Paper 15 - Business Strategy and Strategic Cost Management

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

1. Dr. Sukumar inherited his father's Dey's Lab in Delhi in 1995. Till 2002, he owned 4 labs in the National Capital Region (NCR). His ambition was to turn it into a National chain. The number increased to 7 in 2003 across the country, including the acquisition of Platinum lab in Mumbai. The number is likely to go to 50 within 2-3 years from 21 at present. Infusion of ₹ 28 crores for a 26% stake by Pharma Capital has its growth strategy.

The lab with a revenue of ₹ 75 crores is among top three Pathological labs in India with Atlantic (₹ 77 crores) and Pacific (₹ 55 crores). Yet its market share is only 2% of ₹ 3,500 crores market. The top 3 firms command only 6% as against 40-45% by their counterparts in the USA.

There are about 20,000 to 1,00,000 stand alone labs engaged in routine pathological business in India, with no system of mandatory licensing and registration. That is why Dr. Sukumar has not gone for acquisition or joint ventures. He does not find many existing laboratories meeting quality standards. His six labs have been accredited nationally whereon many large hospitals have not thought of accreditation; The College of American pathologists accreditation of Dey's lab would help it to reach clients outside India.

In Dey's Lab, the bio-chemistry and blood testing equipments are sanitised every day. The bar coding and automated registration of patients do not allow any identity mix-ups. Even routine tests are conducted with highly sophisticated systems. Technical expertise enables them to carry out 1650 variety of tests. Same day reports are available for samples reaching by 3 p.m. and by 7 a.m. next day for samples from 500 collection centres located across the country. Their technicians work round the clock, unlike competitors. Home services for collection and reporting is also available.

There is a huge unutilised capacity. Now it is trying to top other segments. 20% of its total business comes through its main laboratory which acts as a reference lab for many leading hospitals. New mega labs are being built to Encash preclinical and multi-centre clinical trials within India and provide postgraduate training to the pathologists.
Required
(i) What do you understand by the term Vision? What is the difference between 'Vision' and 'Mission'? What vision Dr. Sukumar had at the time of inheritance of Dey's Lab? Has it been achieved? (2+2+2 =6)
(ii) For growth what business strategy has been adopted by Dr. Sukumar? (3)
(iii) What is the marketing strategy of Dr. Sukumar to overtake its competitors? (3)
(iv) In your opinion what could be the biggest weakness in Dr. Sukumar's business strategy? (3)

Answer.
(i) A Strategic vision is a road map of a company's future – providing specifics about technology and customer focus, the geographic and product markets to be pursued, the capabilities it plans to develop, and the kind of company that management is trying to create. A strategic vision thus points an organisation in a particular direction, charts a strategic path for it to follow in preparing for the future, and moulds organizational identity.
A company's Mission statement is typically focused on its present business scope – "who we are and what we do". Mission statements broadly describe an organisation's present capabilities, customer focus, activities, and business makeup. Mission is also an expression of the vision of the

corporation. To make the vision come alive and become relevant, it needs to be spelt out. It is through the mission that the firm spells out its vision.

Dr. Sukumar's vision at the initial stage was to turn his one pathological laboratory firm into a national chain of pathological laboratories. He is in the process of achieving the vision as a number of Labs have been opened and others are in pipeline. However, at the same time the market share is low when compared with the external benchmark from US market.

(ii) To a large extent Dr. Dey's Lab has opted the business strategy of internal growth rather than going in for acquisitions or joint ventures. The reason for such a strategy is that Dr. Sukumar does not find many existing laboratories meeting the quality standards. To fund its growth and raise funds it has also given a 26% stake to Pharma Capital.

(iii) Dr. Sukumar's marketing strategy is superior to its competitors. Over a period of time it is able to evolve itself as reference lab for many leading hospitals. This is a testimony of the level of confidence it enjoys among the medical professionals. It provides a high level of customer services because of the following:
Product mix: It possesses technical expertise to conduct 1650 variety of tests.
Quality: The laboratories use modern methods to conduct tests. Even routine tests are conducted with highly sophisticated procedures. Technology such as bar coding and automated registration of patients is also used. Thus there are no mistakes in the identity of samples. There is also daily sanitisation and validation of lab equipments.
Speed: Laboratories are working round-the-clock. Further, using modern systems the company is able to deliver test results faster.
Convenience: There are 500 collection centres for the laboratory, thereby the reach is more. Additionally, system of collection of samples from home also provide convenience to the patients and others.

(iv) A weakness is an inherent limitation or constraint of the organisation which creates strategic disadvantage to it. In the case it is given that Dr Sukumar has not gone for mergers and acquisition as he does not find many prospective laboratories meeting the quality standards. Thus its biggest weakness is its inability to capitalise the opportunities through mergers and acquisitions. Acquisitions and partnerships can help in leveraging the existing goodwill. Many of these labs must be enjoying a lot of goodwill in their region. In fact, a business in the medical field such as a pathological laboratory, trust and faith are important. On account of its size and available resources Dey's Lab could have easily acquired some of these labs and built upon their names. With resources it should be feasible to modernize them to make them compatible with the business ideology and quality systems of the Dey's Lab. However, it appears that the company lacked capability to modernise an existing laboratory.

2. BB Ltd., is a business organized as three divisions and head office. The divisions are based on market groupings, which are retail, wholesale and Government. The divisions do not trade with each other.

The main method of control of the divisions has been the requirement to earn a return on investment (ROI) of 15% p.a. The definition of return and capital employed is provided by head office, at the criterion ROI rate of 15%.

The recent experience of BB Ltd., is that the group as a whole has been able to earn the 15% but there have been wide variations between the results obtained by different division. This infringes

another group policy that forbids cross-subsidization, i.e. each and every division must earn the criterion ROI.

BB Ltd. is now considering divestment strategies and this could include the closure of one or more of its divisions.

The head office is aware that the Boston Product Market Portfolio Matrix (BPMPM) is widely used within the divisions in the formulation and review of marketing strategies. As it is so widely known within the group and is generally regarded by the divisions as being useful, the head office is considering employing this approach to assist in the divestment decision.

You are required to:
(i) Evaluate the use by BB Ltd. of the concept of ROI and its policy that forbids cross-subsidization. (5)
(ii) Describe the extent to which the BPMPM could be applied by BB Ltd. in its divestment decision. Evaluate the appropriateness of the use of the BPMPM for this purpose. (5)
(iii) Recommend, and justify, two other models that could be used in making a divestment decision. Demonstrate how BB Ltd. could utilize these models to make this decision. (5)

Answer.
(i) Evaluation of the use of the concept of ROI by BB Ltd.
ROI is an accounting measure that estimates the level of profits as a proportion of the capital employed over the year. The concept of ROI is widely used by different companies to measures its performance. Therefore BB Ltd. is not unusual in using this concept of ROI as a means of performance monitoring of its different divisions. Perhaps one division of BB Ltd., may have failed to meet its ROI because it might have recently purchased new fixed assets. Perhaps another division might be using old assets that have been written off. Further one division might be riskier than another division.

ROI and cross subsidization:
There could be a lot of problems with cross subsidy. This issue of cross subsidies is more complex than it first appears. We do not know how the investment funds have been allocated if the head office allocates them, and the divisions cannot take their own investment decisions, there is a cross subsidization by the back door as it were.

Further one division's hard earned cash might be used to buy another division's assets. Arguably, cross-subsidization is the advantage of a business like BB Ltd. Further, if the businesses have different business cycle, they are able to bail each other out when appropriate, whilst ensuring that the shareholders receive a fairly constant return.

(ii) Application of BPMPM by BB Ltd. In its divestment decision:
BPMPM aims to link the overall growth of the market for a product, the growth in the market share of a product, with the product's cash-generative activities. BPMPM classifies a company's products in terms of potential cash generation and cash expenditure requirements into cash cows, dogs, stars and question marks.
• Stars are products with a high share of a high growth market. In short term, term require capital expenditure, in excess of the cash they generate, in order to maintain their market position, but promise high returns in the future. In due course, however, stars will become cash cows, which are characterized by a high market share, but low sales growth.
•Cash cows need very little capital expenditure and generate high level of cash income. The important strategic feature of cash cows is that they are already generating high cash returns that can be used to finance the stars.

•Question marks are products in a high-growth market, but where they have a low market share. A decision needs to be taken about whether the products justify considerable capital expenditure in the hope of increasing their market share, or whether they should be allowed dying quietly.
•Dogs products with a low share of a low growth market. Dogs should be allowed to die, or should be killed off.

Appropriateness of use of BPMPM:
BPMP is conventionally assumed to apply to products and it is perhaps unusual to see it applied to businesses and divisions. The problem is that we do not know enough about the firm's product range to suggest how the matrix could be applied.
Rather than assuming that a whole division is a dog and divesting it, is possible that a thorough review of the product range of each division could be examined to see whether certain products can be pruned from the range. BPMPM should not be used in isolation. Further it needs to be modified from time to time.

(iii) Models for making a divestment decision:
A no. of models is available, which could be used by the co. in making a divestment decision.
Two such models could be:
•Porter's five forces model and
•The product life cycle.

Porter's five forces model:
This model can be used to place each division in the competitive context. The five forces model suggests that the competitive environment is determined by five factors viz.

i. The threat of new entrants.
ii. The threat of substitute products,
iii. The bargaining power of customers,
iv. The bargaining power of suppliers and
v. The state of competitive rivalry within the industry.

The value of this model is that it examines each division's strengths in a competitive context. If the trend is for entry barriers to get lower, or if a major new entrant is on the horizon, this must influence the divestment decision, if the business is a marginal player in the market or if the resources required to fight off such a challenge are too expensive.

Similarly, if the customers are powerful or suppliers are powerful, then the margins would get eroded steadily and firm's business would become less attractive. Similarly if the threat of substitute products becomes serious, then divestment might become a sensible choice.

The product Life cycle:
This model bears similarities to the BCG matrix. This model suggests that a firm's products have a natural life cycle that can be analyzed into the phases of : introduction, growth, maturity and decline.
In the introduction phase, the product still has to make money.
In the growth phase, it starts to make profit.
Maturity occurs when the demand is no longer growing. The demand and the profit are at its peak.
In the decline phase, demand falls off, profits fall and eventually no profits are made.
Thus BB Ltd. Can use this model to examine the condition of the products in each of the divisions.

3. (a) What is Strategy? Why it is done? **(2+3= 5)**
(b) Define Strategic Alliance. (5)

Answer.
(a) Johnson and Scholes define strategy as follows:
"Strategy is the direction and scope of an organisation over the long-term: which achieves advantage for the organisation through its configuration of resources within a challenging environment, to meet the needs of markets and to fulfil stakeholder expectations".
In other words, strategy is about:

* Where is the business trying to get to in the long-term (direction)
* Which markets should a business compete in and what kind of activities are involved in such markets? (markets; scope)
* How can the business perform better than the competition in those markets? (advantage)?
* What resources (skills, assets, finance, relationships, technical competence, facilities) are required in order to be able to compete? (resources)?
* What external, environmental factors affect the businesses' ability to compete? (environment)?
* What are the values and expectations of those who have power in and around the business? (stakeholders)

Strategy in short, bridges the gap between "where we are" and "where we want to be". A method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem. "The framework which guides those choices that determine the nature and direction of an organization."

Strategy is significant because it is not possible to foresee the future. Without a perfect foresight, the firms must be ready to deal with the uncertain events which constitute the business environment.
Strategy deals with long term developments rather than routine operations, i.e. it deals with probability of innovations or new products, new methods of productions, or new markets to be developed in future. Strategies dealing with employees will predict the employee behavior. Strategy is a well defined roadmap of an organization. It defines the overall mission, vision and direction of an organization. The objective of a strategy is to maximize an organization's strengths and to minimize the strengths of the competitors.

(b) Strategic Alliance is an agreement for cooperation among two or more independent firms to work together toward common objectives. A Strategic Alliance is a relationship between two or more parties to pursue a set of agreed upon goals or to meet a critical business need while remaining independent organizations. This form of cooperation lies between mergers & acquisitions and organic growth.
Partners may provide the strategic alliance with resources such as products, distribution channels, manufacturing capability, project funding, capital equipment, knowledge, expertise or intellectual property.
There are four types of strategic alliances : joint venture, equity strategic alliance, non-equity strategic alliance and global strategic alliances.

Joint Venture : It is a strategic alliance in which two or more firms create a legally independent company to share some of their resources and capabilities to develop a competitive advantage.
Equity Strategic Alliance : It is an alliance in which two or more firms own different percentages of the company they have formed by combining some of their resources and capabilities to create a competitive advantage.
Non-Equity Strategic Alliance : It is an alliance in which two or more firms develop a contractual relationship to share some of their unique resources and capabilities to create a competitive advantage.
Global Strategic Alliances : Working partnership between companies (often more than two) across national boundaries and increasingly across industries, sometimes formed between company and a foreign government or among companies and governments.

4. (a) Sylva Food Processing company has proposed you as a management consultant. The firm seeks to implement the balanced scorecard tool in an attempt to monitor performance. The management of Sylva has no idea about the balanced scorecard model and has approached you for guidance regarding the approach to implement it and the challenge such a model presents.

(i) Explain the steps that Sylva can take in designing and implementing the balanced scorecard. (5)

(ii) Evaluate why the cost of implementing the balanced scorecard can outweigh the benefits derived from the use of the model. (5)

Answer.

(i) Implementing Balanced Scorecards typically includes the following steps:

Step One: Assessment - Step One of the scorecard building process starts with an assessment of the organization's Mission and Vision, challenges (pains), enablers, and values. Step One also includes preparing a change management plan for the organization, and conducting a focused communications workshop to identify key messages, media outlets, timing, and messengers.

Step Two: Strategy - In Step Two, elements of the organization's strategy, including Strategic Results, Strategic Themes, and Perspectives, are developed by workshop participants to focus attention on customer needs and the organization's value proposition.

Step Three: Objectives - In Step Three, the strategic elements developed in Steps One and Two are decomposed into Strategic Objectives, which are the basic building blocks of strategy and define the organization's strategic intent. Objectives are first initiated and categorized on the Strategic Theme level, categorized by Perspective, linked in cause-effect linkages (Strategy Maps) for each Strategic Theme, and then later merged together to produce one set of Strategic Objectives for the entire organization.

Step Four: Strategy Map - In Step Four, the cause and effect linkages between the enterprise-wide Strategic Objectives are formalized in an enterprise-wide Strategy Map. The previously constructed theme Strategy Maps are merged into an overall enterprise-wide Strategy Map that shows how the organization creates value for its customers and stakeholders.

Step Five: Performance Measures - In Step Five, Performance Measures are developed for each of the enterprise-wide Strategic Objectives. Leading and lagging measures are identified, expected targets and thresholds are established, and baseline and benchmarking data is developed.

Step Six: Initiatives - In Step Six, Strategic Initiatives are developed that support the Strategic Objectives. To build accountability throughout the organization, ownership of Performance Measures and Strategic Initiatives is assigned to the appropriate staff and documented in data definition tables.

Step Seven: Performance Analysis - In Step Seven, the implementation process begins by applying performance measurement software to get the right performance information to the right people at the right time. Automation adds structure and discipline to implementing the Balanced Scorecard system, helps transform disparate corporate data into information and knowledge, and helps communicate performance information. In short, automation helps people make better decisions because it offers quick access to actual performance data.

Step Eight: Alignment – Cascading - In Step Eight, the enterprise-level scorecard is 'cascaded' down into business and support unit scorecards, meaning the organizational level scorecard (the first Tier) is translated into business unit or support unit scorecards (the second Tier) and then later to team and individual scorecards (the third Tier). Cascading translates high-level strategy into lower-level objectives, measures, and operational details. Cascading is the key to organization alignment around strategy. Team and individual scorecards link day-to-day work with department goals and corporate vision. Cascading is the key to organization alignment around strategy. Performance measures are developed for all objectives at all organization levels. As the scorecard management system is cascaded down through the organization, objectives become more operational and tactical, as do the performance measures. Accountability follows the objectives and measures, as ownership is defined at each level. An emphasis on results and the strategies needed to produce results is communicated throughout the organization.

Step Nine: Evaluation - In Step Nine, an Evaluation of the completed scorecard is done. During this evaluation, the organization tries to answer questions such as, 'Are our strategies working?', 'Are we measuring the right things?', 'Has our environment changed?' and 'Are we budgeting our money strategically?'.

(ii) The balanced scorecard can be very costly. The firm must pay for the software, the consultant and allocate time for staff to go through the training. All this can accumulate to levels the firm finds too high in comparison to value derived.

In as much as the costs are easy to quantify, the benefits are difficult to quantify. In political organisations or depending on perceptions, it is easy to believe that the cost is less than the benefit and in some cases rightly so.

Some organisations may be too smaller lack the organisational as well as information systems especially integrated to successfully implement the balanced scorecard. In such cases, it would be wise not to attempt to introduce the system until such a time that such gaps are closed up.

A challenge of the Balanced Scorecards is that the scores are not based on any proven economic or financial theory, and therefore have no basis in the decision sciences. The process is entirely subjective and makes no provision to assess quantities (e.g., risk and economic value) in a way that is actuarially or economically well-founded.

Another challenge is that the Balanced Scorecard does not provide a bottom line score or a unified view with clear recommendations: it is simply a list of metrics.

Some people also claim that positive feedback from users of Balanced Scorecards may be due to a placebo effect, as there are no empirical studies linking the use of Balanced Scorecards to better decision making or improved financial performance of companies.

5. (a) What is the purpose of SWOT analysis? Why is it necessary to do a SWOT analysis before selecting a particular strategy for a business organization. (4+2=6)

(b) An important part of strategic management process is implementation of strategy. Discuss the relationship of soundness of strategy with the quality of implementation (4)

Answer.

(a) An important component of strategic thinking requires the generation of a series of strategic alternatives, or choices of future strategies to pursue, given the company's internal strengths and weaknesses and its external opportunities and threats. The comparison of strengths, weaknesses, opportunities, and threats is normally referred to as SWOT analysis.

♦ Strength : Strength is an inherent capability of the organization which it can use to gain strategic advantage over its competitors.

♦ Weakness : A weakness is an inherent limitation or constraint of the organization which creates strategic disadvantage to it.

♦ Opportunity : An opportunity is a favourable condition in the organisation's environment which enables it to strengthen its position.

♦ Threat : A threat is an unfavourable condition in the organisation's environment which causes a risk for, or damage to, the organisation's position.

The purpose of SWOT analysis is to gather, analyze, and evaluate information and identify strategic options facing a community, organization, or individual at a given time. SWOT Analysis is a very effective way of identifying strengths and weaknesses, and of examining the opportunities and threats one tends to face. Carrying out an analysis using the SWOT framework helps to focus activities into areas where one is strong and where the greatest opportunities lie. This knowledge is then used to develop a plan of action. The analysis can be performed on a product, on a service, a company or even on an individual. Done properly, SWOT will give the big picture of the most important factors that influence survival and prosperity as well as a plan to act on. Strengths and weaknesses are internal while opportunities and threats are external. Strengths and weaknesses have to be matched with the opportunities in the external environment and also to counter any threats that might pose a danger to plans. SWOT Analysis is generally considered a Marketing tool but although it has its origins in Marketing field and is predominantly used by Marketing people, and it can also be done for self. SWOT Analysis is a tool which guides one to see where one stand in terms of job prospects and career growth.

A good SWOT analysis gives you a top-view of the entire business plan, even before the actual business plan is made. Done with sincerity and honesty, this analysis can help you with:

Product Definition: Once you have clearly identified the target segments and understood their attributes, you will probably take a harder look at your product. A good understanding of whom you are trying to sell your product to would help to define the product better and position it appropriately.

Identifying Inherent Deficiencies: We all think our product is good and that it can definitely deliver benefits to the customer. But the longevity of a product is not in what it can deliver now but how it delivers it, will what it delivers continue to be a need and what more can it deliver over time. This analysis is critical to have a predictable and scalable business plan.

Defining Target Markets: Identify your opportunities and the impediments to maximize those opportunities would help in a more comprehensive Go-to-Market plan. You may just end-up realizing that there are more avenues for generating revenues than the ones you had thought of or may end up taking a re-look at your target market itself.

Understanding Key Market Attributes: Demographic, geographic, social and cultural attributes of your prime markets could seriously affect your overall business plan. Getting to identify these important factors could help to develop a more complete product offering and a marketing plan, to target specific needs that may have otherwise missed your attention.

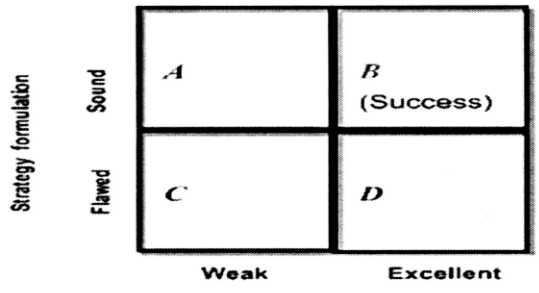
Competitive Analysis: In trying to define your threats you would be forced to do some more work towards understanding your competition and where your product stands in comparison. Getting to know the reasons for your competition's success or failure would only help you in making your offering more robust.

Identifying Threats Other Than Competition: Direct competition may not be the only threat. For example, the watch industry's biggest threat is the mobile phone, with more and more people using this ubiquitous device to also check time. So, such an analysis would help you to do more homework to address such competitive variants and build your competitive barriers.

Any start-up should first do a SWOT of what he intends to create before even attempting anything. This will help him/her to validate most of the assumptions that had been made while planning the enterprise and enable focused efforts leading to meeting objectives.

(b) Strategy implementation concerns the managerial exercise of putting a freshly chosen strategy into place. Strategy execution deals with the managerial exercise of supervising the ongoing pursuit of strategy, making it work, improving the competence with which it is executed and showing measurable progress in achieving the targeted results. Strategic implementation is concerned with translating a decision into action, with presupposes that the decision itself was made with some thought being given to feasibility and acceptability.

It is crucial to realize the difference between strategy formulation and strategy implementation because they both require very different skills. Also, a company will be successful only when the strategy formulation is sound and implementation is excellent. There is no such thing as successful strategic design. This sounds obvious, but in practice the distinction is not always made. The matrix in the figure below represent various combination of strategy formulation and implementation:



Section B

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

6. A product comprised of 10 activities whose normal time and cost are given as follows:

Activity	1-2	2-3	2-4	2-5	3-5	4-5	5-6	6-7	6-8	7-8
Normal Time (days)	3	3	7	9	5	0	6	4	13	10
Normal cost (₹)	50	5	70	120	42	0	54	67	130	166

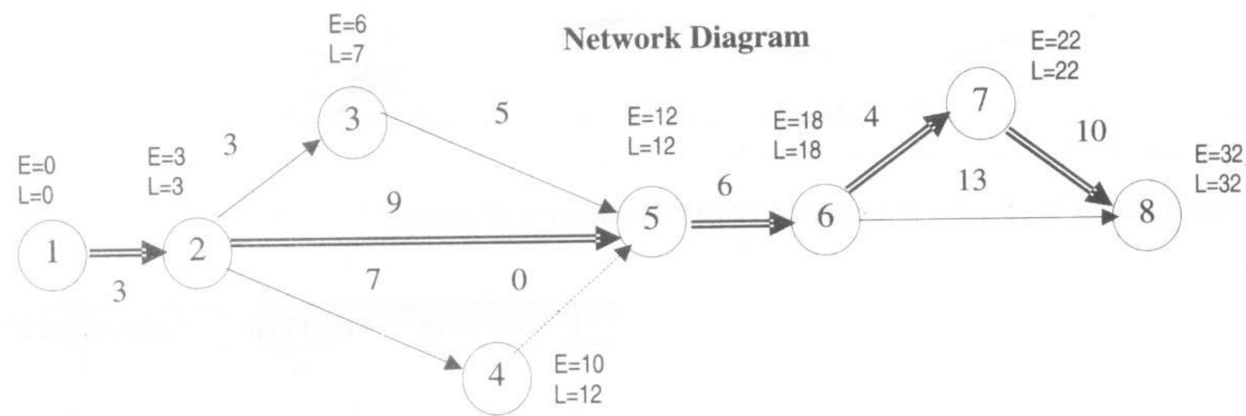
Indirect Cost is ₹ 9 per day.

i. Draw the Network and identify the critical path.

ii. What is the project duration and Associated Cost?

iii. Find out the Total Float associated with each activity. (4+2+4=10)

Solution.



Critical Path 1 – 2 – 5 – 6 – 7 – 8

Project Duration 32 Days. (Note: Observe the use of Dummy Activity, where Time & cost =0)

Network Table

Activity	Duration	EST	LST	EFT	LFT	TF	Normal Cost
1-2	3	0	0	3	3	0	50
2-3	3	3	4	6	7	1	5
2-4	7	3	4	10	11	1	70
2-5	9	3	3	12	12	0	120
3-5	5	6	7	11	12	1	42
4-5	0	10	12	10	12	2	0
5-6	6	12	12	18	18	0	54
6-7	4	18	18	22	22	0	67
6-8	13	18	19	31	32	1	130
7-8	10	22	22	32	32	0	166
							714

Project Duration = 32 days

Associated Cost = Normal Cost + Indirect Cost = ₹ 714 + (₹ 714 + (₹ 9 x 32) = ₹ 1002

7. (a) Ravi, an entrepreneur runs two convenience stores, one in Gurgaon and the other in Noida. Operating income for each store in 2011 is as fallows:

	Gurgaon Store	Noida Store
Revenues:	₹1,07,00,000	₹86,00,000
Operating Cost		
Cost of goods sold	75,00,000	66,00,000
Lease rent (renewable each year)	9,00,000	7,50,000
Labour Costs (paid on an hourly basis)	4,20,000	4,20,000
Depreciation of equipment	2,50,000	2,20,000
Utilities (electricity heating)	4,30,000	4,60,000
Allocated corporate overhead	5,00,000	4,00,000
Total operating costs	1,00,00,000	88,50,000
Operating income (loss)	7,00,000	(2,50,000)

The equipment has zero disposal value. Mohan the accountant makes the fallowing comment, "Ravi can increase his profitability by closing down the Noida Store or by adding another store like it"

Required :

(i) By closing down the Noida store, Ravi can reduce overall corporate overheads costs by ₹4,40,000. Calculate Ravi's operating income if it closes the Noida store. Is Mohan's statement about the effect of closing the Noida Store correct? Explain

(ii) Calculate Ravi's operating income if it keeps the Noida store Open and opens another store with revenues and costs identical to the Noida store (including a cost of ₹2,20,000 to acquire equipment with a one year useful life and zero disposal value). Opening this store will increase corporate overhead costs by ₹40,000. Is Mohan's statement about the effect of adding another store like the Noida store correct? Explain. (6+7=13)

Solution.

Closing and Opening Stores.

1. Column 1 of the following table, presents the relevant loss in revenues and the relevant savings in costs from closing the Noida store. Mohan is correct that Ravi Corporation's operating income would increase by ₹70,000 if it closes down the Noida store. Closing down the Noida store results in a loss of revenue of ₹86,00,000 but cost savings of ₹86,70,000 (from cost of goods sold, rent, labour, utilities and corporate costs.). Note that by closing down the Noida store, Ravi will save none of the equipment-related costs because this is a past cost. Also note that the relevant corporate overhead costs are the actual corporate overhead costs ₹4,40,000 that Ravi expects to save by closing the Noida store. The corporate overhead of ₹4,00,000 allocated to the Noida store is irrelevant to the analysis.
2. Column 2 of the following table, presents the relevant revenues and relevant costs of opening another store like the Noida store. Mohan is correct that opening such a store would increase Ravi Corporation's operating income by ₹1,10,000. Incremental revenues of ₹86,00,000 exceeds the incremental costs of ₹84,90,000 (from higher cost of goods sold, rent, labour utilities, and some additional corporate costs.). Note that the cost of equipment written off as depreciation is relevant because it is an expected future cost that Ravi will incur only if it opens the new store. Also note that the relevant corporate overhead costs are the ₹40,000 of actual corporate overhead costs that Ravi expects to incur as a result of opening the new store. Ravi, may in fact, allocate more than ₹40,000 of corporate overhead to the new store but this allocation is irrelevant to the analysis.

The key reason that Ravi's operating income increases either if he closes down the Noida store or if it opens another store like it is the behavior of corporate overhead costs. By closing down the Noida store, Ravi can significantly reduce corporate overhead costs presumably by reducing the corporate staff that oversees the Noida operation. On the other hand, adding another store like Noida does not increase actual corporate costs by much, presumably because the existing corporate staff will be able to oversee the new store as well.

Relevant- Revenue and Relevant- Cost Analysis of closing Noida Store and opening another store like it.

₹

	(Loss in Revenue) and savings in costs from closing Noida store	Incremental Revenues and (Incremental Costs) of opening new store like Noida store
Revenues	(86,00,000)	86,00,000
Cost of goods sold	66,00,000	(66,00,000)
Lease rent	7,50,000	(7,50,000)
Labour costs	4,20,000	(4,20,000)
Depreciation of equipment	0	(2,20,000)
Utilities (electricity heating)	4,60,000	(4,60,000)
Corporate overhead costs	4,40,000	(40,000)
Total costs	86,70,000	84,90,000
Effect on operating income (loss)	70,000	1,10,000

(b) Whirlpool India Ltd. assembles washing machines at its Auburn plant. In December 2012, 60 tumbler units that cost ₹ 44 each (from a new supplier who subsequently went bankrupt) were defective and had to be disposed of at zero disposal value. Whirlpool India Limited was able to rework all 60 washing machines by substituting new tumbler units purchased from one of its existing suppliers. Each replacement tumbler cost ₹ 50.

Required

(i) What alternative approaches are there to account for the material costs of reworked units?

(ii) Should Whirlpool India Limited use the ₹ 44 tumbler or ₹ 50 tumbler to calculate the costs of materials reworked? Explain.

(iii) What other costs might Whirlpool India Limited include in its analysis of the total costs of rework due to the tumbler units purchased from the (now) bankrupt supplier? (2+2+3=7)

Solution.

Reworked Units, costs of rework

(i) The two alternative approaches to account for the materials costs of reworked units are:

- **a.** To charge the costs of rework to the current period as separate expense item as abnormal rework. This approach would highlight to Whirlpool India Ltd. the costs of the supplier problem.
- **b.** To charge the costs of rework to manufacturing overhead as normal rework.

(ii) The ₹50 tumbler cost is the cost of the actual tumblers included in the washing machines. The ₹44 tumbler units from the new supplier were eventually never used in any Washing Machine and that supplier is now bankrupt. The units must now be disposed of at zero disposal value.

(iii) The total cost of rework due to defective tumbler units include:

- **(a)** The labour and other conversion costs spent on substituting the new tumbler units.
- **(b)** The cost of any extra negotiations to obtain the replacement tumbler units.
- **(c)** Any higher price the existing supplier may have charged to do a rush order for the replacement tumbler units.
- **(d)** Ordering costs for the replacement tumbler units.

8. (a) State Bank of India (SBI) is examining the profitability of its Premier Account, a combined saving and checking account. Depositors receive a 7 percent annual interest rate on their average deposit. SBI earns an interest rate spread of 3 percent (the difference between the rate at which it lends money and the rate it pays to depositors) by lending money for home loan purpose at 10 percent. Thus, SBI would gain ₹60 on the interest spread if a depositor has an average Premier Account balance of ₹2,000, that is ₹2,000 × 3% = ₹60

The Premier Account allows depositors unlimited use of services such as deposits, withdrawals, checking accounts, and foreign currency drafts. Depositors with Premier Account balances of ₹1,000 or more receive unlimited free use of services. Depositors with minimum balances of less than ₹1,000 pay a ₹20-a-months service free for their Premier Account.

SBI recently conducted an activity-based costing study of its services. It assessed the fallowing costs for six individual services. The use of these services in current year by three customers is as follows:

Particulars	Activity-based Cost per Transaction	Nitin	Arvinder	Sanjay
Deposit/withdrawal with teller	₹2.50	40	50	5
Deposit/withdrawal with automatic teller machine (ATM)	0.80	10	20	16
Deposit/withdrawal on prearranged monthly basis	0.50	0	12	60
Bank checks written	8.00	9	3	2
Foreign currency drafts	12.00	4	1	6
Inquiries about account balance	1.50	10	18	9
Average premier account balance for current year		₹1,100	₹800	₹25,000

Assume Nitin and Sanjay always maintain a balance above ₹1,000, whereas Arvinder has a balance below ₹1,000.

Required:

(i) Compute the current year profitability of Nitin, Arvinder and Sanjay's Premier Accounts at SBI.

(ii) What evidence is there of cross-subsidization among the three Premier Accounts? Why might SBI worry about the cross-subsidization if the Premier Account product offering is profitable as a whole?

(iii) What changes would you recommend for SBI's Premier Account? (6+6+3=15)

Solution:

i.

	Nitin	Arvinder	Sanjay	Total
Revenues				
Spread revenue on annual basis (3% x ; ₹1,100, 800, 25,000)	₹33	₹24	₹750	₹807
Monthly fee charges (₹20 x ; 0, 12, 0)	0	240	0	240
Total revenues	33	264	750	1,047
Costs				
Deposit/Withdrawal with teller ₹2.50 x 40, 50, 5	100	125	12.50	237.50

Deposit/Withdrawal with ATM ₹ 0.80 x 10, 20, 16	8	16	12.80	36.80
Deposit/Withdrawal on prearranged basis ₹0.50 x 0, 12, 60	0	6	30.00	36.00
Bank checks written ₹8 x 9, 3, 2	72	24	16.00	112.00
Foreign currency drafts ₹12 x 4, 1, 6	48	12	72.00	132.00
Inquiries ₹1.50 x 10, 18, 9	15	27	13.50	55.50
Total costs	243	210	156.80	609.80
Operating income (loss)	(210)	54	593.20	437.20

The assumption that the Nitin and Sanjay accounts exceed ₹1,000 every month and the Arvinder account is less than ₹1,000 each month means the monthly charges apply only to Arvinder.

ii. Cross subsidization across individual Premier Account occurs when profits made on some accounts are offset by losses on other accounts. The aggregate profitability on the three customers is ₹437.20. The Sanjay account is highly profitable (₹593.20), while the Nitin account is sizably unprofitable. The Arvinder account shows a small profit but only because of the ₹240 monthly fees. It is unlikely that Arvinder will keep paying these high fees and the SBI would want Arvinder to pay such high fees from a customer relationship standpoint.

The facts also suggest that the customers do not use the bank services uniformly. For example, Nitin and Arvinder have a lot of transactions with the teller or ATM, and also inquire about their account balances more often than Sanjay. This suggests cross-subsidization. SBI should be very concerned about the cross-subsidization. Competition likely would "understand" that high balance low-activity type accounts (such as Sanjay) are highly profitable. Offering free services to these customers is not likely to retain these accounts if other banks offer higher interest rate. Competition likely will reduce the interest rate spread SBI can earn on the high-balance low-activity accounts they are able to retain.

iii. Possible changes SBI could make are:

a. Offer higher interest rates on high-balance accounts to increase SBI's competitiveness in attracting and retaining these accounts.

b. Introduce charges for individual services.

(b) Discuss the role of a Firm's suppliers in its Value Engineering or Cost Reduction drive. (5)

Answer.

Value Engineering also involves calling on the services of a Company's suppliers to assist in the cost reduction efforts. Suppliers of materials can have significant role in value engineering due to the following reasons:-

i. Suppliers can contribute information on enhanced types of technology of materials.

ii. Supplier specialize in areas that a Company has no information about and can share product expertise.

iii. They may have also conducted extensive value engineering for the components they manufacture, resulting in advanced designs that a Company may be able to incorporate into its new products.

iv. Suppliers may have also redesigned their production process, or can be assisted by a Company's engineers in doing so, producing cost reductions or decreased production waste that can be translated into lower component costs for the Company.

9. (a) The following figures are available. Find out the missing figures, given appropriate formulae –

Particulars	₹	₹
Budgeted Profit		15,000
Less: Adverse variances: Contribution Price variance	10,600	
Direct Material variance	1,000	
Fixed Overhead variance	600	12,200
		2,800
Add: Favourable Variances: Contribution Quantity Variance	1,800	
Direct Wages Variance	600	
Variable Overhead Variance	1,800	4,200
Actual Profit		7,000

There is no inventory. Also, Production units = Sales units for both actual and budget.
Other information:

Standard selling Price	₹ 18 per unit	Actual Labour Hours at Actual rate	₹ 63,000
Standard Variable Cost	₹ 15 per unit	Actual Labour Hours at Standard rate	₹61,950
Standard Contribution	₹3 per unit	Variable Overhead Standard rate	₹2
Actual selling Price	₹ 17 per unit	Standard Hours of Production	4 per unit
Budgeted sales	10,000 units	Variable Overhead at Standard rate	₹ 84,800
Std Material Cost p.u	Re.1(5 kg. at 20 paise/kg)	Variable Overhead Expenditure Variance	400 (A)
Material Usage variance	400(Adv)	Budgeted Fixed overhead	₹ 15,000

Find out the following:

(i) Actual sales Units	(v) Actual Variable Overhead in rupees
(ii) Actual sales Rupees	(vi) Variable Overhead Efficiency Variance
(iii) Actual Quantity of Raw Materials used	(vii) Actual Fixed Overheads
(iv) Labour Efficiency variance	(viii) Operating Profit Variance

(8 x 2 = 16)

Solution:

1. **Sales Variances**

BQ x BP (1)	**AQ x AP (2)**	**AQ x BP (3)**	**Sales Variances Total (1)-(2)=200F**	
10,000 x18=1,80,000	10,600 x 17 = 1,80,200 Qtty from **WN (a)**	10,600 x 18 = 1,90,800	Price(3)-(2) =10,600 A (given)	Volume(1)-(3) =10,800 F

2. **Material Variances**

SQ x SP (1)	**AQ x AP (2)**	**AQ x SP (3)**	**Material Variances Cost (1)-(2)=1,000A (given)**	
(10,600 x 5) x 0.20 =10,600	55,000 x 0.21 = 11,600 **[WN (d)]**	55,000 x 0.20 =11,000 **[WN (c)]**	Price (3)-(2) =600A (Bal. figure)	Usage(1)-(3) =400A (given)

3. **Labour Variances**

SH x SR (1)	**AH x AR (2)**	**AH x SR**	**Labour Variances Cost(1)-(2)=600F (given)**	
(10,600 x 4) x 1.50 =63,600 **[WN (e)]**	41,300 x1.53 =63,000 (given)	41,300 x 1.50 =61,950 (given)	Rate(3)-(2) =1,050A	Efficiency(1)-(3) =1,650 F

4. **VOH Variances**

SH x SR	AVOH	AH x SR	VOH Variances Cost(1)-(2)= 1,800F (given)	
(10,600 x 4)x 2 =84,800 (given)	**[WN (f)]** 83,000	41,300 x 2 =82,600 [Hrs from LCV]	Exp. (3)-(2) =400A	Efficiency(1)-(3) =2,200F

5. **FOH Variances**

AO x SR (1)	AFOH (2)	BFOH (3)	FOH Variances Cost (1)-(2) =? (NA under Marg Costing)	
10,600 ×? =?	**[WN (g)]** 15,600	Given 15,000	Exp. (3)-(2) =600A	Efficiency(1)-(3) =NA

Working Notes:

a.	**Contribution Quantity Variance**	=(BQ-AQ)x Std. Contribution per unit =1,800F =(10,000-AQ) x ₹3 = -1,800. On solving, AQ=10,600 units
b.	Since Contribution Quantity Variance is given in the reconciliation Statement as per the question, Marginal Costing system has been used in the reconciliation. Accordingly, FOH Variance as per the Reconciliation statement constitutes only FOH Expenditure Variance.	
c.	**Material usage variance**=(1)-(3)	=400A 10,600-(3) = -400. Hence,(3)=11,000 On balancing, AQ of Raw Material (AQ) = 55,000 kg.
d.	**Material Cost Variance** (1)-(2)	=1,000A 10,600-(2) = -1,000. Hence, (2)=11,600, On balancing AP of Raw Material (AP) = 0.21 per kg.
e.	**Labour Cost Variance**=(1)-(2)	=600A (1)-63,000= -600. Hence, (1)= 63,600. On balancing, Std Rate ph of Labour(SR)= ₹1.50 ph
F.	**VOH Cost Variance** =(1)-(2)	=1,800A 84,800-(2) = -1,800. Hence, (2) = 83,000. Hence, AVOH= ₹83,000
g.	**FOH Expenditure Variance** =(3)-(2)	=600A So, 15,000-(2) = -600. Hence, (2) = 15,600.

Actual Sales Units	10,600 units
Actual Sales Rupees	₹1,80,200
Actual Quantity of RM used	55,00 kg
Labour Efficiency Variance	₹1,650 F
Actual Variable Overhead in rupees	₹83,000
VOH Efficiency Variance	₹2,200F
Actual Fixed Overheads	₹15,600
Operating profit Variance	₹8,000A

(b) State how ZBB is superior to Traditional Budgeting. (4)

Answer: ZBB is superior to Traditional budgeting as:

i. **Priority Allocation:** It provides a systematic approach for the evaluation of different activities and ranks them in order of preference for the allocation of scarce resources.
ii. **Maximum Efficiency:** It ensures that the various functions undertaken by the Firm are critical for the achievement of its objectives and are being performed in the best possible way. The areas of wasteful expenditure can be easily identified and eliminated.
iii. **Cost Benefit Analysis:** It provides an opportunity to the management to allocate resources for various activities only after having a through Cost-Benefit Analysis. The chances of arbitrary cuts and enhancement are the avoided.
iv. **Goal Congruence:** Departmental Budgets are closely linked with corporate objectives.
v. **Management by Objectives:** The technique can be used for the introduction and implementation of the system of 'Management by Objectives, (MBO).