

PAPER 5 : COST MANAGEMENT**November 1999**

Question No.1 is compulsory

Answer any four questions from the rest.

Working notes should form part of the answer.

Question 1

- (a) Discuss the relationship between Angle of Incidence, Break-even Level and Margin of Safety. **(8 Marks)**
- (b) Satish Enterprises are leading exporters of Kid's Toys. J Ltd. of U.S.A. have approached Satish Enterprises for Exporting a special toy named "Jumping Monkey". The order will be valid for next three years at 3,000 toys per month. The export price of the toy will be \$4.

Cost data per toy is as follows :

	Rs.
Materials	60
Labour	25
Variable overheads	20
Primary packing of the toy	15

The toys will be packed in lots of 50 each. For this purpose a special box, which will contain the 50 toys will have to be purchased, cost being Rs. 400 per box.

Satish Enterprises will also have to import a special machine for making the toys. The cost of the machine is Rs. 24,00,000 and duty thereon will be at 12%. The machine will have an effective life of 3 years and depreciation is to be charged on straight line method. Apart from depreciation, annual fixed overheads is estimated at Rs. 4,00,000 for the first year with 6% increase in the second year. Fixed overheads are incurred uniformly over the year.

Assuming the average conversion rate to be Rs. 50' per \$, you are required to :

- (i) Prepare a monthly and yearly profitability statements for the first year and second year assuming the production at 3,000 toys per month. **(6 Marks)**
- (ii) Compute a monthly and yearly break – even units in respect of the first year. **(4 Marks)**
- (iii) In what contingency can there be a second break even point for the month and for the year as a whole? **(4 Marks)**
- (iv) Have you any comments to offer on the above? **(2 Marks)**

Question 2

- (a) Explain the concept of Relevant Costs. **(5 Marks)**
- (b) Mention any four important factors to be considered in Marginal Costing Decisions. **(4 Marks)**
- (c) Ranka Builders has been offered a contract by Excel Ltd. to build for it five special Guest Houses for use by top management. Each Guest House will be an independent one. The contract will be for a period of one year, and the offer price is Rs. one crore. In addition, Excel Ltd. will also provide 2 grounds of land free of cost for purpose of construction. The Chief Accountant of Ranka Builders has prepared an estimate on the basis of which he has advised that the contract should not be accepted at the price offered. His estimate was as follows: **(10 Marks)**

	Rs in Lacs
Land (3 Grounds at Rs. 20 lacs each)	60
Drawings and Design	7
Registration	10
Materials:	
Cement and Sand	6
Bricks and Tiles	4
Steel	10
Others (including interior decoration)	10
Labour -Skilled	12

Unskilled	8
Supervisor's Salary	5
Overheads General	12
Depreciation	6
Total Cost	150

The Accountant also provides the following information :

Land : The total requirement of land is 3 grounds costing Rs.20 lacs per ground. Excel Ltd. will provide 2 grounds free of cost.

Drawing and Design: These have already been prepared and 50% of the cost has already been incurred.

Materials:

- (i) Cement and sand are already in stock and are in regular use. If used for this contract, they have to be replaced at a cost of Rs. 8 lacs.
- (ii) Bricks and tiles represent purchases made several months before for a different contract. They could be sold readily for a net Rs. 5 lacs after meeting all further expenses.
- (iii) Others: Materials worth Rs. 2 lacs relating to interior decoration are in stock for which no alternative use is expected in the near future. However they can be sold for Rs. 1 lac.

Labour:

- (i) Skilled workers will be transferred to this project from another project. The Project Manager claimed that if the men were returned to him, he could have earned the company an additional Rs. 2 lacs in terms of profits.
- (ii) The supervisor undertakes various tasks in the sites and his pay and continuity of employment will not be affected by the new contract. If the contract is taken, he will devote half of his time.

Overheads :

- (i) The equipment that would be used on the contract was bought one year before for Rs. 30 lacs and is expected to last for five years. It can also be used on other contracts and the current replacement price will be Rs. 32 lacs and in a year's time it will be Rs. 25 lacs.
- (ii) The general overheads includes both specific and absorbed overheads. If the contract is not undertaken, Rs. 4 lacs of the same can be avoided.

Ranka Builders has also on hand another project, which would not be executed if the contract from Excel Ltd. were to be accepted. The estimated profit on that project is Rs. 10 lacs.

In the light of information given above, you are required to indicate with reasons whether the contract from Excel Ltd. should be accepted or not.

Question 3

- (a) "Transfer pricing is a widely debated and contested topic"-Discuss. (5 Marks)
- (b) What should be the basis of transfer pricing, if unit variable cost and unit selling price are not constant ? (4 Marks)
- (c) Chum Chum Ltd. is about to introduce a new product with the following estimates:

Price per Unit in Rupees	Demand (in thousand units)
30-00	400
31-50	380
33-00	360
34-50	340
36-00	315
37-50	280
39-00	240

Cost

Direct material	Rs.12 per unit
Direct labour	Rs.3 per unit

Variable overhead	Rs.3 per unit
Selling expenses	10% on sales
Fixed production overheads	Rs.14,40,000
Administration expenses	Rs.10,80,000

Judging from the estimates, determine the tentative price of the new product to earn maximum profit

Question 4

- (a) Explain the concept of discretionary costs. Give three examples. **(4 Marks)**
- (b) Discuss, how control may be exercised over discretionary costs. **(5 Marks)**
- (c) Veejay Ltd. makes and sells two products, Vee and Jay. The budgeted selling price of Vee is Rs. 1,800 and that of Jay is Rs. 2,160. Variable costs associated, with producing and selling the Vee are Rs. 900 and with Jay, Rs. 1,800. Annual fixed production and selling costs of Veejay Ltd. are Rs. 88,000. The company has two production / sales options. The Vee and Jay can be sold either in the ratio of two Vees to three Jays or in the ratio of one Vee to two Jays. What will be the optimal mix and why? **(10 Marks)**

Question 5

- (a) Mention the causes that give rise to labour rate variance. **(5 Marks)**
- (b) Following is the standard cost card of a component: **(14 Marks)**

Materials	2 units at Rs.15	Rs.30
Labour	3 hours at Rs.20	Rs.60
Total overheads	3 hours at Rs.10	Rs.30

During a particular month 10,000 units of the component were produced and the same was found to be at 60% capacity of the budget. In preparing the variance report for the month, the cost accountant gathered the following information:

Labour	Rs.6,50,000
Variable overheads	Rs.2,00,000
Fixed overheads	Rs.3,00,000
Material price variance	Rs.70,000 (A)
Material cost variance	Rs.50,000 (A)
Labour rate variance	Rs.50,000 (F)
Fixed overhead expenditure variance	Rs.50,000 (A)

You are required to prepare from the above details :

- (1) Actual material incurred.
- (2) Standard cost of materials actually consumed
- (3) Labour efficiency variance
- (4) Variable OH efficiency variance
- (5) Variable OH expenditure variance
- (6) Fixed OH efficiency variance
- (7) Fixed OH capacity variance
- (8) Fixed OH volume variance.

Question 6

- (a) Distinguish between Cost Control and Cost Reduction. **(6 Marks)**
- (b) Product "A" takes five hours to produce on a particular machine and it has a selling price of Rs.50 and a marginal cost of Rs.35. **(6 Marks)**
On the same machine, another product "B" can be made at two hours at a marginal cost of Rs.5 per unit. Supplier's price of product "B" is Rs.10 per unit.

Assuming that machine hour is the key factor, advise whether product "B" could be bought out or manufactured.

- (c) R Ltd., will produce 3,00,000 kgs of S and 6,00,000 kgs of Y from an input of 9,00,000 kgs of raw material Z. **(7 Marks)**

The selling price of S is Rs.8 per kg and that of Y is Rs.6 per kg.

Processing costs amount to Rs.54 lacs per month as under:

Raw material Z 9,00,000 kgs at Rs.3 per kg	Rs.27,00,000
Variable process costs	Rs.18,00,000
Fixed processing costs	<u>Rs.9,00,000</u>
Total	<u>Rs.54,00,000</u>

There is an offer to purchase 60,000 kgs of Y additionally at a price of Rs.4 per kg. The existing market for Y will not be affected by accepting the offer. But the price of S is likely to be decreased uniformly on all sales.

Find the minimum reduced average price for S to sustain the increased sales.