

Paper – 17 - Strategic Performance Management

This paper contains 10 questions, divide in three sections; Section A, Section B and Section C. In total 7 questions are to be answered.

From Section A, Question No. 1 is compulsory and answer any two questions from Section A (out of three questions – questions Nos. 2 to 4). From Section B, Answer any two questions (i.e. out of Question nos. 5 to 7). From Section C, Answer any two questions (i.e. out of question nos.8 to 10).

Students are requested to read the instructions against each individual question also. All workings must form part of your answer. Assumptions, if any, must be clearly indicated.

Section –A

[Question 1 is compulsory and answers any 2 from the rest. All questions carry equal marks]

1. Read the following case study and answer the following questions:

Over the past ten years, Walmart has become the world's largest and arguably most powerful retailer with the highest sales per square foot, inventory turnover, and operating profit of any discount retailer. Walmart owes its transition from regional retailer to global powerhouse largely to changes in and effective management of its supply chain.

Walmart began with the goal to provide customers with the goods they wanted when and where they wanted them. Walmart then focused on developing cost structures that allowed it to offer low everyday pricing. The key to achieving this goal was to make the way the company replenishes inventory the centerpiece of its strategy, which relied on a logistics technique known as cross docking. Using cross docking, products are routed from suppliers to Walmart's warehouses, where they are then shipped to stores without sitting for long periods of time in inventory. This strategy reduced Walmart's costs significantly and they passed those savings on to their customers with highly competitive pricing. Walmart then concentrated on developing a more highly structured and advanced supply chain management strategy to exploit and enhance this competitive advantage.

The main elements of a supply chain include purchasing, operations, distribution, and integration. The supply chain begins with purchasing. Purchasing managers or buyers are typically responsible for determining which products their company will sell, sourcing product suppliers and vendors, and procuring products from vendors at prices and terms that meets profitability goals.

Supply chain operations focus on demand planning, forecasting, and inventory management. Forecasts estimate customer demand for a particular product during a specific period of time based on historical data, external drivers such as upcoming sales and promotions, and any changes in trends or competition. Using demand planning to develop accurate forecasts is critical to effective inventory management. Forecasts are compared to inventory levels to ensure that distribution centers have enough, but not too much, inventory to supply stores with a sufficient amount of product to meet demand. This allows companies to reduce inventory carrying costs while still meeting customer needs.

Moving the product from warehouses or manufacturing plants to stores and ultimately to customers is the distribution function of the supply chain.

Supply chain integration refers to the practice of developing a collaborative workflow among all departments and components involved in the supply chain to maximize efficiencies and build a lean supply chain.

Walmart has been able to assume market leadership position primarily due to its efficient integration of suppliers, manufacturing, warehousing, and distribution to stores. Its supply chain strategy has four key components: vendor partnerships, cross docking and distribution management, technology, and integration.

Walmart's supply chain begins with strategic sourcing to find products at the best price from suppliers who are in a position to ensure they can meet demand. Walmart establishes

MTP_Final_Syllabus 2012_Dec2014_Set 2

strategic partnerships with most of their vendors, offering them the potential for long-term and high volume purchases in exchange for the lowest possible prices.

Suppliers then ship product to Walmart's distribution centers where the product is cross docked and then delivered to Walmart stores. Cross docking, distribution management, and transportation management keep inventory and transportation costs down, reducing transportation time and eliminating inefficiencies.

Technology plays a key role in Walmart's supply chain, serving as the foundation of their supply chain. Walmart has the largest information technology infrastructure of any private company in the world. Its state-of-the-art technology and network design allow Walmart to accurately forecast demand, track and predict inventory levels, create highly efficient transportation routes, and manage customer relationships and service response logistics.

Required:

- (a) Mention the objectives of supply chain Management.
- (b) Explain the importance of Supply Chain Management.
- (c) Discuss the benefits getting after the adoption of Supply Chain Management by Wal Mart.
- (d) Explain how Walmart's manage the Supply Chain Management.
- (e) Describe the component of Supply Chain Management.

[3+3+4+5+5]

2. (a) Reduce the following two-person zero-sum game to 2 x 2 order, and obtain the optimal strategies for each player and the value of the game

		Player B			
		B ₁	B ₂	B ₃	B ₄
Player A	A ₁	3	2	4	0
	A ₂	3	4	2	4
	A ₃	4	2	4	0
	A ₄	0	4	0	8

- (b) Describe the different perspectives of Balanced Scorecard.
- (c) "EVA is period-to-period computation, which can be used to monitor the process of value creation and record historically the growth of the enterprise. The MVA can be expressed as the present value of all EVAs." - Discuss the statement. **[10+5+5]**

3. (a) HP Ltd manufactures two parts 'A' and 'B' for Computer Industry.
- A: Annual Production and Sales of 1,00,000 units at a Selling Price of ₹100.05 per unit.
 - B: Annual Production and Sales of 50,000 units at a Selling Price of ₹150 per unit.
- Direct and Indirect Costs incurred on these two parts are as follows - (₹ in thousands)

Particulars	A	B	Total
Direct Material Cost (Variable)	4,200	3,000	7,200
Labour Cost (Variable)	1,500	1,000	2,500
Direct Machining Costs (See Note)	700	550	1,250
Indirect Costs:			
Machine Set Up Cost			462

MTP_Final_Syllabus 2012_Dec2014_Set 2

Testing Cost			2,375
Engineering Cost			2,250
Total			16,037

Note: Direct Machining Costs represent the cost of machine capacity dedicated to the production of each product. These costs are fixed and are not expected to vary over the long-run horizon.

Additional information is as follows -

Particulars	A	B
Production Batch Size	1,000 units	500 units
Set up time per batch	30 hours	36 hours
Testing time per unit	5 hours	9 hours
Engineering Cost incurred on each product	₹8,40,000	₹14,10,000

A foreign competitor has introduced product very similar to 'A'. To maintain the Company's share and profit, HP Ltd. has to reduce the price to ₹86.25. The Company calls for a meeting and comes up with a proposal to change design of product 'A'. The expected effect of new design is as follows:

- Direct Material Cost is expected to decrease by ₹5 per unit.
- Labour Cost is expected to decrease by ₹2 per unit.
- Machine time is expected to decrease by 15 minutes, previously it took 3 hours to produce 1 unit of 'A'. The machine will be dedicated to the production of new design.
- Set up time will be 28 hours for each set up.
- Time required for testing each unit will be reduced by 1 hour.
- Engineering Cost and Batch Size will be unchanged.

Required:

- (i) Company management identifies that cost driver for Machine Set-Up Costs is 'set up hours used in batch setting' and for Testing Costs is 'testing time'. Engineering Costs are assigned to products by special study. Calculate the full cost per unit for 'A' and 'B' using Activity-Based Costing.
 - (ii) What is the Mark-up on full cost per unit of A?
 - (iii) What is the Target cost per unit for new design to maintain the same mark up percentage on full cost per unit as it had earlier? Assume cost per unit of cost drivers for the new design remains unchanged.
 - (iv) Will the new design achieve the cost reduction target?
 - (v) List four possible management actions that the HP Ltd. should take regarding new design.
- (b) State the steps to be considered in strategies Bench Trending.
- (c) "EVA is period-to-period computation, which can be used to monitor the process of value creation and record historically the growth of the enterprise. The MVA can be expressed as the present value of all EVAs." - Discuss the statements.
- (d) Describe the objectives of Performance Appraisal. **[(3+1+1+3+2)+3+3+4]**

4. (a) List the Objectives of pricing Policy.

MTP_Final_Syllabus 2012_Dec2014_Set 2

- (b) The cost function is $C = 100 + q$, where the product is sold at ₹ 5 per unit. Determine break even sales and profit when 125 units are sold.
- (c) The total cost function of a firm $C = \frac{x^3}{3} - 5x^2 + 28x + 10$, where C is total cost and 'x' is the output. A tax @ ₹2 per unit of output is imposed and the producer adds it to his cost. If the demand function is given by $P = 2530 - 5x$, where 'P' is the price per unit of output, Find the profit maximizing output and the price at the level. [2+4+4+4+6]
- (d) The price (P) per unit at which company can sell all that it produces is given by the function $P(x) = 300 - 4x$. The cost function is $500 + 28x$, where 'x' is the number of units, find x, so that profit is maximum.
- (e) "Methods of pricing policy can be classified into 5 broad categories. One of them on that category is pricing Policies based on Market Conditions. There are 5 different types of market in Economics and certainly there are different types of pricing policies - Monopoly and Oligopoly is not different." – Explain the above statement.

Section – B

[Answer any 2 questions from this section]

- 5 (a) List the Advantages of these Data Envelopment Analysis.
- (b) "Data quality management incorporates a virtuous cycle in which continuous analysis, observation, and improvement lead to overall improvement in the quality of organizational information across the board. This virtuous cycle incorporates five fundamental data quality management practices, which are ultimately implemented using a combination of core data services." – Discuss the five fundamentals. [5+5]
6. (a) Describe about the Long Short Term Memory of Recurrent Artificial Neural Networks Topologies.
- (b) Describe about the different types of On-Line Analytical Processing. [5+5]
7. (a) Discuss the potential impact of Computers and MIS on different levels of management.
- (b) Mention any six objectives of Management Information Systems. [7+3]

Section C

[Answer any 2 questions from this section]

8. (a) Discuss the needs for Implementation of ERM.
- (b) State the objectives of Risk Management. [5+5]
9. Discuss Altman's Model and Explain the Five Z – Score Constituent Ratios. [10]
10. (a) Describe about the Dr. L.C. Gupta's Sickness Prediction Model under the corporate failure.
- (b) Discuss the Total Loss Distribution [6+4]