FINAL EXAMINATION

June 2017

P–17(SPM)
Syllabus 2012

Strategic Performance Management

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.
This question paper has been divided into 2 parts namely
Section-A (20 marks) and Section-B (80 marks)

Section–A

Answer Question 1, which is compulsory and carries 20 marks.

1. (a) The cost function of a firm is given by $C = x^3 - 4x^2 + 7x$. Find at what level of output, the average cost is minimum and what level will it be. 4

(b) Division A produces three products X, Y and Z and each product has an external market. The following data are available:

Particulars	X	Y	Z
External market price per unit (₹)	48	46	40
Variable cost of production for the Division A (₹)	33	24	28
Labour hours per unit (Division A)	3	4	2
Maximum external sales units	800	500	300

Determine the optimum Product-mix if the total labour hours available in division A is 3800 hours. 4

(c) Define the following terms in just a sentence:

(i) Generic Benchmarking

(ii) Dual Pricing

(iii) Quality Circle

(iv) TQM 4

(d) List the benefits of risk mapping. 4

(e) Briefly state the issues affecting the development of E-Commerce. 4

Section–B (80 marks)

Answer any *five* questions out of the seven questions. Each question carries 16 marks.

2. (a) Define "Transfer Pricing". What any Transfer Pricing System should aim to? 2+4

(b) Unique Industries Ltd. has two divisions, A and B. Division A manufactures Product X which it sells in outside market as well as to Division B which processes it to manufacture Z. The manager of Division B has expressed the opinion that the transfer price is too high and that it should be lowered down.

The two divisional managers are about to enter into discussion to resolve the conflict.

The following information is collected before the discussion.

Division A has been selling 40000 units to outsiders and 10000 units to Division B, all at ₹ 20 per unit. It is not anticipated that the demand will change. The variable cost is ₹ 12 per unit and the fixed costs are ₹ 2 lakh.

The manager of Division A anticipates that Division B will want a transfer price of ₹ 18. If he does not sell to Division B ₹ 35,000 of fixed costs and ₹ 1,50,000 of assets out of total assets of ₹ 8,00,000 can be avoided. The manager of Division A would have no control over the proceeds from the sale of the assets and is judged primarily on his rate of return.

(i) Should the manager of Division A transfer its products at ₹ 18 to Division B?

(ii) What is the lowest price that Division A should accept? Support your decision. 4+6

3. (a) A manufacturing company "SB Products" sells its output at ₹ 1,100 per unit. Due to competition, its competitors are likely to reduce price by 15%. SB Products want to respond aggressively by cutting price by 20% and expects that the present volume of 150000 units p.a. will increase to 200000. SB Products want to earn a 10% target profit on sales. Based on detailed value engineering, the comparative position is given below:

Particulars	Existing (₹)	Target (₹)
Direct material cost per unit	452	437
Direct manufacturing labour per unit	65	60
Direct machinery costs per unit	80	70
Direct manufacturing costs per unit	597	567
Manufacturing overheads:		
No. of orders (₹ 80 per order)	22,500	21,250
Testing hours (₹ 2 per hour)	4,500,000	3,000,000
Units reworked (₹ 100 per unit)	12,000	13,000

Manufacturing overheads are allocated using relevant cost drivers. Other operating costs per unit for the expected volumes are estimated as follows:

Research and Design	₹ 50
Marketing and customer service	₹ 130
	₹ 180

Required:

(i) Calculate target costs per unit and target costs for the proposed volume showing break-up of different elements.

(ii) Prepare target product profitability statement. 4+4

(b) Identify Key Roles for successful implementation of Six Sigma. Explain the implication of Six Sigma Process. 5+3

4. (a) MJ Ltd. provides you following information. In a purely competitive market, 10000 Tablets can be manufactured and sold and a certain profit is generated. It is estimated that 2000 Tablets need be manufactured and sold in monopoly market to earn the same profit. Profit under both the conditions is targeted at ₹ 2,00,000. The variable cost per Tablet is ₹ 100 and the total fixed cost is ₹ 37,000.

As a Management Accountant you are required to find out the unit selling price both under monopoly and competitive conditions. 10

(b) What is Game Theory? Discuss briefly its assumptions. 6

5. (a) A company is considering a Cost saving Project. This involves purchasing a machine costing ₹ 7,000, which will result in annual savings on wage costs of ₹ 1,000 and on material costs of ₹ 400. The following forecasts are made of the rates of inflation each year for the next 5 years:

Wages Cost	10%
Material Cost	5%
General prices	6%

The cost of capital of the company, in monetary terms is 15%.

Evaluate the projects, assuming that the machine has a life of 5 years and no scrap value.

Given: the Dcf @ 15%: 8

Year	1	2	3	4	5
Dcf @ 15%	0·870	0·756	0·658	0·572	0·497

(b) From the following information, calculate EVA:

Equity Share Capital (₹)	5,00,000
13% Preference Share Capital (₹)	2,00,000
Reserves and Surplus (₹)	6,00,000
Non-trade investments (Face value ₹ 1,00,000), Rate of interest	10%
20% Debentures (₹)	3,00,000
Profit before tax (₹)	3,00,000
Tax rate	40%
WACC (Weighted Average Cost of Capital)	13%

8

6. (a) Discuss about

(i) reduction of risk through diversification, and

(ii) benefits of diversification

in the context of Enterprise Risk Management. 4+4

(b) Identify symptoms indicating industrial sickness. 8

7. (a) You have been given the following pay-off matrix.

State of Nature	Probability	Do not expand ₹	Expand 200 units ₹	Expand 400 units ₹
High Demand	0·4	2,500	3,500	5,000
Medium Demand	0·4	2,500	3,500	2,500
Low Demand	0·2	2,500	1,500	1,000

What should be the decision, if we use Expected Monetary Value Criterion? 8

(b) Explain what do you mean by the term Target Pricing. Discuss briefly the manner in which Target Pricing is determined. 2+6

8. Write Short Notes on *any four* out of the following: 4×4

(a) Risk Management

(b) Total Productivity Management (TPM)

(c) Data Warehousing

(d) Requirements for the Balanced Scorecard Implementation Process and the benefits of adopting Balance Scorecard approach to Performance management.

(e) Factors influencing the pricing of a product.