outlines.

(e) Manager of the responsibility center prepares & communicates performance reports. The desired result will not be achieved by the responsibility accounting system, if there is any shortcoming in the report.

24. (a) Explain the stages or steps of Activity based Costing.

Answer:

The different steps or stages in ABC system can be given as follows:

1. Identify the chosen cost objects

The cost objects of any organization are the products or services and the goal is to first calculate the total cost of manufacturing and distributing these products and their unit cost.

2. Identify the different activities within the organization

After the identification of cost objects, the main activities, which are being performed in the organization, have to be identified. Usually the number of activities over cost centers in ABC will be much more as compared to traditional overhead system. The exact number will depend on how the management subdivides the organizations activities.

3. Identifying the direct cost of products

The direct cost of products or objects may comprise direct material cost, direct labour cost and direct expenses. Classification of as many of the total costs as direct costs as is economically feasible should be made. It reduces the amount of costs classified as indirect.

4. **Relating the overhead to the activities**
After identifying the organizations activities, the various items of overhead are related to activities both support and primary, that caused them. As a result of relating the items of overhead to various activities, cost pool or cost buckets are created.
5. **Spreading the support activities across the primary activities**
The spreading of support activities (i.e., activities which support or assist manufacturing) across the primary activities (correlated to the number of units produced) is done on some suitable base which reflects the use of support activity. The base is the cost driver and is measured of how the support activities are used.
6. **Determining the activity cost drivers**
The determination of the activity cost drivers is done in order to relate the overhead collected in cost pools to the cost objects of products. It is done on the basis of the factor that drives the consumption of the activities.
7. **Calculating the activity cost driver rates**
The activity cost rates for each activity are calculated in the way in which overhead absorption rates would be calculated under the traditional system. It can be presented as follows:
Activity cost driver rate = Total cost of activity/Activity driver
These activity cost driver rates are to be used for ascertaining the amount of overhead chargeable to various cost objects or products.
8. **Computing the total cost of products or cost objects**
The total costs of the products shall be computed by adding all direct and indirect costs assigned to them. The amount of overhead chargeable to a product or cost object shall be calculated by multiplying the activity cost drivers rates by different amounts of each activity that each product or other cost object consumes.

24. (b) Family Store wants information about the profitability of individual product lines - Soft Drinks, Fresh Produce and Packaged food. Family Store provides the following data for a financial year for each product line.

Particulars	Soft Drinks	Fresh Produce	Packaged Food
Revenues	**₹7,93,500**	**₹21,00,600**	**₹12,09,900**
Cost of Goods Sold	**₹6,00,000**	**₹15,00,000**	**₹9,00,000**
Cost of Bottles returned	**₹10,000**	**NIL**	**NIL**
Number of purchase orders placed	**360**	**840**	**360**
Number of deliveries received	**300**	**2,190**	**660**
Hours of shelf-stocking time	**540**	**5,400**	**2,700**
Items sold	**1,26,000**	**11,04,000**	**3,06,000**

Family Store also provides the following information for the financial year.

Activity	Description of Activity	Total Cost	Cost Allocation Base
Bottles returns	**Returning of empty bottles to store**	**₹12,000**	**Direct tracing to soft-drink line**

Ordering	**Placing of orders for purchases**	**₹1,56,000**	**1,560 purchase orders**
Delivery	**Physical delivery and receipt of goods**	**₹2,52,000**	**3,150 deliveries**
Shelf-stocking	**Stocking of goods on store shelves and on-going restocking**	**₹1,72,800**	**8,640 hours of shelf-stocking time**
Customer Support	**Assistance provided to customers including check-out**	**₹3,07,200**	**15,36,000 items sold**

Required:

1. **Family Store currently allocates all support cost (all costs other than cost of goods sold) to product lines on the basis of cost of goods sold of each product line. Calculate the operating income and operating income as a % of revenues for each product line.**
2. **If Family Store allocates support cost (all costs other than cost of goods sold) to product lines using an activity based costing system, calculate the operating income and operating income as a % of revenues for each product line.**

Answer:

1. Allocation based on Cost of Goods Sold

- Total Support Costs = ₹12,000 + ₹1,56,000 + ₹2,52,000 + ₹ 1,72,800 + ₹3,07,200 = ₹9,00,000
- Total Cost of Goods Sold = ₹6,00,000 + ₹ 15,00,000 + ₹9,00,000 = ₹30,00,000
- Hence, Ratio of Support Costs to COGS = ₹9,00,000 ÷ ₹30,00,000 = 30%
- The Product Profit Statement is as under:

Particulars	Soft Drinks	Fresh Produce	Packaged Food	Total
Revenues	₹7,93,500	₹21,00,600	₹ 12,09,900	₹41,04,000
Less: Cost of Goods Sold	₹6,00,000	₹ 15,00,000	₹ 9,00,000	₹30,00,000
Gross Margin	₹ 1,93,500	₹ 6,00,600	₹ 3,09,900	₹ 11,04,000
Less: Support Costs at 30%	₹ 1,80,000	₹ 4,50,000	₹ 2,70,000	₹ 9,00,000
Net Profit	**₹ 13,500**	**₹ 1,50,600**	**₹ 39,900**	**₹ 2,04,000**

Note: Cost of Bottles returned is presumed to have been already adjusted.

2. Allocation based on Activity based Costing

(a) Computation of Activity based Cost Driver rates

Activity	Total Cost	Cost Allocation Base	ABC Rate
Bottles returns	₹ 12,000	Direct tracing to soft-drink line	Directly allocated
Ordering	₹1,56,000	1,560 purchase orders	₹100 per purchase order
Delivery	₹2,52,000	3,150 deliveries	₹80 per delivery
Shelf-stocking	₹ 1,72,800	8,640 hours of shelf-stocking time	₹20 per hour
Customer Support	₹3,07,200	15,36,000 items sold	₹0.20 per item sold

(b) The Product Profit statement is as under –

Particulars	Soft Drinks	Fresh Produce	Packaged Food	Total
Revenues	₹7,93,500	₹21,00,600	₹ 12,09,900	₹41,04,000
Less: Cost of Goods Sold	₹6,00,000	₹ 15,00,000	₹ 9,00,000	₹30,00,000

Gross Margin	₹ 1,93,500	₹ 6,00,600	₹ 3,09,900	₹ 11,04,000
Less: Activity Cost				
Bottles Returns	₹ 12,000	Nil	Nil	₹ 12,000
Ordering at ₹100 per order	₹ 36,000	₹84,000	₹ 36,000	₹ 1,56,000
Delivery at ₹80 per delivery	₹ 24,000	₹ 1,75,200	₹ 52,800	₹ 2,52,000
Shelf-stocking at ₹20 ph	₹ 10,800	₹ 1,08,000	₹ 54,000	₹ 1,72,800
Customer support at 0.20 pu	₹ 25,200	₹ 2,20,800	₹ 61,200	₹ 3,07,200
Total Support Costs	₹ 1,08,000	₹ 5,88,000	₹ 2,04,000	₹ 9,00,000
Net Profit	**₹ 85,500**	**₹ 12,600**	**₹ 1,05,900**	**₹ 2,04,000**

Note: Cost of Bottles returned is presumed to have been already adjusted.

25. Janta Video Company sells package of blank Video tapes to its customers. It purchases video tapes from Harsh Tape Company at ₹150 per packet. Harsh Tape Company pays all freight to Janta Video Company. No incoming inspection is necessary because Harsh Tape Company has a superb reputation for delivery of quality merchandise. Annual demand of Janta Video Company is 15,600 packages. Janta Video Company requires 10% annual return on its investment. The purchase order Lead time is 2 weeks. The purchase order is passed through internet and it costs ₹20 per order. The relevant insurance, material handling etc. is ₹10 per package per year.

Janta Video has to decide whether or not to shift to JIT purchasing. Harsh Tape Company agrees to deliver 100 packages of Video tapes 156 times per year (6 times every 2 weeks) instead of existing delivery system of 1,200 packages 13 times a year, with additional amount of ₹0.05 per package. Janta Video Company incurs no stock out under its current purchasing policy. It is estimated that Janta Video Company will incur stock out cost on 50 video tape packages under a JIT purchasing policy. In the event of stock out, Janta video company has to rush order tape packages, which costs ₹8 per package. Comment whether Janta Video Company should implement JIT purchasing system.

Ram Co. also supplies video tapes. It agrees to supply at ₹145 per package under JIT delivery system. If video tape is purchased from Ram Co. relevant carrying cost would be ₹9 per package against ₹10 in case of purchasing from Harsh Tape Company. However Ram Co. does not enjoy a sterling reputation for quality, Janta Video Company anticipates the following negative aspects of purchasing tapes from Ram Co.

(a) Incurring additional inspection cost of ₹0.05 per package.

(b) Average stock out of 360 tape packages per year would occur, largely resulting from late deliveries. Ram Co. cannot rush order at short notice. Janta Video Company anticipates lost contribution margin per package of ₹10 from stock out.

(c) Customers would likely return 2% of all packages due to poor quality of the tape and to handle this return, an additional cost of ₹25 per package would be incurred.

Comment on whether Janta Video Company can place an order with Ram Co.

Answer:

(1) **Computation of Carrying Costs**

Carrying Cost = interest + Others (Insurance, Material Handling, etc.), which is calculated as under:-

Particulars	Current Policy	JIT with Harsh Tape Co.	JIT with Ram Co.
(i) Interest cost	₹150 ×10% = ₹15.00	₹150.05 × 10% = ₹15.005	₹145 × 10% = ₹14.50

(ii) Others	₹10.00	₹10	₹9.00
(a) Total carrying cost p.u. p.a.	₹25.00	₹25.005	₹23.50
(b) Average Inventory	1/2 ×1200 = 600 units	1/2 × 100 = 50 units	1/2 ×100 = 50 units
(c) Carrying Costs p.a. (a × b)	₹15,000	₹1,250	₹1,175

(2) **Comparative Statement of Relevant Annual Costs of Purchasing Policies**

Particulars	Current policy	JIT with Harsh Tape Co.	JIT with Ram Co.
(a) Cost of tapes purchased	15,600 tapes × ₹150 = ₹23,40,000	15,600 tapes × ₹150.05 =23,40,780	15,600 tapes × ₹45 = ₹22,62,000
(b) Ordering or buying costs	13 orders × ₹20= ₹260	156 orders × ₹20 = ₹3,120	156orders × ₹20 = ₹3,120
(c) Carrying costs [As calculated in (1)]	₹15,000	₹1,250	₹1,175
(d) Stock out costs	Nil	50 units × ₹8 = ₹400	360 units × ₹10 = ₹3,600
(e) Inspection Costs	Nil	Nil	15,600 units ×0.05 = ₹780
(f) Customer Return costs	Nil	Nil	15,600 units × 2% × ₹25 = ₹7,800
Total Relevant costs	**₹23,55,260**	**₹23,45,550**	**₹22,78,475**

Conclusions:

(1) Compared to present system, JIT with Harsh Tape Co. will result in cost saving of ₹23,55,260 – ₹23,45,550 = ₹9,710. Hence, JIT system may be implemented.
(2) Comparing present system, JIT with Harsh Tape Co and Ram Co., JIT with Ram Co. results in the least total cost. Hence, the packages may be bought from Ram Co.

26. (a)

A Company using a continuous manufacturing operation achieves an output of 3 Kg per hour. The selling price is ₹450 per Kg. The raw material cost is ₹125 per Kg of output and the direct labour and variable overheads amount to ₹316 per Kg of output. The Company has provided an expenditure of ₹640 on maintenance and ₹6,400 on breakdown repairs per month in its budget. Breakdowns averaging 300 hours per month occur due to mechanical faults. These could be reduced or eliminated, if additional maintenance on the following scale were undertaken:

Breakdown hours	**0**	**60**	**120**	**180**	**240**	**300**
Maintenance Costs (₹)	**20,480**	**10,240**	**5,120**	**2,560**	**1,280**	**640**
Repair costs (₹)	**0**	**1,920**	**2,560**	**3,840**	**5,120**	**6,400**

Using the incremental cost and incremental revenue concept, you are required to –

- **Determine the optimum level upto which breakdown can be reduced to increase production.**
- **Calculate the additional profits obtainable at that level as compared to the present situation.**

Answer:

1. **Contribution per Hour:**

Contribution per Kg. = Selling price per Kg - Variable cost per kg
= ₹450 - [₹125 (Material cost) + ₹316 (Labour & OH)] = ₹9

Contribution per hour = 3 Kg. x Contribution per kg = 3 Kgs × ₹9 Per Kg. = ₹27

2. Optimum level upto which breakdown can be reduced to increase production:

Break Down Hours	300	240	180	120	60	0
Saving in Hours	0	60	120	180	240	300
Contribution on Hours saved @ ₹27 per hour	-	1,620	3,240	4,860	6,480	8,100
Incremental Contribution (A)	-	1,620	1,620	1,620	1,620	1,620
Maintenance Costs	640	1,280	2,560	5,120	10,240	20,480
Repair costs	6,400	5,120	3,840	2,560	1,920	-
Total Costs	7,040	6,400	6,400	7,680	12,160	20,480
Incremental Costs (B)	-	(640)	NIL	1,280	4,480	8,320
Net Incremental Contribution (A) – (B)	-	**2,260**	**1,620**	**340**	**(2,860)**	**(6,700)**

Therefore, Optimal level upto which breakdown can be reduced to increase production: **Saving of 180 hours and Breakdown of 120 Hours.**

3. Additional profit at Optimum Level Compared to Present Position:
= ₹340 + ₹1,620 + ₹2,260 = ₹4,220

26. (b) Describe the principles of TQM.

Answer:

The following principles of TQM which are enlisted below:

- Clear exposition of the benefits of a project.
- Total Employee involvement (TEI).
- Process measurement.
- Involvement of all customers and contributors.
- Elimination of irrelevant data.
- Understanding the needs of the whole process.
- Use of graphical and pictorial techniques to achieve understanding.
- Established of performance specifications and targets.
- Use of errors to prompt continuous improvement
- Use of statistics to tell people how well they are doing.

26. (c) BENT Ltd manufactures and sells 20,000 copiers each year. The Variable and Fixed Costs of reworking and repairing copiers are as follows (in ₹):

Particulars	Variable costs	Fixed Costs	Total Costs
Rework costs per copier	**1,600**	**2,400**	**4,000**
Repair cost per copier:			
Customer-Support Cost	**80**	**120**	**200**
Transportation Cost for repair parts	**180**	**60**	**240**
Warranty Repair Costs	**1,800**	**2,600**	**4,400**

BENT's engineers are currently working to solve the problem of copies being too light or too dark. They propose changing the lens of the copier. The new lens will cost ₹50 more than the

old lens. Each copier uses one lens, BENT uses 1-year time horizon for this decision, since it plans to introduce a new copier at the end of the year, BENT believes that even if it improves quality, it will not be able to save any of the fixed costs of rework or repair.

However, by changing the lens, BENT expects that it will (1) rework 300 fewer copiers, (2) repair 200 fewer copiers, and (3) sell 100 additional copiers. BENT's unit contribution margin on its existing copier is ₹6000.

Required:

1. **What are the additional costs of choosing the new lens?**
2. **What are the additional benefits of choosing the new lens?**
3. **Should BENT use the new lens?**

Answer:

1. Additional costs of choosing the new lens = ₹50 × 20,000 copiers = ₹10,00,000

2. Additional benefits of choosing the new lens = Variable costs Avoided + Additional Contribution

Savings in Rework Costs	= 300 copiers × ₹ 1,600	=₹ 4,80,000
Savings in Repair Costs	= 200 × (80 + 180 + 1,800)	= ₹ 4,12,000
Additional Contribution	= 100 copiers × ₹5,950	= ₹ 5,95,000
Hence, Total Additional Benefit	= Total of above	**= ₹14,87,000**

3. Since there is a net benefit of ₹14,87,000 - ₹ 10,00,000 = ₹4,87,000, BENT may use the new lens. **Note:** Contribution per copier = Existing Contribution - Cost of New Lens = ₹6,000 - ₹50 = ₹5,950.

27. (a) Write a note on Value Engineering.

Answer:

Value Engineering is an organized/systematic approach directed at analyzing the function of systems, equipment, facilities, services, and supplies for the purpose of achieving their essential functions at the lowest life-cycle cost consistent with required performance, reliability, quality, and safety. Society of Japanese Value Engineering defines VE as:

"A systematic approach to analyzing functional requirements of products or services for the purposes of achieving the essential functions at the lowest total cost".

Value Engineering is an effective problem solving technique. Value engineering is essentially a process which uses function analysis, team- work and creativity to improve value. Value Engineering is not just "good engineering." It is not a suggestion program and it is not routine project or plan review. It is not typical cost reduction in that it doesn't "cheapen" the product or service, nor does it "cut corners."

Value Engineering simply answers the question "what else will accomplish the purpose of the product, service, or process we are studying?". VE technique is applicable to all type of sectors. Initially, VE technique was introduced in manufacturing industries. This technique is then expanded to all type of business or economic sector, which includes construction, service, government, agriculture, education and healthcare.

27. (b) The output of a production line is checked by an inspector for one or more of three different types of defects, called defects A, B and C. If defect A occurs, the item is scrapped. If defect B or C occurs, the item must be reworked. The time required to rework a B defect is 15 minutes and the time required to rework a C defect is 30 minutes. The probabilities of an A, B and C defects are 0.15, 0.20 and 0.10 respectively. For ten items coming off the assembly line, (a) determine the number of items without any defects, (b) the number scrapped and (c) the total minutes of rework time. Use the following random numbers –

Defect A	**48**	**55**	**91**	**40**	**93**	**01**	**83**	**63**	**47**	**52**
Defect B	**47**	**36**	**57**	**04**	**79**	**55**	**10**	**13**	**57**	**09**
Defect C	**82**	**95**	**18**	**96**	**20**	**84**	**56**	**11**	**52**	**03**

Answer:

1. Random Numbers Allocation

Defect A			Defect B			Defect C		
Occurs	Prob.	R. Nos	Occurs	Prob.	R. Nos	Occurs	Prob.	R. Nos
Yes	0.15	00-14	Yes	0.20	00-19	Yes	0.10	00-09
No	0.85	15-99	No	0.80	20-99	No	0.90	10-99

2. Simulation Table

Item No.	**R. No. for Defect A**	**R. No. for Defect B**	**R. No. for Defect C**	**Defect occurs in**	**Rework time in min.**	**Remarks**
1	48	47	82	None	Nil	Nil
2	55	36	95	None	Nil	Nil
3	91	57	18	None	Nil	Nil
4	40	04	96	B	15	Nil
5	93	79	20	None	Nil	Nil
6	01	55	84	A	Nil	Scrap
7	83	10	56	B	15	Nil
8	63	13	11	B	15	Nil
9	47	57	52	None	Nil	Nil
10	52	09	03	B,C	15 + 30 = 45	Nil

Result:

Number of Defectives = 5 units (out of 10), No. of defectives reworked = 4 units (out of 5)

Total Rework Time = 90 minutes (for 4 items out of 10) Scraped Units = 1 unit (out of 10)

28. An electronics firm which has developed a new type of fire-alarm system has been asked to quote for a prospective contract. The customer requires separate price quotations for each of the following possible orders –

Order	**First**	**Second**	**Third**
Number of fire- alarm systems	**100**	**60**	**40**

The Firm estimates the following cost per unit for the first order -

Direct Materials	**₹500**
Direct Labour: Department A (Highly automatic)	**20 hours at ₹10 per hour**
Department B (Skilled Labour)	**40 hours at ₹15 per hour**
Variable Overheads	**20% of Direct Labour**

Fixed Overheads absorbed:	Department A	₹8 per hour
	Department B	₹5 per hour

Determine a price per unit for each of the three orders, assuming the Firm uses a mark-up of 25% on total costs and allows for an 80% Learning Curve. Extract from 80% learning Curve table –

X	1.0	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
Y%	100.0	91.7	89.5	87.6	86.1	84.4	83.0	81.0	80.0

X represents the cumulative total volume produced to date expressed as a multiple of the initial order.
Y is the Learning Curve Factor, for a given X value, expressed as a percentage of the cost of the initial order.

Answer:

1. **Computation of Selling Price per unit of First Order (100 units)**

Particulars	Computation	₹
Direct Materials	100 units × ₹500 per unit	50,000
Direct Labour: Department A	100 units × 20 hours x ₹ 10 per hour	20,000
Department B	100 units × 40 hours × ₹15 per hour	60,000
Variable OH	20% of (20,000 + 60,000)	16,000
Fixed OH: Department A	100 units × 20 hours × ₹8 per hour	16,000
Department B	100 units × 40 hours × ₹5 per hour	20,000
Total Cost		1,82,000
Add: Profit at 25% of cost	1,82,000 × 25%	45,500
Sale Value		2,27,500
Sale Price per unit	₹2,27,500 ÷ 100 units	**₹2,275**

2. **Computation of Selling Price per unit of Second Order (60 units)**

Department A is highly automatic and there is no learning effect in respect of machine / mechanical operations. Hence, Learning Effect is applicable for Department B only, where skilled labour is involved.

Learning Effect: Since Second Order is for 60 units, the relevant "X" factor is 1.6 (cumulative quantity = 160 units) and "Y" factor is 86.1%. Hence, the additional time taken for the Second Order is determined as under –

Total Time for First and Second Order	= (40 hours p. u. × 86.1%) × 160 units	= 5,510.40 hours.
Less: Total Time for First Order only	= (40 hours p. u. × 100 units)	= 4,000.00 hours.
Additional Time for Second Order		= 1,510.40 hours.

The Incremental Cost of the Second order will be **–**

Particulars	Computation	₹
Direct Materials	60 units × ₹500 per unit	30,000.00
Direct Labour: Department A	60 units × 20 hours × ₹ 10 per hour	12,000.00
Department B	1,510.40 units × ₹15 per hour	22,656.00

Variable OH	20% of (12,000 + 22,656)	6,931.20
Fixed OH: Department A	60 units × 20 hours × ₹8 per hour	9,600.00
Department B	1,510.40 hours × ₹5 per hour	7,552.00
Total Cost		88,739.20
Add: Profit at 25% of cost	88,739.20 × 25%	22,184.80
Sale Value		1,10,924.00
Sale Price per unit	₹1,10,924.00 ÷ 60 units	**₹1,848.73**

3. Computation of Selling price per unit of Second Order (40 units)

The Incremental Cost of the Third Order will be - (See below for Learning Effect)

Particulars	Computation	₹
Direct Materials	40 units × ₹500 per unit	20,000.00
Direct Labour: Department A	40 units × 20 hours × ₹ 10 per hour	8,000.00
Department B	889.60 units × ₹15 per hour	13,344.00
Variable OH	20% of (8,000 + 13,344)	4,268.80
Fixed OH: Department A	40 units × 20 hours × ₹8 per hour	6,400.00
Department B	889.60 hours × ₹5 per hour	4,448.00
Total Cost		56,460.80
Add: Profit at 25% of cost	56,460.80 × 25%	14,115.20
Sale Value		70,576.00
Sale Price per unit	₹70,576.00 ÷ 60 units	**₹1,176.27**

Learning Effect: Since Third Order is for 40 units, the relevant "X" factor is 2.0 (cumulative quantity = 200 units) and "Y" factor is 80%. Hence, the additional time taken for the Third Order is determined as under –

Cumulative time up to Third Order	= (40 hours p. u. × 80%) × 200 units	= 6,400.00 hours.
Less: Cumulative time upto Second Order	= (as calculated earlier)	= 5,510.40 hours.
Additional Time for Third Order		= 889.60 hours.

29. (a)

A salesman has to visit five cities A,B,C,D and E. The inter-city distances are tabulated below. Note the distance between two cities need not be same both ways.

From / To	A	B	C	D	E
A	-	12	24	25	15
B	6	-	16	18	7
C	10	11	-	18	12
D	14	17	22	-	16
E	12	13	23	25	-

Note further that the distances are in km.

Required:

If the salesman starts from city A and has to come back to city A, which route would you advise him to take that total distance traveled by him is minimised?

Answer:

Profit matrix

-	12	24	25	15
6	-	16	18	7
10	11	-	18	12
14	17	22	-	16
12	13	23	25	-

Row Operation

-	0	12	13	3
0	-	10	12	1
0	1	-	8	2
0	3	8	-	2
0	1	11	13	-

Column Operation

-	[0]	4	5	2
0	-	2	4	[0]
0	1	-	[0]	1
0	3	[0]	-	1
[0]	1	3	5	-

A → B → E → D → C → A
12 + 12 + 7 + 18 + 22 = 71 kms
Optimum distance 71 kms.

29. (b) Target rate pricing - A small scale unit has a capacity to make 10,000 units of a product. The actual cost in 2014 was as given below:

Direct material	**₹50 per unit**
Direct labour	**₹12 per unit**
Variable overheads	**₹4.5 per unit**
Fixed factory overheads	**₹25,000**

The company's budget for the next year was to be prepared with the following data:

(i) A wage agreement is entered into where the wage will be linked to an index. The labour rate presently comprises of 50% basic pay and balance as D.A. The formula is to link the existing D.A. to price index.

(ii) The sale is estimated to touch 80% capacity.

(iii) The average fixed assets(net) will be ₹ 2,25,000 and working capital would be 25% of value of sales.

(iv) Company expects a return of 15% on capital employed.

(v) The price indices for the base period 2014 and for 2015 are as follows:

	2014	2015
Cost of living index for D. A.	**420**	**525**
Copper	**450**	**600**
Aluminium	**400**	**480**

The material used is 60% copper and 40% aluminium.

Determine the price at which product is to be sold in 2015.

Answer:

Adjustment to be effected in 2015 for change in price indices over the year 2014.

(a) Copper = (600/450) × 100 = 133.33%
(b) Aluminum = (480/400) × 100 = 120%
(c) Cost of living index for D. A = (525/420) × 100 = 125%

Statement showing cost per unit

Particulars	Actual cost	Budgeted cost
Variable costs:		
Direct material		
Copper 60%	30.00	40.00
Aluminium 40%	20.00	24.00
Direct Labour:		
Basic 50%	6.00	6.00
D. A. 50%	6.00	7.50
Variable overheads	4.50	4.50
Total variable costs per unit	66.50	82.00
Fixed factory overhead (₹25,000/8,000)		3.125
Total costs of production		85.125

The estimate sale will be 8,000 units. Average net fixed assets employed will be ₹ 2,25,000 and working capital would be 25% of value of sales. 15% return on capital employed is expected. Suppose Sale value per unit = x

Total working capital (25% of sale value)	= (8,000 × X) × 25%
Working capital per unit	= 2,000x/8,000
15% return on working capital	= (2,000x/8,000) × 15%
	= ₹0.0375x
15% return on net fixed assets	= (2,25,000/8,000) × 15%
	= ₹4.219
Total return	= ₹4.219 + 0.0375x
Price	= Cost + Return
x	= ₹85.125 + ₹4.219 + 0.0375x
Or 0.962 x	= ₹89.344
x	= 92.87.

Therefore, during 2015, the product should be sold at ₹ 92.87 per unit.
Return = ₹92.870 – ₹85.125 = ₹7.745 say ₹7.75

Notes:
(1) Selling and administration overheads have not been indicated in the question.
(2) The amount of depreciation has also not been indicated. Depreciation is excluded from cost for computation of working capital.

30. (a). Outline the impact of VCA on Organisational and Managerial Accounting. Or Explain the role of the Management Accountant in VCA.

Answer:

Management Accountants should recognize that the traditional, functional, internally oriented information system is inadequate for the Firm engaged in global competition. In order to facilitate Value Chain Analysis, there should be a change in focus for Management Accounting. The Management Accountant's role will be significant in the following areas -

1. **Need for education, training and awareness:** Management Accountants should bring the importance of customer value to the forefront of Management's strategic thinking. They should take the initiative to bring the Value Chain message to major players in the Firm through seminars, articles, Value Chain examples and Company-specific applications.
2. **Exploring for information:** VCA requires expertise in internal operations and information and also demands a great deal of external information. Management Accountants must seek relevant financial and non-financial information from sources outside the Firm.
3. **Creativity:** Management Accountants must integrate databases and potential sources of timely information on competitive forces confronting the business. This calls for innovation and creativity in gathering and analysing information for management decisions.
4. **System design**: Designing internal and external information systems to assist managers in planning, monitoring and improving value-creating processes is another challenge facing Management Accountants.
5. **Cooperation:** Management Accountants should solicit support from all senior managers for allocating resources to develop and improve Value Chain-oriented Information Systems. The Management Accountant should ensure that the Top Management is committed to Value Chain Analysis and the organisational changes necessary for its successful implementation.

30. (b) Discuss the pitfalls of Business Process Outsourcing.

Answer:

Although the benefits can be extensive, there are many risks associated with business process outsourcing.

- Risk is seen as the biggest potential issue with BPO. Risk can be reflected in security issues in relation to sensitive data and privacy, risk of losing independence and potentially losing control.
- Loss of flexibility in reacting to changes in business conditions. It is important that communications continue throughout the life cycle of any BPO agreement. This means informing the BPO provider of any change of strategy or conditions that might impact their ability to function properly.

- Potential threat to security or access to confidential information. There are many examples where confidential data has gone 'astray' or been sold. Processes and procedures must be put in place to ensure that only certain personnel can access specific information, especially with payroll systems, HR and client records.
- Staff turnover. It is expected that within call centres, for example there may be a fairly high turnover of staff, typically some 30%, but typically within BPO companies this can be up to 50%. This can be critical because losing key people can have a serious impact operationally, e.g. having to retrain people on a particular system or product within a call centre if people are leaving. Also, if absenteeism is high within a call centre environment, this will naturally badly impact customer service and call waiting times.
- Cultural differences. If a BPO company's staff is based abroad, for example in India, there can be potential problems. This can be anything from communications difficulties to not totally understanding what perhaps a British customer expects. Many BPO off-shoring companies train their staff in order to resolve this.
- Job losses. People often believe that BPO only leads to staff losing their jobs. This could be true to a certain extent, but while there might be a perceived threat to staff's finances, generally the roles that are outsourced are those which typically a company can have difficulty fulfilling anyhow.
- Potential loss of managerial control. Naturally it can be easier to manage your own personnel than relying upon a third party, but again, this can be resolved with good communication and regular update meetings.
- BPO can badly impact customer relationships as it may eliminate direct communication between a company and its' customers.
- Failure to meet service levels. This can be caused by changing needs, unclear objectives or through incompetence.

30. (c) Quarterly sales in (₹ '000) of a company is given below:

Quarters	**Years**		
	2013	**2014**	**2015**
I	**10.80**	**11.10**	**12.60**
II	**7.50**	**10.20**	**9.00**
III	**11.70**	**11.10**	**9.30**
IV	**13.80**	**13.50**	**11.40**

Calculate the seasonal indices.

As no appreciable trend is noticed in the given data method of quarterly averages to be used here.

Answer:

Calculation for seasonal Indices

Quarter	**Year**			**Total**	**Average**
	2013	**2014**	**2015**		
I	10.80	11.10	12.60	34.50	11.50
II	7.50	10.20	9.00	26.70	8.90
III	11.70	11.10	9.30	32.10	10.70
IV	13.80	13.50	11.40	38.70	12.90
Total					44

Average of averages $= \frac{44}{4} = 11$

Seasonal Index for **Quarter I** $= \frac{11.50}{11} \times 100 = 104.6$

Seasonal Index for **Quarter II** $= \frac{8.90}{11} \times 100 = 80.9$

Seasonal Index for **Quarter III** $= \frac{10.70}{11} \times 100 = 97.2$

Seasonal Index for **Quarter IV** $= \frac{12.90}{11} \times 100 = 117.3$

Note. Since the total of Seasonal Index for the 4 quarters is 400, no adjustment is necessary.