

INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS OF PAKISTAN



7th Comprehensive Examination

Sunday, the 8th February 2009

Time Allowed – 2 Hours

Maximum Marks – 60

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- (i) Attempt both the cases 1 and 2 that carry 30 marks each.
 - (ii) Answers must be neat, relevant and brief.
 - (iii) In marking the question paper, the examiners take into account the clarity of exposition, logic of arguments, effective presentation, language and use of clear diagram or 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 calculator of any model is allowed.
 - (v) DO NOT write your Name, Reg. No. or Roll No. anywhere inside the answer script.
 - (vi) Question No.1 – “Multiple Choice Question” printed separately, is an integral part of this question paper.
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CASE # 1

Marks

Management of a manufacturing company is reviewing the profitability of its four products. Several proposals have been considered regarding various product mix and price changes. Advise the management as to which one of the proposals is most profitable as given hereunder (show all your workings):

Proposal - 1. Product C is discontinued.

Proposal - 2. Product C is discontinued and a consequent loss of customers results in a decrease of 200 units in sales of product B.

Proposal - 3. Product C's sales price is increased to Rs.640, and the number of units sold decreases to 1,500 with no effect on the other products.

Proposal - 4. A new product E is introduced and product C is discontinued with no effect on the other products.

The total variable cost per unit of product E would be Rs.644, and 1,600 units can be sold at Rs.760 each. The plant in which product C is produced can be utilized to manufacture product E.

Proposal - 5. The output of product A is reduced to 500 units (to be sold at Rs.960 each) and output of product D is increased to 2,500 units (to be sold at Rs.840 each).

It may be noted that part of the plant in which product A is produced can easily be adapted to manufacture product D, but changes in quantities requires changes in the sales price as suggested.

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Proposal - 6. The output of product A is increased by 1,000 units to be sold at Rs.800 each by adding a second shift.

In order to achieve the increased production, higher wages must be paid, thus increasing the variable cost of goods sold per unit to Rs.280 for each additional unit.

Relevant data for calculating effects of each proposal is as under:

(In Rupees)

Products	A	B	C	D	Total
Particulars					
Sales	800,000	1,440,000	1,008,000	1,760,000	5,008,000
Cost of goods sold	380,000	564,480	1,117,440	1,480,000	3,541,920
Gross profit	420,000	875,520	(109,440)	280,000	1,466,080
Operating expenses	159,200	238,080	226,080	337,600	960,960
Profit before income tax	260,800	637,440	(335,520)	(57,600)	505,120

Units sold (Nos.)	1,000	1,200	1,800	2,000
Sales price per unit (Rs.)	800	1,200	560	880
Variable cost of goods sold per unit (Rs.)	200	240	520	480
Variable operating expenses per unit (Rs.)	93.60	100	80	96

The total fixed cost is not expected to fluctuate as a result of changes under consideration.

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CASE # 2

A company is using a machine for last two (2) years. At the end of second year of its operation, management of the company felt that increasing market demand could not be met with due to lesser capacity of existing machine. The management has received a proposal to purchase similar machine of enhanced production capacity. The particulars of new proposed machine are given below as compared to existing machine:

Particulars	Existing machine	New machine
Purchase price (Rs.)	480,000	800,000
Estimated life (years)	6	4
Salvage value	Nil	Nil
Annual operating hours	2,000	2,000
Selling price per unit (Rs.)	20	20
Output per hour (units)	15	30
Material cost per unit (Rs.)	4	4
Labour cost per hour (Rs.)	40	80
Consumable stores per year (Rs.)	4,000	10,000
Repairs and maintenance per year (Rs.)	18,000	12,000
Working capital (Rs.)	50,000	80,000

- The market value of existing machine is assessed at Rs. 200,000 with no salvage value having remaining useful life of four (4) years.
- The company uses the reducing balance method of depreciation @ 25% per annum.
- Tax rate of the company is 30%.
- Company's required rate of return is 15%.

Required:

Advise the management regarding replacement of the existing machine with new one. (Show all computations).

Present value factors											
Year	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162

Cumulative present value factors											
Year	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192

THE END