

# **Paper-15: Business Strategy and Strategic Cost Management**

## PTP\_Final\_Syllabus 2012\_June2016\_Set 1

The following table lists the learning objectives and the verbs that appear in the syllabus learning aims and examination questions:

	<b>Learning objectives</b>	<b>Verbs used</b>	<b>Definition</b>
<b>LEVEL C</b>	KNOWLEDGE  What you are expected to know	List	Make a list of
		State	Express, fully or clearly, the details/facts
		Define	Give the exact meaning of
	COMPREHENSION  What you are expected to understand	Describe	Communicate the key features of
		Distinguish	Highlight the differences between
		Explain	Make clear or intelligible/ state the meaning or purpose of
		Identify	Recognize, establish or select after consideration
		Illustrate	Use an example to describe or explain something
	APPLICATION  How you are expected to apply your knowledge	Apply	Put to practical use
		Calculate	Ascertain or reckon mathematically
		Demonstrate	Prove with certainty or exhibit by practical means
		Prepare	Make or get ready for use
		Reconcile	Make or prove consistent/ compatible
		Solve	Find an answer to
		Tabulate	Arrange in a table
	ANALYSIS  How you are expected to analyse the detail of what you have learned	Analyse	Examine in detail the structure of
		Categorise	Place into a defined class or division
		Compare and contrast	Show the similarities and/or differences between
		Construct	Build up or compile
		Prioritise	Place in order of priority or sequence for action
		Produce	Create or bring into existence
	SYNTHESIS  How you are expected to utilize the information gathered to reach an optimum conclusion by a process of reasoning	Discuss	Examine in detail by argument
		Interpret	Translate into intelligible or familiar terms
Decide		To solve or conclude	
EVALUATION  How you are expected to use your learning to evaluate, make decisions or recommendations	Advise	Counsel, inform or notify	
	Evaluate	Appraise or asses the value of	
	Recommend	Propose a course of action	

## Paper-15: Business Strategy and Strategic Cost Management

Full Marks: 100

Time Allowed: 3 Hours

This paper contains 4 questions. All questions are compulsory, subject to instruction provided against each questions. All workings must form part of your answer. Assumptions, if any, must be clearly indicated.

### Question 1:

[20 Marks]

Read the case and answer the following questions

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.
- (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.
- (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.

[6+6+8 = 20]

**Question 2: Answer any two questions**

[30 Marks]

**Question 2(a):**

- (i) "Strategic planning may be done in levels." Comment.
- (ii) Distinguish between "Strategies" and "Tactics".
- (iii) Write a short note on "Value Creation"

[6+6+3 = 15]

**Question 2(b):**

- (i) State what you understand by "Stability Strategies". Do you think there are specific situations and reasons to undertake them.
- (ii) Discuss in brief about 'Market challengers'.

[(3+7) + 5 = 15]

**Question 2(c):**

- (i) Explain 'Vertical Integration Strategy' and list out benefits of undertaking it.
- (ii) Enumerate the risks associated with Cost Leadership Strategy.

[(4+6) + 5=15]

**Question 3:**

[20 Marks]

Read the case and answer the following questions:

Timex makes digital watches. Timex is preparing a product life-cycle budget for a new watch, MX3. Development on the new watch is to start shortly. Estimates for MX3 are as follows:

Life-cycle units manufactured and sold	4,00,000
Selling Price per watch (₹)	400
<b><u>Life-cycle costs</u></b>	
R&D and design costs (₹)	1,00,00,000
<b><u>Manufacturing</u></b>	
Variable Cost per watch (₹)	150
Variable Cost per Batch (₹)	6,000
Watches per Batch	500
Fixed Costs (₹)	1,80,00,000

**Marketing**

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Variable cost per watch (₹)	32
Fixed Costs (₹)	1,00,00,000

### Distribution

Variable Cost per batch (₹)	2800
Watches per batch	160
Fixed Costs (₹)	72,00,000
Customer Service per watch (₹)	15

Ignore the time value of money.

### Required:

1. Calculate the budgeted life-cycle operating income for the new watch.
2. What percentage of the budgeted total product life-cycle costs will be incurred by the end of the R&D and design stages?
3. An analysis reveals that 80% of the budgeted total product life-cycle costs of the new watch will be locked in at the R&D and design stages. What are the implications for managing MX3's costs?
4. Timex's Market Research Department estimates that reducing MX3's price by ₹30 will increase life-cycle unit sales by 10%. If unit sales increase by 10%, Timex plans to increase manufacturing and distribution batch sizes by 10% as well. Assume that all variable costs per watch, variable costs per batch and fixed costs will remain the same. Should Timex reduce MX3's price by ₹ 30? Show your calculations.

[7+3+3+7 = 20]

### Question 4: Answer any two questions

[30 Marks]

#### Question 4(a)(i):

- A. Radha Tours and Travels Ltd, comprises of three divisions viz. Buses, Taxis and Maintenance. Buses division operates a fleet of 8 vehicles on four different routes in Kolkata city. Each vehicle has a capacity of 30 passengers. There are two vehicles assigned in each route, and each vehicle completes five return journeys per day for six days in each week, for 52 weeks a year. The division is considering its plans for the year ending on 31<sup>st</sup> March, 2016.

Data in respect of each route is given below:

Particulars	North	South	West	East
Return Travel distance (Kms)	42	36	44	38
Average number of passengers:				
• Adult	15	10	25	20
• Children	10	8	5	10
Return Journey Fares (₹):				

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• Adult	3.00	6.00	4.50	2.20
• Children	1.50	3.00	2.25	1.10

The following cost estimates have been made:

• Fuel and Repairs per kilometer	₹ 0.1875
• Drivers wages per vehicle per work-day	₹ 120
• Vehicles Fixed Cost per annum	₹ 2,000
• General Fixed Cost per annum	₹ 3,00,000

Required:

1. Prepare a statement showing the planned contribution of each route and the Total contribution and profit of the buses division for the year ending 31<sup>st</sup> March, 2016.
  2. Calculate the effect on contribution of route North of increasing the adult fare to ₹ 3.75 per return journey if this reduces the number of adult passengers using this route by 20% and assuming that the ratio of Adults to Child passengers remain same. Recommend whether or not the buses division should amend the Adult fare on route North.
- B. The Maintenance Division comprises 2 fitters who are paid an annual salary of ₹ 15,808 each, and a Transport Supervisor who is paid an annual salary of ₹ 24,000. The work of Maintenance Division is to repair and service the buses and taxis of the company. In total there are 8 buses and 6 taxis which need to be maintained.

Each Vehicle requires routine servicing on a regular basis on completion of 4,000 kilometers. Every two months each vehicle is fully tested for safety. The Maintenance Division is also responsible for carrying out any breakdown work, though the amount of regular servicing is only 10% of the Division's work.

The annual distance travelled by each taxi is 1,28,000 kilometers. The projected Material Costs associated with each service and Safety Check are ₹ 100 and ₹ 75 respectively.

The Directors of the Company are concerned over the efficiency and cost of its own Maintenance Division. The Company invited its Local Garage to tender for the Maintenance Contract for its fleet and the quotation received was for ₹ 90,000 per annum including parts and labour.

If the Maintenance Contract is awarded to the Local Garage, then the Maintenance Division will be closed down, and the two fitters made redundant with a redundancy payment being made of 6 months salary to each fitter. The Transport Supervisor will be retained at the same salary and would be deployed elsewhere in the Group instead of recruiting a new employee at an annual salary cost of ₹ 20,000.

Required:

1. Calculate the cost of the existing maintenance function.

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2. Advise the company whether to award the Maintenance Contract to the Local to the Local Garage on financial grounds.

$$[(4+2) + (3+3) = 12]$$

### Question 4(a)(ii):

Do you think that prices can be fixed above Marginal Cost but below Total Costs? 3

### Question 4(b)(i):

Jyoti Ltd has a dedicated set of Production Facilities for Component X. The Company operates a JIT system and no Stocks of Materials, WIP or Finished Goods are held.

At the beginning of Year 1, the planned information relating to the production of Component X through the dedicated facilities is as follows -

1. Every unit of Component X requires 3 units of Material A at ₹ 18 per unit and 2 units of Material B at ₹ 9 per unit.
2. Variable Cost per unit of Component X (excluding materials) is ₹ 15 per unit worked on.
3. Fixed Costs of the dedicated facilities for Year 1: ₹1,62,000.
4. It is anticipated that 10% of the units of X worked on in the process will be defective and will be scrapped.
5. It is estimated that customers will require replacement (free of charge) of faulty units of Component X at the rate of 2% of the quantity invoiced to them in fulfillment of orders.

The Company is pursuing a TQM Philosophy. Consequently, all losses will be treated as abnormal in recognition of a zero defect policy and will be valued at Variable Cost of Production.

Actual figures for Years 1 to 3 for Component X are shown below. No changes have occurred from the planned price levels from Materials, Variable Overhead or Fixed Overhead Costs.

Particulars	Year 1	Year 2	Year 3
Invoiced to Customers (units)	5,400	5,500	5,450
Worked on in the process (units)	6,120	6,200	5,780
Total Costs:			
Materials A and B	₹ 4,40,640	₹ 4,46,400	₹ 4,16,160
Variable Costs of Production (excluding Materials)	₹91,800	₹ 93,000	₹86,700
Fixed Costs	₹1,62,000	₹ 1,77,000	₹1,85,000

Required:

1. For Year 1:

- (a) Prepare an analysis of the actual figures relating to Year 1 to show that Year 1 Actual Results were achieved at the planned level in respect of - (i) quantities and losses, and (ii) Unit Cost Levels for Material and Variable Costs.

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(b) Use your analysis from (1) above, to calculate the amount of the Planned Level of each of Internal Failure and External Failure Costs for Year 1.

2. For Years 2 and 3:

Actual Free Replacement of Component X to Customers were 170 units and 40 units in Years 2 and 3 respectively. The Company authorized additional expenditure during Years 2 and 3 as follows:

- Year 2: Equipment Accuracy Checks ₹ 10,000 and Staff Training Costs ₹ 5,000.
- Year 3: Equipment Accuracy Checks ₹ 10,000, Inspection Costs ₹ 5,000, Staff Training Costs ₹ 3,000 on extra Planned Maintenance of Equipment.

(a) Prepare an analysis for each of Year 2 and 3 which reconcile the number of components invoiced to customers with those worked-on in the production process. Show the change from the planned quantity of process losses and changes from the planned quantity of replacement of faulty components in customer hands, in the above analysis.

(b) Prepare a Cost Analysis for each of Years 2 and 3 which shows actual Prevention Costs, Appraisal Costs Internal Failure Costs, and External Failure Costs.

3. Prepare a report which explains the meaning and inter-relationship of figures in Years 1 to 3 as given above, and in your analysis in (1), and (2) above. The report should also give examples of each cost type and comment on their use in the monitoring and progressing of the TQM Policy being pursued by the Company.

[(3+1) + (2+2) + 4]

### Question 4(b)(ii):

From the following information, calculate Labour Cost Variance, Labour Rate Variance and Labour Efficiency Variance:

Standard rate per hour – ₹ 4.00

Standard time per unit of output - 20 hours

Units produced - 500

Actual hours worked - 12,000

Actual labour cost – ₹ 38,400.

3

### Question 4(c)(i):

A Car Rental Agency has collected the following data on the demand for five-seater vehicles over the past 50 days.

Daily Demand	4	5	6	7	8
No. of days	4	10	16	14	6

The Agency has only 6 cars currently.

1. Use the following 5 Random Numbers to generate 5 days of demand for the Rental Agency.  
Random Nos: 15, 48, 71, 56, 90
2. What is the average number of Cars rented per day for the 5 days?
3. How many rentals will be lost over the 5 days?

3

**Question 4(c)(ii):**

A Company has two divisions. Division A and Division B. Both divisions of the Company manufacture the same product but located at two different places. The annual output of Division A is 6,000 tons (at 80% capacity) and that of Division B is 7,500 tons (at 60% capacity). The basic Raw Material required for production is available locally at both the places, but at Division A, it is limited to 4,000 tons per annum at the rate of ₹ 100 per ton, at Division B, it is limited to 8,000 tons per annum at the rate of ₹ 110 per ton. Any additional requirement of Material will have to be purchased at a rate of ₹ 125 per ton from other markets at either of division. Variable Costs per ton at each division remain constant. For every 1,000 tons of output, 800 tons Raw Material is required. The details of other costs of the divisions are as follows:

Particulars	Division A	Division B
Other Variable Costs of output (₹)	122 per ton	120 per ton
Fixed Cost per annum (₹)	3,80,000	6,00,000

**Required:**

1. Calculate Variable Cost per ton for each division's product and decide ranking in order of preference.
2. The Company desires to fully utilize the available local supplies of Raw Material to save the Overall Variable Cost of production, keeping the total production of both the divisions putting together is the same as at present level. Calculate the quantity of production (output) that could be transferred between the two divisions and overall saving in Variable Cost.
3. After considering the option (2), how the balance capacity should be utilized, if the Company is working at 100% capacity, and also calculate Selling Price per ton, if Company wants a mark-up 10% on full cost of each division's product.

[4 + 4 + 4 = 12]