Sr. No. **0001**

INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS OF PAKISTAN

6th Comprehensive Examination

Sunday, the 23rd November 2008

Time Allowed – 2 Hours **Maximum Marks – 60**

(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.

Marks

CASE # 1

A firm is planning to manufacture a new product. They have prepared the following estimate of profit for the first year of its manufacturing:

	Rs. '000'	Rs. '000'
Sales - 9,000 units @ Rs.192 per unit		1,728
Cost of goods sold:		
Labour - 40,000 hours @ Rs.21 per hour	840	
Materials and other variable costs	390	
Depreciation	270	
Total	1500	
Less: ending inventory	150	1,350
Net profit		378

(i) The product will be manufactured for the duration of four (4) years.

(ii) Annual sales volume will remain same over the entire period at 9,000 units.

(iii) Production is estimated at 10,000 units in the first year, 9,000 units each in year two and three and 8,000 units in year four.

(iv) Debtors at the end of each year would be 20% of sales during the year.

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(v) Creditors would be 10% of materials and other variable costs. **Marks**

(vi) If sales differed from the forecast level, inventories would be adjusted in proportion.

(vii) Depreciation relates to the machinery which would be purchased especially for manufacturing of new product and is calculated on the straight-line basis assuming that the machinery would last for four (4) years and have no scrap value.

(viii) Other costs are included in labour cost.

(ix) Cost of capital is 20% per annum.

(x) You may assume that debtors are realised and creditors are paid in the following year.

(xi) Prices of inputs and outputs are expected to be the same over the next four years.

(xii) There is high level of confidence concerning the accuracy of all the above estimates except the annual sales volume.

(xiii) Ignore taxes.

Required:

Suggest whether the plan of manufacturing the new product is worthwhile or not. Substantiate your reply with detailed working notes. 30

CASE # 2

A manufacturing company is facing the problem of transportation of raw materials from its 'raw materials preparation unit'. The unit is situated 25 kilometres away and the only means of transportation available is the roadways. The company has received quotations from some of the local transporters at Rs.360, Rs.375 and Rs.390 per ton of materials transported, with an escalation clause in respect of diesel/ oil costs. The quantity of materials to be transported per month is 24,000 tons. While examining the feasibility of departmental transport, the following facts regarding financial impact are recognised:

(i) Two types of trucks are available in the market with respect to capacity of 10-tons and 8-tons.

(ii) Each vehicle can run 5 trips (up and down) each day and can run on an average 24 days each month.

(iii) Cost of diesel is Rs.60 per litre.

(iv) Cost of finance is 12% per annum for purchase of trucks.

(v) Drivers will have to be recruited according to the number of trucks to be purchased. In addition, one extra driver for every 5 vehicles will be required for the entire fleet. The salary of each driver would be Rs.12,000 per month.

(vi) An additional transport supervisor would be required at a cost of Rs.30,000 per month. **Marks**

(vii) Details of operating costs for the trucks are:

	10 – Tons Capacity	8 – Tons Capacity
Purchase price - Rs.	7,500,000	6,000,000
Estimated useful life - (years)	5	5
Residual value - Rs.	1,200,000	600,000
Kilometres per litre of diesel - (km)	3	4
Estimated repairs and maintenance cost per truck per month - Rs.	60,000	48,000
Vehicle and road tax per quarter - Rs.	18,000	18,000

(viii) Yet another possibility is to hire sufficient number of trucks (8-tons only) from a transport company at the rate of Rs.180,000 per month per truck. The transport company bears repair and maintenance cost as well as the vehicle and road tax. The manufacturing company has to bear the cost of drivers, supervisor and other operational costs.

Required:

Advise the manufacturing company on an appropriate choice among the above alternatives, considering also the option of entrusting the job to the transport operators. 30

Present value factors

Year	*12%*	*13%*	*14%*	*15%*	*16%*	*17%*	*18%*	*19%*	*20%*	*21%*	*22%*
1	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	0.826	0.820
2	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694	0.683	0.672
3	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579	0.564	0.551
4	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482	0.467	0.451
5	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402	0.386	0.370
6	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335	0.319	0.303
7	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279	0.263	0.249
8	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233	0.218	0.204
9	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194	0.180	0.167
10	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162	0.149	0.137

Cumulative present value factors

1	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833	0.826	0.820
2	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528	1.509	1.492
3	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106	2.074	2.042
4	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589	2.540	2.494
5	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991	2.926	2.864
6	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326	3.245	3.167
7	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605	3.508	3.416
8	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837	3.726	3.619
9	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031	3.905	3.786
10	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192	4.054	3.923

THE END