P 15 – Business Strategy and Strategic Cost Management

Test Paper- III/15/BSCM/2012/T-1

Time Allowed-3hours **Full Marks-100**

Section A – Business Strategy [50 marks]

Question 1

From the four alternatives given against each of the following cases, indicate the correct answer. (just state A, B, C or D) **[1 x 5 =5]**

(i) A firm can effectively use its operations function to yield competitive advantage via all of the following except
  A. Customization of the product
  B. Set equipment utilization goals below the industry average
  C. Speed of delivery
  D. Constant innovation of new products

(ii) Which of the following statements is not true when describing a successful strategy?
  A. It provides some property that is unique or distinctive
  B. It provides the means for renewing competitive advantage
  C. It addresses changes in the external environment
  D. It guarantees long term survival

(iii) Two reasons for mergers and acquisitions are
  A. To increase managerial staff and to minimize economies of scale
  B. To reduce tax obligations and increase managerial staff
  C. To create seasonal trends in sales and to make better use of a new sales force
  D. To provide improved capacity utilization and to gain new technology

(iv) Which strategy would be effective when the new products have a counter cyclical sales pattern compared to an organization's present products ?
  A. Forward integration
  B. Retrenchment
  C. Horizontal Diversification
  D. Market Penetration

(v) The means by which long term objectives will be achieved are
  A. Mission statements
  B. Strategies
  C. Visions statements
  D. Long-term goals

Question 2

a) Consider Porter's Generic Strategies. In your opinion, how cost - based advantages can be sustained? Give Example to support your argument. [**5**]

b) The competitive (positioning) and competence (resource-based) views are two dominant theoretical perspectives in strategic management. Compare and contrast these two perspectives. Give example to support your arguments. **[4]**

Question 3

Strategic alliance and acquisitions are two different methods of strategic development. Compare and contrast the motives of these two development methods. Discuss factors that can influence the success of strategic alliances/ acquisition. **[9]**

Question 4

Strategy is developed at different levels in large organisations. The process starts with the corporate strategy which is then translated into the strategy for the business divisions and business functions.

Required:

(a) Explain what the corporate strategy of a multi-business organisation is typically concerned with. **[5]**

(b)Describe the important role that the corporate level strategy has in relation to the development of the business and functional strategy in a multi-business organization **[4]**

Question 5

Dr. Mohan inherited his father's Mathur's Lab in Gujrat in 2005. Till 2012, he owned 4 labs in. His ambition was to turn it into a National chain. The number increased to 7 in 2013 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 ₹ 50 crores for a 26% stake by Pharma Capital has its growth strategy.

The lab with a revenue of ₹ 80 crores is among top three Pathological labs in India with Atlantic (₹ 75 crores) and Pacific (₹ 60 crores). Yet its market share is only 2% of ₹ 5,000 crores market. The top 3 firms command only 8% 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. Mohan has not gone for acquisition or joint ventures. He does not find many existing laboratories meeting quality standards. His ten labs have been accredited nationally whereon many large hospitals have not thought of accreditation; The College of American pathologists accreditation of Mathur's lab would help it to reach clients outside India.

In Mathur'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. Mohan had at the time of inheritance of Mathur's Lab? Has it been achieved? **[1 + 1 + 1 + 1]**

(ii) For growth what business strategy has been adopted by Dr. Mohan? **[2]**

(iii) What is the marketing strategy of Dr. Mohan to overtake its competitors? **[2]**

(iv) In your opinion what could be the biggest weakness in Dr. Mohan's business strategy? **[2]**

Question 6

Lotus is one of the leading detergent manufacturing companies. The firm has more than twenty-five product types. These have been developed over a period of its ten year existence. Some products are very successful while others have not performed well. The challenge for the board has been the formulation of strategy policy in the way the company manages the portfolio of products.

As a newly recruited Cost Accountant, your advice is being sought to address the following questions the Product manager has prepared as input into his paper to the Board.

a) Describe the Boston Consulting Group (BCG) growth vector matrix. **[4]**

b) Explain what strategic options are available to Hassan in accordance to the BCG Matrix. **[5]**

Section B – Strategic Cost Management [50 marks]

Question 7

(a) Honey Ltd. initiated a quality improvement program at the beginning of the year. Efforts were made to reduce the number of defective units produced. By the end of the year, reports from the production manager revealed that scrap and rework had both decreased. Though pleased with success, the CEO of the company wanted some assessment of the financial impact of the improvements. To make this assessment, the following financial data were collected for the current and preceding year:

Particulars	**2011-12 (₹)**	**2012-13 (₹)**
Sales	10,00,00,000	10,00,00,000
Scrap	4,00,000	3,00,000
Rework	6,00,000	4,00,000
Product inspection	1,00,000	1,25,000
Product warranty	8,00,000	6,00,000
Quality training	40,000	80,000
Material inspection	60,000	40,000

You are required to —

(i) Classify the cost as prevention, appraisal, internal failure, or external failure.

(ii) Compute the profit that has increased because of quality improvements? **[3+2]**

Or

Explain about the new seven tools of quality in details? **[5]**

(b) What is Benchmarking? What are the benefits of Benchmarking? How does it work? **[5]**

Question 8

(a) H Ltd. has decided to adopt JIT policy for materials. The following effects of JIT policy are identified-

i. To implement JIT, the company has to modify its production and material receipt facilities at a capital cost of ₹10,00,000. The new machine will require a cash operating cost ₹1,08,000 p.a. The capital cost will be depreciated over 5 years.

ii. Raw material stockholding will be reduced from ₹40,00,000 to ₹10,00,000.

iii. The company can earn 15% on its long-term investments.

iv. The company can avoid rental expenditure on storage facilities amounting to ₹33,000 per annum. Property Taxes and insurance amounting to ₹22,000 will be saved due to JIT programme.

v. Presently there are 7 workers in the store department at a salary of ₹5,000 each per month. After implementing JIT scheme, only 5 workers will be required in this department. Balance 2 workers' employment will be terminated.

vi. Due to receipt of smaller lots of Raw Materials, there will be some disruption of production. The costs of stock-outs are estimated at ₹77,000 per annum.

Determine the financial impact of the JIT policy. Is it advisable for the company to implement JIT system? **[5+2]**

(b) An agriculturist firm has 480 hectares of land on which he grows potatoes, tomatoes, Cabbage and carrots. Out of the total area of land, 340 hectares are suitable for all the four vegetables but the remaining 140 hectares of land are suitable only for growing Cabbage and carrots. Labour for all kinds of farm work is available in plenty.

The market requirement is that all the four types of vegetables must be produced with a minimum of 5,000 boxes of any one variety. The farmer has decided that the area devoted to any crop should be in terms of complete hectares and not in fractions of a hectare. The only other limitation is that not more than 1,13,750 boxes of any one vegetable should be produced.

The relevant data concerning production, market prices and costs are as under:

	Potatoes	Cabbage	Carrots	Tomatoes
Annual yield :				
Boxes per hectare	350	100	70	180
	₹	₹	₹	₹
Costs :				
Direct Material per hectare	952	432	384	624
Direct Labour :				
Growing per hectare	1792	1216	744	1056
Harvesting and Packing per box	7.20	6.56	8.80	10.40
Transport per box	10.40	10.40	8.00	19.20
Market price per box	30.76	31.74	36.80	44.55

Fixed expenses per annum :	₹
Growing	1,24,000
Harvesting	75,000
Transport	75,000
General Administration	1,50,000

It is possible to make the land presently suitable for Cabbage and carrots, variable for growing potatoes and tomatoes if certain land development work is undertaken. This work will involve a capital expenditure of ₹ 6,000 per hectare which a Bank is prepared to finance at the rate of interest of 15% p.a. If such improvement is undertaken, the harvesting cost of the entire crop of tomatoes will decrease on an average by ₹ 2.60 per box.

Required:

i. Calculate, within the given constraints, the area to be cultivated in respect of each crop to achieve the largest total profit and the amount of such total profit before land development work is undertaken.

ii. Assuming that the other constraints continue, advise the grower whether the land development scheme should be undertaken and if so the maximum total profit that would be achieved after the said development schemes is undertaken **[4+4]**

Or

A company makes four products in a joint process. Each of these products can be sold as it emerges from the joint process or can be processed further for eventual sale at a higher price. The company has a plan to process 2,00,000 kg of basic raw material during the next year and it has adequate machine capacity available for fully processing this input further.

The initial processing cost of each batch of 500 kgs of input is ₹ 600 and the cost of raw materials is ₹ 4 per kg. The output per batch and the selling price at split off state are as under:

Product	Out per batch of 500 kg of input	Selling Price per kg of output (₹/kg)
P	200	8
Q	150	4
R	100	10
S	50	2

The details of resources used and variable costs incurred in processing these products further and the selling price per kg of the final output are as under:

Product	Machine (hours/kg.)	Direct labour (hours/kg.) (₹)	Direct labour hour Rate per hour	Variable overheads per kg. (₹)	Selling price (₹/kg.)
P	2	1	6	4	20
Q	6	1	6	2	16
R	4	5	6	3	51
S	2	2	6	2	15

Fixed overheads of further processing amounts to ₹ 6,70,000 per annum.

Required:

i. Advice which of the products should be subjected to further processing. Show the calculations.

ii. The company's policy is to apportion the joint costs on the basis of the sales values less further processing costs. The fixed further processing cost can be apportioned to the products processed further either on the basis of (a) machine hours or (b) directs labour hours. Present a statement showing product wise profitability of the year based on each of the aforesaid two bases.

iii. What should in your opinion be the proper basis for the apportionment of the joint costs of this type of problem? **[2+3+3]**

Question 9

(a) A company has developed two types pocket T.V. sets operated on battery and having liquid crystal display. Model 'Simplax' is having single channel and model 'Delux' is having multi-channels. The management of the company asked their accountant to recommend prices for these new products which will fetch a margin of 20% on selling price. The accountant has collected following data for 1st year of production.

	Simplax	Delux
(1)Maximum Production and Sale/units	2,500	1,500
(2)Variable Cost per unit ₹:		
Direct Materials	300.00	500.00
Direct Labour	100.00	200.00
(3)Attributable fixed overheads ₹ lakh	2.50	3.00
(4)Labour Hours per units	20.00	40.00
(5)Machine Hours per unit	30.00	15.00

The marketing department is contemplating to sell the entire output produced during the year. The other common fixed overheads relating to these products are ₹8.58 lakhs p.a. The management wants to have a statement of costs, revenue and profit for both the products. The accountant, accordingly prepared two statements, one with common fixed costs absorbed on labour hour basis and another with common fixed costs absorbed on machine hour basis. However, he is not able to decide as to which one is correct for deciding price of the products.

Required:

i. Present the statement showing annual costs, revenue and profit for each product using both the bases that were used by the accountant for absorbing common fixed overheads.
ii. Which set of prices would you recommend?
iii. Do you think that cost plus pricing decision is valid for a newly developed product? **[3+2+2]**

Or

A Company manufactures a product, particulars of which are detailed below:

Annual production	2,00,000 units
Material cost	₹ 60,000
Other variable costs	₹ 1,20,000
Fixed cost	₹ 40,000
Total cost	₹ 2,20,000
Apportioned investment	₹ 2,00,000

Determine the unit selling price under each of the following strategies:

i. 20% return on investment;
ii. 30% mark-up based on total cost;
iii. 20% profit on net sales price;
iv. 15% profit on list sales when trade discount is 35%;
v. 40% mark-up based on incremental cost;
vi. 50% mark-up based on value added by manufacturer.
vii. Assume that the Company's tax rate is 52%. **[1×7]**

(b) A firm has developed a product for which the following standard cost estimates have been made for first batch to be manufactured in month 1.

Standard cost per batch	
500 labour hours @ ₹8 per hour	₹4,000
55 units of direct materials @₹100 per unit	₹5,500

Variable overhead 500 hours @ ₹15 per hour	₹7,500
	₹17,000

From experience the firm knows that labour will benefit from a learning effect and labour time will be reduced. This is expected to approximate to an 80% learning curve and to follow the general function.

Budgetary Control and Standard Costing in Profit Planning

$Y=ax^b$
Where,
Y=Average labour hours per batch
a=Number of labour hours for the first batch
x=Cumulative number of batches
b=learning coefficient
(The learning coefficient is found as follows:

$$b = \frac{\log(1\text{-Proportionate decrease})}{\log 2}$$

The coefficient for 80% learning curve is b=0.322)

In addition, the growing expertise of labour is expected to improve the efficiency with which materials are used. The usage of material is expected to approximate to a 95% learning curve and to follow the general function
$Y=ax^b$
Where,
Y=Average units of material per batch
a=number of units for the first batch
And x and b are explained previously.
The actual production for the first six months was as follows:

Month 1	20 batches	Month 4	24 batches
Month 2	30 batches	Month 5	33 batches
Month 3	25 batches	Month 6	28 batches

During month 6 the following results were recorded for the last batch made:

Actual result of last batch

Labour hours	115
Direct wages	₹978
Direct materials(41 units)	₹3,977
Variable overhead	₹1,685

You are required:

i. To calculate the learning coefficient for materials,
ii. To derive the standard cost of the last batch in Month 6,
iii. To calculate what variances have arisen in connection with the last batch,
iv. To explain what information the variances provide for management. **[2+2+2+2]**

Or

You have been provided with the following data for M Plc. for September 2012:

Accounting method:	Absorption	Marginal
Variances	₹	₹
Selling price	1,900 (A)	1,900 (A)
Sales volume	4,500 (A)	7,500 (A)
Fixed overhead expenditure	2,500 (F)	2,500 (A)
Fixed overhead volume	1,800 (A)	Not applicable

During September 2012 production and sales volume were as follows:

	Sales	Production
Budget	10,000	10,000
Actual	9,500	9,700

Calculate:

(i) The standard contribution per unit,
(ii) The standard profit per unit,
(iii) The actual fixed overhead cost total. **[2+3+3]**

Question 10

(a) What makes a problem suitable for Simulation modeling and Analysis? **[5]**

(b) Is a value chain, supply chain, and demand chain management the same? Who can become involved in a value chain? What impact can a value chain have on the industry? **[1+2+2]**

Test Paper- III/15/BSCM/2012/T-2

Section A – Business Strategy [50 marks]

Question 1

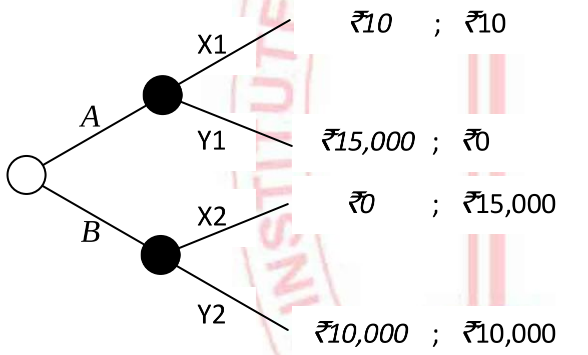
Strategy making is a key function of any successful manager. Many strategists agree that strategy is a fit between what is obtaining in the internal environment of the organization and the dictates of the external environment. However, the manager must consider a number of factors that shape any strategy.

Describe any five (5) factors that shape strategy. **[10]**

Question 2

a) Logical Incrementalism is widely used by organizations to develop its strategy. Explain the term "Logical Incrementalism" and describe the major steps (or characteristics) involved when it is used for strategy development. Give an example to illustrate your understanding. **[6]**

b) What is the rollback equilibrium of this game? Player 1 is indicated by a hollow circle and player 2 by a solid circle. Player 1's payoffs are listed first. **[4]**



Question 3

Benchmarking exercise is based on "best exercise" and not on 'best performances". Explain. Also state briefly the important benchmarking processes used in strategy implementation. **[3 + 7]**

Question 4

X Ltd., is a small family controlled manufacturing company. In its 60 yrs history, the company has grown to the extent that it now employs 75 employees, producing a wide and diverse range of industrial products and special components. The company has increased in size from its small original base. However, it has never employed a strategic management approach for its development and has relied on operational decision-making to determine priorities.

X Ltd., has never gathered any information relating to its markets. In recent years, the company has experienced a reduction in turnover and profitability and is assessing how it might redress the situation.

a) You explain how strategic management differs from operational management to the directors of X Ltd. After being convinced, the directors of X Ltd., have now decided to introduce strategic management approach, which will assist in the selection of appropriate strategies for future development of the company. **[5]**
b) Discuss the cultural and organizational changes which X Ltd., will need to implement in order to successfully introduce strategic management. **[5]**

Question 5
Strategy involves planning ways in which the long-term objectives of the organisation can be achieved. An important part of such a process is the analysis of the external environment to determine future potential factors that are most relevant to the organisation.

Some believe that the external environment within which organisations operate has become increasingly uncertain and therefore wholly unpredictable. This raises important issues for strategy development, with some questioning the value of past approaches.
Requirements
(a) Discuss how environmental uncertainty might affect strategic thinking within organisations. **[5]**
(b) Assess the usefulness of scenario planning in strategy formulation, particularly under conditions of extreme uncertainty. **[5]**

Section B – Strategic Cost Management [50 marks]

Question 6
(a) What is Life Cycle Costing? Write down the different phases of LCC? **[5]**

(b) Write short note on Cost of Quality Report? **[5]**

Question 7
(a) Shan and Mann Ltd. is introducing a new type of pocket calculator in the market and is now deciding on its production plans pricing policy. The standard variable cost of the new product will be ₹50 per unit, the same as that of the old model withdrawn from the market. The fixed costs that have to be borne works out to ₹10,40,000. Three alternative selling price - ₹70, ₹80, ₹90 per unit are discussed. The Sales Manager has estimated for each selling price an optimistic, a pessimistic and a most likely demand figure and associated probabilities for each of these. For the ₹90 selling price the figures are

	Annual demand units	Probability of demand
Pessimistic	20,000	0.20
Most likely	35,000	0.70
Optimistic	40,000	0.10

On the cost side, it is clear the standard variable cost of ₹50 is an ideal which has been achieved in practice. An analysis of the past 20 months shows that an adverse variance of ₹10 arose on 4 occasions, an adverse variance of around ₹5 arose on 14 occasions and a variance of around zero arose on two occasions. There is no reason to think that the pattern for the new product will differ significantly from this.

A summary of the result of an analysis of the data for the other two selling prices – ₹70 and ₹80 is as under:

	Prices

	₹70	₹80
Probability of a loss :		
Greater than or equal to :		
₹ 5 lakhs	0.02	0
₹ 3 lakhs	0.07	0.05
₹ 1 lakh	0.61	0.08
0	0.61	0.10
Probability of a profit:		
Greater than or equal to :		
0	0.39	0.91
₹ 1 lakh	0.33	0.52
₹ 3 lakhs	0.33	0.04
₹ 5 lakhs	0	0.01
Expected profit (Loss)	(55,750)	68,500

(i) From the above calculate the expected annual profit for a selling price of ₹90.

(ii) With the help all these data, compare the three selling price and give your recommendation regarding the selling price to be adopted. Substantiate your recommendation. **[2+3+2]**

(b) Explain in brief about Lean Accounting? **[7]**

Or

Sunny Ltd. a company engaged in the manufacture of electrical appliances has set the following budget for 20x1:

	Immersion Heaters	**Table Lamp**	**Bread Toasters**	**Room Heaters**
Production (units)	40,000	10,000	50,000	30,000
Selling price per unit (₹)	30.00	50.00	60.00	80.00
Cost per unit:				
Direct Materials (₹)	6.00	13.50	10.50	24.00
Direct labour (₹)	7.50	10.00	18.00	24.00
Variable overheads (₹)	4.50	10.00	12.00	13.00
Fixed overheads (₹)	7.50	10.00	18.00	24.00
Profit/(Loss) (₹)	4.50	6.50	1.50	(5.00)

When the budget was placed before the Budget committee, the Marketing Manager put up a proposal to increase the sales by 20,000 additional units for which capacity existed. The additional 20,000 units could be one product or any combination of products. The proposal was accepted by the Committee.

The Committee also decided that the production capacity for the next year, namely 20x2 would be set in such way that there would be a further increase in the output by 50,000 units over and above the increase of 20,000 units envisaged for 20x1. The additional production of 50,000 units would be of table lamp only for which a new plant would be acquired. The additional fixed expenses of the new plant were estimated ₹50,000 per annum. During 20x1, the material and labour costs were expected to increase by 10.% but the other cost and selling prices would remain same.

Required:

(i) Set a budget for 20x1 in such a way that the additional capacity of 20,000 units is utilized to maximize the profits.
(ii) Set a budget for 20x2.
(iii) Assuming that the increased output may not fully materialise, calculate the number of units of table lamps required to be sold in 20x2 at the given price in order to ensure that profitability at least at 20x1 level is maintained. **[3+2+2]**

[3+5]

Question 8

(a) Simpark Limited makes three main products, using broadly the same production methods and equipment for each. A conventional product costing system is used at present, although an Activity Based Costing (ABC) system is being considered. Details of the three products, for typical period are:

Particulars	Labour Hours per unit	Machine Hours per unit	Material Per unit	Volumes Units
Product A	½	1 ½	₹20	750
Product B	1 ½	1	12	1,250
Product C	1	3	25	7,000

Direct labour costs ₹6 per hour and production overheads are absorbed on a machine hour basis. The rate for the period is ₹28 per machine hour.

You are required:

(i) To calculate the cost per unit for each product using conventional methods. **[3]**

Further analysis shows that the total of production overheads can be divided as follows

	%
Costs relating to set-ups	35
Costs relating to machinery	20
Costs relating to material handling	15
Costs relating to inspection	30
Total production overhead	100

The following activity volumes are associated with the product line for the period as a whole. Total activities for the period

	Number of Set-ups	Number of movements of materials	Number of Inspections
Product A	75	12	150
Product B	115	21	180
Product C	470	87	670
	660	120	1,000

You are required:

(ii) To calculate the cost per unit for each product using ABC principles;
(iii) To comment on the reasons for any differences in the costs in your answers to (i) and (ii) **[3+2]**

(b) Average time taken by an operator on a specific machine is tabulated below. The management is considering replacing one of the old machines by a new one and the estimated time for operation by each operator on the new machine is also indicated.

Machines							
Operation	M_1	M_2	M_3	M_4	M_5	M_6	New
01	2	3	2	1	4	5	6
02	4	4	6	3	2	5	1
03	6	10	8	4	7	6	1
04	8	7	6	5	3	9	4
05	7	3	4	5	4	3	12
06	5	5	6	7	8	1	6

(i) Find out an allocation of operators to the old machines to achieve a minimum operation time.

(ii) Reset the problem with the new machine and find out the allocation of the operators to each machine and comment on whether it is advantageous to replace an old machine to achieve a reduction in operating time only.

(iii) How will the operators be reallocated to the machines after replacement? **[3+2.5+2.5]**

Question 9

(a) Harman Ltd. is selling 30,000 units of a product at ₹50 per unit. Fixed cost is ₹3,00,000 and variable cost if ₹25 per unit. The company proposes to increase selling price to ₹55 per unit. You are required to calculate Price Indifference Point and also suggest whether the company should implement this pricing proposal if it anticipated sale of 17,000 units. **[4]**

(b) Shobha Ltd. has the capacity of production of 80,000 units and presently sells 20,000 units at ₹50 each. The demand is sensitive to Selling Price and it has been observed that for every reduction of ₹10 in Selling Price, the demand is doubled.

Required:

(i) What should be the Target Cost at full capacity, if Profit Margin on Sale is 10%?

(ii) What should be the Cost Reduction Scheme if at present 40% of Cost is variable, with same % of profit?

(iii) If Rate of Return desired is 15%, what will be the maximum investment at full capacity?

[2+1+1]

(c) Explain the buyer power which influence on the price of the product? **[2]**