

**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]**

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

While the Whirlpool brand has long been associated with reliable household appliances, its delivery performance in 2000 was anything but reliable. In every measurable way, the old system was failing to meet expectations – inventory quantities were either too low or too high, or they had the wrong items in inventory, or they had the right inventory delivered to the wrong place. These inconsistencies were frustrating to retail partners and customers alike, and it was clear to executive leadership that these supply chain management issues had to be fixed.

Of course, this situation that Whirlpool found itself in did not come about overnight. In fact, many of problems that led to this crisis were a result of the company's geographic expansion and business acquisitions. With many different systems and procedures cobbled together into an unwieldy mess, the supply chain management team found that this complex, patchwork reporting made it exceedingly difficult to track and control all of Whirlpool's production and distribution processes.

Due to these old system issues, the company's overall availability rate – which measures how often a product is in the right place at the right time – was only 83% in 2000.\* Relative to industry standards, this was considered a dismal failure. The unfortunate irony of the situation is that availability was low even while total inventory levels were often too high. In terms of supply chain management, Whirlpool was at a competitive disadvantage.

To remedy these extensive problems, the Whirlpool supply chain management and IT teams took on the massive task of replacing their myriad production scheduling and distribution systems with a streamlined, standardized solution. The new system had a central platform for master scheduling, inventory planning and deployment planning, plus collaborative tools for forecasting and replenishment. This foundation allowed for great strides in supply chain management, with greater efficiency and cost savings across the board.

While the system improvements were rolled out in phases – starting in North America – the initial enhancements led to dramatic advances in supply chain management. Shortly after the new system went live, Whirlpool was able to reduce forecasting errors by 50% and inventories of finished appliances by more than 20%, while saving 5% on warehouse and transportation costs. Furthermore, its overall availability rate rose from 83% to 93%, and reached 97% within five years of implementation.\* These accomplishments demonstrate the impact skilled supply chain management personnel can have on a company's system-wide performance and profitability.

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### Required:

- (i) Discuss the challenges face the Whirlpool Company before implementing the Supply Chain Management systems
- (ii) Describe the benefits get after implementing the Supply Chain Management systems.
- (iii) Describe the strategy taken by the whirlpool company.
- (iv) List the component of supply chain Management. [5+5+5+5]

2. (a) R Enterprise is considering to replace or repair a particular machine, which has just broken down. Last year this machine costed ₹ 20,000 to run and maintain. These costs have been increasing in real terms in recent years with the age of the machine. A further useful life of 5 years is expected, if immediate repairs of ₹ 19,000 are carried out. If the machine is not repaired it can be sold immediately to realize about ₹ 5,000 (Ignore loss/gain on such disposal). Alternatively, the company can buy a new machine for ₹ 49,000 with an expected life of 10 years with no salvage value after providing depreciation on Straight line basis. In this case, running and maintenance costs will reduce to ₹ 14,000 each year and are not expected to increase much in real terms for a few years at least. R Enterprise regard a normal return of 10% p.a. after tax as a minimum requirement on any new investment. Considering Capital Budgeting Techniques, which alternative will you choose? Take corporate tax rate of 50% and assume that depreciation will be accepted for tax purpose also.
- Given cumulative present value of Re 1 p.a.at 10% for 5 years ₹ 3.791 ,10 years ₹ 6.145

- (b) The following information relates to budgeted operation of Division X of a manufacturing company

Particulars	Amount (₹)
Sales: (50,000 units of ₹ 8)	4,00,000
Less: Variable Cost @ ₹ 6 per unit	3,00,000
Contribution Margin	1,00,000
Less: Fixed Costs	75,000
Divisional Profit	25,000

The amount of divisional investment is ₹ 1,50,000 and the minimum desired rate of return on the investment is the cost of capital of 20%.

- (i) Calculate divisional expected ROI
- (ii) Calculate divisional expected RI
- (iii) Comment on the results of (i) and (ii)
- (iv) The divisional manager has the opportunity to sell 10,000 units at ₹ 7.50 per unit. Variable cost per unit would be the same as budgeted, but fixed costs would increase by ₹ 5,000. Additional investment of ₹ 20,000 would also be required. If the manager accepts the special order, by how much and in what direction would his residual Income change?

- (c) State the objectives of Transfer Pricing.

- (d) Discuss about the Limitations of the Value Chain Analysis [6+6+3+5]

- 3 (a) Discuss the role of the Management Accountant in Activity Based Management (ABM).
- (b) State the Importance of the Product Life Cycle Costing.

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- (c) The Parker Flower Shops promises its customers delivery within four hours on all flower orders. All flowers are purchased on the prior day and delivered to Parker by 8.00 the next morning. Parker's daily demand for roses are as follows :

Dozens of Roses	7	8	9	10
Probability	0.1	0.2	0.4	0.3

Parker purchases roses for ₹ 10.00 per dozen and sells them for ₹30.00. All unsold roses are donated to a local hospital. You are required to calculate the dozens of roses should order by Parker in the evening to maximize the profits and Optimal expected profits. **[7+7+6]**

4. (a) Discuss the parameters to measure the performance of Public Undertakings.
- (b) A radio manufacturer produces 'x' sets per week at total cost of ₹  $X^2 + 78x + 2500$ . He is a monopolist and the demand function for his product is  $x = \frac{(600 - P)}{8}$ , when the price is 'p' per set. Show that maximum net revenue is obtained when 29 sets are produced per week. What is the monopoly price?
- (c) A monopolist has demand curve  $x = 106 - 2p$  and average cost curve  $(AC) = 5 + x/50$ . The total revenue is  $(R) = xp$ , determine the most profitable output and maximum profit.
- (a) Distinguish between Total Quality Management (TQM) and Business Process Re-Engineering (BPR). **[6+5+5+4]**

### Section – B [Answer any 2]

5. (a) State the Technological and Operational factors of E-commerce. **[6+4]**  
(b) Discuss about the Data Availability.
6. (a) Describe about the Long Short Term Memory of Recurrent Artificial Neural Networks Topologies. **[5+5]**  
(b) Describe about the different types of On-Line Analytical Processing.
7. Define the following terms in the context of Supply chain Management:  
(a) Capacity Strategy, (b) Lead Time/ Cycle Time, (c) Preventative Maintenance, (d) Specifications. **[2.5 x4]**

### Section C [Answer any 2]

8. (a) "Risk Management Process refers to the process of measuring or assessing risk and then developing strategies to manage risk. In the risk management, some steps are taken up to minimize the risk"- Discuss the steps taken to minimize the risk. **[5+5]**  
(b) List the objectives of Generally Accepted Cost Accounting Principles [GACAP].
9. (a) Describe about the Partial Adjustment Process under the Corporate Bankruptcy Prediction Models. **[6+4]**  
(b) Discuss the benefits of Risk Mapping.
- 10 (a) Explain about the Risk Retention. **[6+4]**  
(b) Discuss the steps to be taken for preventing the Corporate Failures.