

**INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS  
OF PAKISTAN**

PROFESSIONAL-II EXAMINATION— SUMMER 2003

Monday, the 19th May, 2003

72

**ACA P-III (EXIST) OPERATIONAL COST ACCOUNTING**

*Time Allowed—2 Hours 40 Minutes*

*Maximum Marks—90*

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- (i) Attempt ALL questions.
  - (ii) Show computations where necessary.
  - (iii) Use of non-programmable scientific calculators of: O Casio fx-82 LB, O Casio fx-82 Super, O Casio fx-350 D, O Casio fx-350 HA models is allowed.
  - (iv) In marking paper, the examiners take into account clarity of exposition, logic of arguments, effective arrangement, presentation and use of clear diagram/chart where appropriate.
  - (v) Read the instructions printed on the top cover of answer script CAREFULLY before attempting the paper.
  - (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 paper.
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- Q 2 (a) Explain the purpose of a materials purchasing budget and the sources from which the information for the budget may be derived. Marks  
5
- (b) Next year's preliminary budget workings for Fajar, a breakfast cereal, the only product manufactured by Hamd Foods Limited, are shown below:

Hamd Foods Limited  
Budgeted Income Statement  
for the year ending June 30, 2004

	<u>Rs.</u>	<u>Rp.</u>
Sales (20,000 boxes, containing standard packets)		600,000
Direct materials	240,000	
Direct labour	102,000	
Variable overheads	70,000	
Fixed overheads	<u>122,200</u>	<u>534,200</u>
Income		<u>65,800</u>

P.T.O.

Hamd Foods Limited  
Budgeted Net Assets  
as at June 30, 2004

	<i>Rs.</i>	<i>Rs.</i>
Fixed Assets (Net of Depreciation)		310,000
<b>Working Capital :</b>		
Debtors (one month's credits given to customers)	50,000	
Stock	65,000	
Creditors	<u>(25,000)</u>	<u>90,000</u>
Net Assets Employed		<u>400,000</u>

The existing plant is considerably under-utilised and a proposal being considered is to extend sales to supermarkets, where the product would be sold under a different brand name.

Estimated effects of this proposal are:

- (i) Additional annual sales, to supermarkets, 8,000 boxes @ Rs. 25 per box.
- (ii) Cost of direct materials will be reduced as a result of a 5% quantity discount on all purchases.
- (iii) Extra supervisory and clerical staff will be required at a cost of Rs. 16,000 per annum.
- (iv) Market research has indicated that sales to existing outlets will fall by approximately 10% and there will be no change in selling price to these customers.
- (v) Stock and creditors will increase by Rs. 25,000 and 15,000 respectively, and the credit period extended to supermarkets will be double than that allowed to the existing customers.

**Required :**

- (i) Prepare revised budgeted income statement and statement of net assets employed incorporating the results of the proposal. 8
  - (ii) Compare the return on net assets employed and breakeven point of both original budget and proposed budget quantities. 10
- Q. 3 (a) Differential costs do not correspond to any possible accounting category. Explain. 6

- (b) The management of Moon Company uses the following unit costs for the single product it manufactures:

	<u>Projected cost</u> <u>Rs. per unit</u>
Direct material (all variable)	300
Direct labour (all variable)	190
Factory overheads:	
Variable cost	60
Fixed cost (based on 1,000 units/month)	50
Marketing, general and administrative cost:	
Variable cost (per unit sold)	40
Fixed cost (based on 1,000 units/month)	28

The projected sales price is Rs. 800 per unit. The fixed costs remain fixed within the relevant range of 400 to 1,600 units of production and sales.

Management has projected the following unit data for June:

	<u>units</u>
Beginning inventory	200
Production	900
Available	1100
Sales	750
Ending inventory	<u>350</u>

Required :

- (i) An income statement for June, using absorption costing method, with all adjustments in Cost of Goods Sold. 6
- (ii) An income statement for June, using direct costing method. 6
- (iii) Reconciliation of the difference in operating income, as computed in (i) & (ii) above. 4
- Q. 4 (a) Identify differences and similarities between budgets and standards. 7
- (b) The Hub Cement Co. uses a standard cost system for the production of cement, which is produced by mixing two major components, A (Lime) and B (clay), with water and by adding a third component 'C', in an insignificant quantity. Material standards and costs for the production of 100 tons of output are:

<u>Materials</u>	<u>Tonnes</u>	<u>Cost</u> <u>Rs.</u>	<u>% of output</u>	<u>Amount</u> <u>Rs.</u>
A	55	2,150	50	118,250
B	44	1,750	40	77,000
C	11	<u>1,250</u>	<u>10</u>	<u>13,750</u>
Input	<u>110</u>	<u>5,150</u>	<u>100</u>	<u>209,000 = Rs. 1,900/tonne</u>
Output	100			<u>209,000 = Rs. 2,090/tonne</u>

P.T.O.

The Monthly Factory overheads budget for normal capacity level of 16,500 direct labour hours is as under:

	<u>Fixed</u> <u>F.O.H.</u> <u>Rs.</u>	<u>Variable</u> <u>F.O.H.</u> <u>Rs.</u>
Plant Manager	100,000	-
Supervisor	90,000	-
Indirect labour	111,000	40,500
Supplies	42,500	102,000
Light & Power	15,000	110,000
Water	24,000	100,000
Repair & Maintenance	25,000	60,000
Insurance	22,500	-
Depreciation-production facilities	188,750	-
Total	<u>618,750</u>	<u>412,500</u>

To convert 110 tonnes of materials into 100 tonnes of finished cement, 500 direct labour hours @ Rs. 37.50 per tonne are required. Factory overhead is applied on direct labour hours basis.

In producing 32,34 tonnes of finished cement, the following costs were incurred:

Direct labour	15,800 hours @	Rs. 39.75
Fixed factory overheads		Rs. 553,750
Variable factory overheads		Rs. 424,500

<u>Materials</u>	<u>Material Purchased</u>		<u>Material Consumed</u>
	<u>Quantity</u> <u>(Tonnes)</u>	<u>Price</u> <u>Rs.</u>	<u>Quantity</u> <u>(Tonnes)</u>
A	2,000	2,200	1,870
B	1,200	1,850	1,100
C	500	1,200	440

There was no inventory of materials or work-in-process at beginning of April, 2003. The materials price variance is recognized at the time of purchase.

**Required :**

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|---|---|
| (i) Materials price, mix and yield variances.                                   | 6 |
| (ii) Direct labour rate, efficiency and yield variances.                        | 4 |
| (iii) Factory overhead spending, idle capacity, efficiency and yield variances. | 5 |

- Q. 5 (a) Define and discuss the linear programming technique including assumptions and accounting data used therein.
- (b) Ace corporation limited manufactures 3 different products, and the following information has been collected from their books of accounts:

	<i>Product</i>		
	<i>K</i>	<i>L</i>	<i>M</i>
Sales Mix	35%	35%	30%
Selling Price (Rs.)	180	240	120
Variable cost (Rs.)	90	120	72
Total Fixed cost		Rs. 1,080,000	
Total Sales		Rs. 3,600,000	

The company is currently considering a proposal to discontinue the manufacture of product 'M' and replace it with Product 'N', when the following results are anticipated:

	<i>Product</i>		
	<i>K</i>	<i>L</i>	<i>N</i>
Sales Mix	50%	25%	25%
Selling Price (Rs.)	180	240	180
Variable cost (Rs.)	90	120	90
Total Fixed cost		Rs. 1,080,000	
Total Sales		Rs. 3,840,000	

**Required :**

What will be your advice to the company? Whether to changeover to production of product N? Give reasons for your answer. 15

THE END