

INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS OF PAKISTAN



Fall (Winter) 2008 Examinations

Friday, the 21st November 2008

MANAGEMENT ACCOUNTING – DECISION MAKING – (S-502)

Stage- 5

Time Allowed – 2 Hours 45 Minutes

Maximum Marks – 90

- (i) Attempt all questions.
- (ii) Answers must be neat, relevant and brief.
- (iii) In marking the question paper, the examiners take into account clarity of exposition, logic of arguments, effective presentation, language and use of clear diagram/ chart, where appropriate.
- (iv) Read the instructions printed on the top cover of answer script CAREFULLY before attempting the paper.
- (v) Use of non-programmable scientific calculators of any model is allowed.
- (vi) DO NOT write your Name, Reg. No. or Roll No. anywhere inside the answer script.
- (vii) Question No.1 – “Multiple Choice Question” printed separately, is an integral part of this question paper.

Q. 2 (a) Explain ‘discretionary fixed costs’ and ‘committed fixed costs’. **Marks**
05

(b) Kidco Bike Company manufactures different models of kids’ bicycles. The budget in respect of silver model for the month of December 2008 is as under:

Budgeted output	40,000 units		
	Rs. in ‘000’	Rs. in ‘000’	Rs. in ‘000’
Net sales			350,000
Variable costs:			
Materials	132,000		
Labour	26,000		
Direct expenses	62,000	220,000	
Specific fixed cost	45,000		
Allocated fixed cost	56,250	101,250	
Total cost			321,250
			28,750

Required:

Calculate the following:

- (i) Profit with 10% increase in selling price and a 10% reduction in sales volume. 05
- (ii) Volume to be achieved to maintain the original profit after a 10% rise in material cost, at the originally budgeted selling price per unit. 05

PTO

Q. 3 (a) Outline the merits and demerits of mathematical programming and mathematical modeling in financial planning.

07

(b) M/s Deltex Limited is engaged in the manufacture of consumer products, has developed a special glue called “Delglue” to utilize its spare production capacity. Delglue is to be sold in tubes of 50ml capacity to distributors packed in cartons of 40 tubes at Rs.1,200 per carton. The company estimates sales of 200,000 tubes per month at the cost estimates based on this volume of production as under:

	Rs. per carton
Direct materials	500
Direct wages	300
Variable overhead	300
Allocated fixed overhead	60
Total	1,160

The company expects that in course of time the sales can be increased to 300,000 tubes per month and ultimately to 500,000 tubes per month. The sales of Delglue require a special tube manufacturing capacity. The company has a machine which is capable of producing 200,000 empty tubes of the required size per month and this machine is at present idle. It can be used for producing the empty tubes required for packing Delglue.

Alternatively, the company can purchase empty tubes from the market at a cost of Rs.450 per 100 tubes. In that event, there will be a saving of 20% in materials cost and 10% in labour and overhead cost of Delglue estimated above.

If the company however, desires to manufacture the empty tubes in excess of 200,000 tubes, a new tube making machine will have to be installed involving a fixed overhead of Rs.200,000 per month. The capacity of the new machine is 500,000 empty tubes per month.

Required:

- (i) Prepare statements to show whether the company should make or buy empty tubes at each of the three levels of production of Delglue of 200,000, 300,000 and 500,000 empty tubes per month.
11
- (ii) At what volume of sales of Delglue will the company find it justifiable to install the new empty tube manufacturing machine.
04
- (iii) Prepare a statement to show the overall profit at the three volume of production and sales of Delglue, viz., 200,000, 300,000 and 500,000 tubes based on your decision at (i) above to make or buy the empty tubes.
05

Q.4 The Businet newspaper group is to commence publication of a weekly supplement called Bizcom. They have estimated that printing cost will be as follows:

No. of copies	5,000	6,000	7,000	8,000	9,000
Cost (Rs.)	6,250	7,200	8,310	9,200	9,500

Additional cost will be Re.0.50 as delivery cost for each copy ordered and a 15% commission payable on each copy sold. Any unsold copies are considered worthless. The management has as yet not decided on a selling price for the supplement and has evaluated that the demand will be as follows at the following prices:

<u>Prices (Rs.)</u>	<u>Demand (copies)</u>
2.75	9,000
3.00	8,000
3.25	7,000
3.50	6,000
3.75	5,000

Required:

- (a) Calculate the number of copies that the management should order and the selling price that it should set. 10
- (b) Assuming that 9,000 copies had been ordered and the selling price set at Rs.3.25, advise the management whether to accept an upcountry order at Rs.1.25 a copy for 2,000 copies (demand is expected to fall by 10% as a result of accepting the offer). Show your working notes. 02

Q. 5 K & J Burger has grown to over 200 stores within the past five years, 80% of which are franchised (independently owned). Two of the company operated stores (out of 40 stores) – North-side store and South-side store are among the fastest growing stores. Both are considering expanding their menus to include pizza. Installation of the necessary ovens and purchase of the necessary equipment would cost Rs.180,000 per store.

The current investment in the North-side store totals Rs.890,000. Store revenues are Rs.1,100,500 and expenses are Rs.924,420. Expansion of North-side menu should increase profit by Rs.30,600.

The current investment in the South-side store totals Rs.1,740,000. The store's revenues are Rs.1,760,800 and expenses are Rs.1,496,680. Adding pizza to the menu should increase South-side store's profit by Rs.30,600.

K & J Burger evaluates its managers based on return on investment. Managers of individual stores have decision rights over the pizza expansion.

Required:

- (a) Using the given data, calculate the return on investment for both stores for the expansion projects and for the stores after expansion. 07
- (b) Assuming a 14% cost of capital, calculate residual income for both stores before and after the potential expansion. 06
- (c) Will the K & J Burger stores choose to expand? How would the answer change if the stores were franchised units owned by value-maximizing investors? 07

- Q. 6** Royal Engineering is considering the introduction of a new product which will have a life of five years. Two alternative methods of promoting the product have been defined as under:

Alternative - 1:

This option will involve employing a large number of agents. An immediate expenditure of Rs.2,500,000 will be required to advertise the product. This will produce net annual cash inflows of Rs.1,500,000 at the end of each year. However, the agents will have to be paid Rs.250,000 each year. On termination of the contract, the agents will have to be paid a lump sum of Rs.500,000 at the end of the fifth year.

Alternative - 2:

Under this alternative, the company will not employ agents but will sell directly to the consumers. The initial expenditure of advertising will be Rs.1,250,000. This will bring in cash inflows at the end of each year of Rs.750,000. However, this alternative will involve out-of-pocket cost for sales administration to the extent of Rs.250,000. The company also proposes to allocate fixed cost worth Rs.100,000 per year to this product, if this alternative is pursued.

(You may assume that the firm's cost of capital is 20% per annum).

Required:

- (a) Advise the management as to the best method of promotion to be adopted. 09
- (b) Calculate the internal rate of return (IRR) for Alternative-2. 07

Present value factors

Year	18%	19%	20%	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
1	0.847	0.840	0.833	0.826	0.820	0.813	0.806	0.800	0.794	0.787	0.781	0.775	0.769
2	0.718	0.706	0.694	0.683	0.672	0.661	0.650	0.640	0.630	0.620	0.610	0.601	0.592
3	0.609	0.593	0.579	0.564	0.551	0.537	0.524	0.512	0.500	0.488	0.477	0.466	0.455
4	0.516	0.499	0.482	0.467	0.451	0.437	0.423	0.410	0.397	0.384	0.373	0.361	0.350
5	0.437	0.419	0.402	0.386	0.370	0.355	0.341	0.328	0.315	0.303	0.291	0.280	0.269

Cumulative present value factors

Year	18%	19%	20%	21%	22%	23%	24%	25%	26%	27%	28%	29%	30%
1	0.847	0.840	0.833	0.826	0.820	0.813	0.806	0.800	0.794	0.787	0.781	0.775	0.769
2	1.566	1.547	1.528	1.509	1.492	1.474	1.457	1.440	1.424	1.407	1.392	1.376	1.361
3	2.174	2.140	2.106	2.074	2.042	2.011	1.981	1.952	1.923	1.896	1.868	1.842	1.816
4	2.690	2.639	2.589	2.540	2.494	2.448	2.404	2.362	2.320	2.280	2.241	2.203	2.166
5	3.127	3.058	2.991	2.926	2.864	2.803	2.745	2.689	2.635	2.583	2.532	2.483	2.436

THE END