INSTITUTE OF COST AND MANAGEMENT ACCOUNTANTS OF PAKISTAN

Fall 2012 (February 2013) Examinations

Monday, the 25th February 2013

MANAGEMENT ACCOUNTING – (AF-401)

SEMESTER-4

Extra Reading Time: 15 Minutes **Writing Time:** 02 Hours 45 Minutes	**Maximum Marks: 90**	**Roll No.:**	

(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 inside 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.

(viii) **Question Paper must be returned to invigilator before leaving the examination hall.**

Answer Script will be provided after lapse of 15 minutes Extra Reading Time (9:30 a.m. or 2:30 p.m. [PST] as the case may be).

Marks

Q. 2 A biscuit manufacturer produces and sells three types of cookies – plain, chocolate and lemon. Following data is available for preparing the budget:

Sales assumptions:

Product	Quantity (Boxes)	Price Per Box (Rs.)
Plain	10,000	5.00
Chocolate	20,000	6.50
Lemon	15,000	8.00

Raw material assumptions per box:

	Flour	Sugar	Butter	Cocoa	Lemon
Unit cost per kg (Rs.)	4	6	6	50	8
Quantities used (kgs):					
Plain	0.4	0.1	0.2	–	–
Chocolate	0.3	0.3	0.2	0.3	–
Lemon	0.3	0.4	0.2	–	0.2

Inventory assumptions:

Finished goods inventory in boxes:

	Plain	Chocolate	Lemon
1-Mar-12	1,200	2,300	1,750
31-Mar-12	1,050	2,500	1,600

Raw materials inventory in kgs:

	Flour	Sugar	Butter
1-Mar-12	730	820	320
31-Mar-12	750	800	250
No inventory is held for cocoa and lemon.			

Required:

Using the information given above, prepare budgets for:

(a) Product-wise sales revenue. **02**

(b) Production quantities of each product. **03**

(c) Materials requirement (quantities of each raw material). **04**

(d) Materials purchases in quantity and value. **06**

Marks

Q. 3 **(a)** Texfab Textiles has received an offer from local Power Generation firm to provide breakdown free power supply for longer term. The equipment and installations of transmission line would cost Rs. 5,000,000. Management believes that the power supply would provide substantial annual reductions in costs, as shown below:

	Rupees
Electricity cost	695,000
Power breakdown cost	555,000

The new power system would require considerable maintenance work to keep it in proper adjustment. The company engineers estimate that maintenance cost would increase by Rs. 16,000 per annum if new system operates. The transmission system needs an overhaul at the end of every 2 years amounting to Rs. 200,000 per overhaul.

The contract period would be 10 years with salvage value (of installations) of Rs. 70,000. After 10 years company will be able to purchase a new power generation system from an international supplier amounting to Rs. 30 million.

Texfab Textiles requires a rate of return before tax of at least 18% on investment and uses straight-line deprecation method.

Required:

(i) Should Texfab Textiles accept the offer or not? Ignore taxation. **08**

(ii) Should Texfab Textiles accept the offer or not, if taxation rate is 35%? **08**

(Support your answers with proper working)

(b) Metro has a cost of capital of 10% and is considering a project with the following 'most-likely' cash flow:

Rupees

Year	Purchase	Running cost	Revenue
0	(14,500)	–	–
1	–	(5,000)	12,000
2	–	(7,000)	16,000

Required:

(i) Explain sensitivity analysis. **02**

(ii) Calculate the change in the level of expected costs to attain breakeven. **06**

Q. 4 Mars Transportation Company has appointed a management accountant. First assignment given to her is to analyse company's cost-volume-profit relationship. The company's summarized income statement for the last year is as under:

Rupees

			Total	Per Trip	% to Sales
Revenue	2,000	Trips	15,000,000	7,500	100
Less: Variable cost			9,000,000	4,500	60
Contribution margin			6,000,000	3,000	40
Less: Fixed cost			3,000,000		20
Net operating income			3,000,000		20

According to the agreement with local government at least one trip a day is mandatory. (one year = 360 days)

Required:

Calculate:

(a) Existing break-even in trips and amount. **07**

(b) Number of trips needs to be completed to achieve a profit target of Rs. 5,000,000. **04**

Marks

(c) For next year, the company is planning to purchase a computerized booking system having cost of Rs. 1,000,000. Company will save 3% of variable cost and Rs. 400,000 of fixed cost after installation of new system. Calculate break-even in percentage and amount after installing the new system. **04**

Q. 5 (a) The Home company is attempting to establish a current asset policy. Fixed assets are Rs. 1,200,000 and the firm plans to maintain a 60% debt to assets ratio. The company has no current liabilities. The interest rate is 10% on all debts. Three alternative current asset policies are under consideration: 30%, 50% and 70% of projected sales. The company expects to earn 15% before interest and taxes on sales of Rs. 6 million. Tax rate is 35%.

Required:

What is the expected return on equity under each alternative? **08**

(b) Salman is considering to set up a business offering mobile service of shoe repairing in the commercial area using the car parks of the shopping centres and offers an as-you-wait shoe repair service from his van. He has visited the major employers in the area and having reached agreements with a number of large local businesses and having carried out surveys of his potential customers, he has arrived at the following estimates for his first 3 months of business:

- He will start the business by investing Rs. 120,000 of his own money in March 2013 and, in that month, he will purchase a second-hand van at a cost of Rs. 90,000 and various machinery for Rs. 30,000. Also in March, he will buy inventories of materials at a cost of Rs. 38,500. The van would then be painted to advertise his business, at a cost of Rs. 7,000, payable in April 2013.
- He will commence business in April 2013 and expects sales to be as follows:

	Rupees
April 2013	13,000
May 2013	15,000
June 2013	18,000

  Materials needed for the repairs would cost 30% of the sales price of each repair, giving a margin of 70% and materials would be regularly replaced to maintain inventories at a constant level.
- Fuel expense will be Rs. 800 per month from April 2013 onwards and motor insurance for the year to 31 March 2014 will be Rs. 7,500, payable in April 2013.
- All sales will be for cash and all purchases, including the purchase of opening inventories, will be on one month's credit.
- Salman will draw Rs. 5,000 per month for his personal expenditures from April 2013.
- Running bank financing will be available if required, at 10%. Cash requirement at the end of month will be Rs. 5,000 and extra cash will be used to pay off financing. Assume financing will be taken at the start of month and interest will be paid in July 2013.

Required:

(i) What is the purpose of preparing a cash budget? Give four reasons. **02**

(ii) Prepare a cash budget for Salman for four months ended June 30, 2013. **06**

(iii) Furnish details of outstanding payments, if any. **02**

Marks

Q. 6 (a) 'ASA' manufactures components for the heavy goods vehicle industry. The following annual information regarding three of its key customers is available:

CUSTOMER	A	B	C
Gross margin	Rs. 897,000	Rs. 1,070,000	Rs. 1,056,000
Units sold	4,600	5,800	3,800
Orders placed	300	320	480
Sales visits	80	50	100
Invoices raised	310	390	1,050

The company uses an activity based costing system and the analysis of customer-related costs is as follows:

		Rupees
Sales visits	420	per visit
Order processing	190	per order placed
Dispatch costs	350	per order placed
Billing and collections	97	per invoice raised
General administration costs	158,000	allocated in the ratio of gross margin

Required:

Rank the customers on the basis of profitability. **08**

(b) 'YS' Limited manufactures one standard product and operates a system of variance accounting using a fixed budget. As a Management Accountant, you are responsible for preparing the monthly operating statements. Data from the budget, standard product cost and actual data for the month ended December 31, 2012 are given below:

Budgeted and standard cost data:

Budgeted sales and production for the month		10,000	units
Standard cost for each unit of product:			
Direct material:	X:	10	kgs at Re. 1 per kg
	Y:	5	kgs at Rs. 5 per kg
Direct labour		5	hours at Rs. 3 per hour
Fixed production overhead is absorbed at 200% of direct labour.			
Budgeted sales price has been calculated to earn a profit of 20% of sales price.			

Actual data for the month ended December 31, 2012:

Production and sales		9,500	units
Sales price remained 10% higher than the budgeted sales price.			
Direct material consumed:	X:	96,000	kgs at Rs. 1.2 per kg
	Y:	48,000	kgs at Rs. 4.7 per kg
Direct labour		46,000	hours at Rs. 3.2 per hour
Fixed production overhead incurred		Rs. 290,000	

Required:

Prepare the operating statement for the month ended December 31, 2012 to show the **(i)** budgeted and actual profit **(ii)** variances for direct materials **(iii)** direct wages and **(iv)** overhead variance. **10**

THE END

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