KARACHI UNIVERSITY BUSINESS SCHOOL

University of Karachi

FINAL EXAMINATION, JULY 2010: AFFLIATED COLLEGES

MANAGIRAL ACCOUNTING: BA (M) - 602

MBA – IV

Date: July 12, 2010 **Max Marks: 60**

Instruction: Attempt all questions. **Max Time: 3 Hrs**

Q # 1: Frankel Ltd., a British merchandising firm, is the exclusive distributor of a product that is gaining rapid market acceptance. The company's revenues and expenses for the last three months are given below:

FRANKEL LTD.
Comparative Income Statement
For the Three Months Ended June 30

	April	May	June
Sales in units …………………………….	3,000	3,750	4,500
Sales revenue ……………………………	Rs. 420,000	Rs. 525,000	Rs. 630,000
Less cost of goods sold ………………….	168,000	210,000	252,000
Gross margin …………………………...	252,000	315,000	378,000
Less operating expenses:			
Shipping expense …………….	44,000	50,000	56,000
Advertising expense ………….	70,000	70,000	70,000
Salaries and commission ……..	107,000	125,000	143,000
Insurance expense ……………	9,000	9,000	9,000
Depreciation ………………….	42,000	42,000	42,000
Total operating expenses ………………	272,000	296,000	320,000
Net operating income (loss) …………...	Rs. (20,000)	Rs. 19,000	Rs. 58,000

Required

1. Identify each of the company's expenses (including cost of goods sold) as variable, fixed or mixed.
2. Using the high low method, separate each mixed expense into variable and fixed elements. State the cost formula for each mixed expense.
3. Redo the company's income statement at the 5250 unit level of activity using the contribution format.

Q # 2: Sonne Company produces a perfumed called Whim. The direct materials and direct labor standards for one bottle of Whim are given below:

	Standard Quantity Of hours	**Standard Price or rate**	**Standard Cost**
Direct material	7.2 ounces	\$ 2.50 per ounce	\$ 18
Direct labor	0.4 hours	\$ 10. 00 per hour	\$ 4

During the most recent month, the flowing activity was recorded:

a. Twenty thousand ounces of material were purchases at a cost of 2.40 per ounce.
b. All of the material was used to produce 2,500 bottles of Whim.
c. Nine hundred hours of direct labor time were recorded at a total labor cost of \$ 10,800.

Required

1. Compute the direct material price and quantity variance for the month.
2. Compute the direct labor rate and efficiency for the month.

Q # 3: Royal Company manufactures 20,000units of part R - 3 each year for use on its production line. The cost per unit for part-3 follows:

Direct material	$ 4.80
Direct labor	7.00
Variable manufacturing overhead	3.20
Fixed manufacturing overhead	10.00
Total cost per part	$ 25.00

An outside supplier had offered to sell 20,000 units of part – 3 each year to Royal Company for $ 23.50 per part. If Royal Company accepts this offer, the facilities now being used to manufacture part – 3 could be rented to another company at an annual rental of $ 150,000. however, Royal Company has determined that $ 6 of the fixed manufacturing overhead being to part R – 3 would continue even if R – 3 were purchased from outside supplier.

Required

Prepare computations to show the new dollar advantages or disadvantages of accepting the outside supplier's offer.

Q # 4: Maxwell Company manufactures and sells a single product. The following were incurred during the company's first year of operations:

Variable costs per unit:	
Production:	
Direct Materials	$36
Variable manufacturing overhead	4
Variable selling and administrative	10
Fixed cost per year:	
Fixed manufacturing overhead	$320,000
Fixed selling and administrative expenses	220,000

During the year, the company produced 40,000 units and sold 32,000 units. The selling price if the company's product is $ 100 per unit.

Required

1. Assume that the company uses the absorption costing method.
   a. Compute the unit product cost.
   b. Prepare an income statement for the year.
2. Assume that the company uses the variable costing method.
   a. Compute the unit product cost.
   b. Prepare an income statement for the year.

Q # 5: Answer the following questions.

1. Explain how fixed manufacturing overhead costs are shifted from one period to another under absorption costing.
2. Company A's cost structure includes costs that are mostly variable; whereas Company B's cost structure will tend to realize the most rapid increase in profits? Explain.
3. What are unit-level, product-level, customer-level, and organization-sustaining activities?
4. What is meant by the term responsibility accounting?
5. An examination of the cost records of the ABC furniture Company reveals that the materials price variance is favorable but that the material quantity variance is unfavorable by a substantial amount. What might this indicate?
6. Define the terms: incremental cost, opportunity cost, and sunk cost.

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FINAL EXAMINATION, JANUARY 2009: AFFLIATED COLLEGES

MANAGIRAL ACCOUNTING: BA (M) - 602

MBA – IV

Date: 09-01-10 **Max Marks: 60**

Instruction: Attempt all questions. **Max Time: 3 Hrs**

Q#1: Parker Company manufactures and sells single products. A partially completed schedule of the company's total and per unit cost over a relevant range of 60,000 to 100,000 unit produced and sold each year is given below:

	Unit Produced and Sold		
	60,000	**80,000**	**100,000**
Total Cost:			
Variable Costs	$150,000	?	?
Fixed Costs	360,000	?	?
Total Cost	$510,000		
Cost per unit:			
Variable Cost	?	?	?
Fixed Cost	?	?	?
Total Cost per unit	?	?	?

Required:

1. Complete the schedule of the company's total and unit costs above.
2. Assume that the company produced and sells 90,000 unit during a year. The selling price is $7. 50 per unit. Prepare an income statement in the contribution format for the year.

Q#2: Theatre Seating Inc., makes high quality adjustable seats for theatres. The company's activity based costing system has four activity cost pools, which are listed below along their activity measures and activity rates:

Activity Cast Pool	**Activity Measure**	**Activity Rate**
Volume	Number of direct labor-hours	$ 12 per direct labor-hour
Batch processing	Number of batches	$96 per batch
Order processing	Number of orders	$284 per order
Customer service	Number of customers	$2,620 per customer

The company just completes a single order form. CineMax Entertainment Corporation for 2,400 custom seats. The order was purchased in four batches. Each seat required 0.8 direct labor hour. The selling price was # 137.95 per seat, the direct cost was $112.00 per seat, and the direct labor cost was $14.40 per seat. This was the only order from CineMax Entertainment for the year.

Required:

1. Prepare a report shoeing the product margin for this order. Ignore the customer service costs.
2. Prepare a report showing the customer margin on sales to CineMax Entertainment for the year.

Q#3: Super Sales Company is the exclusive distributor for the revolutionary book-bag. The product sells for $60 per unit and had a CM ratio of 40%. The company's fixed expenses are $360,000 per year.

Required:

1. What are the variable expenses per unit?
2. Using the equation method:

a) What is the break-even point in units and in sales dollars?

b) What sales level in unit and in sales dollars is required to earn an annual profit of $90,000?

c) Assume that through negotiation with the manufacturer the Super Sales Company is able to reduce its variable expenses by $ 3 per unit. What is the company's new break-even point in units and in sales dollars?

3. Repeat (2) above using the contribution margin method.

Q#4: Amcor, Inc. produces and sells a single product. The following costs relate to its production and sale:

Variable costs per unit:		
Direct materials		$10
Direct labor		05
Variable manufacturing overhead		02
Variable selling and administrative expenses		04
Fixed Costs per year:		
Fixed manufacturing overhead	$90,000	
Fixed selling and administrative expenses	300,000	

During the last year, 30,000 units were produced and 25,000 units were sold. The finished goods inventory account at the end of the year shows a balance of $ 85,000 for the 5,000 unsold units.

Required:

1. Is the company using absorption costing or variable costing to cost unit in the finished goods inventory account? Show computations to support your answer.
2. Assume that the company wished to prepare financial statement for the year to issue to its stockholders.
   a. Is the $ 85,000 figures for the Finished Goods inventory the correct figures to use on these statements for external reporting purposes? Explain.
   b. At what dollar amount should the 5,000 units be carried in inventory for external reporting purpose?

Q#5: Climate-Control, Inc. manufactures a variety of heating air-conditioning units. The company is currently manufacturing all of its own component parts. An outside supplier has offered to sell a thermostat to Climate-Control for $20 per unit. To evaluate this offer, Climate-Control, Inc. has generated the following information relating to its own cost of producing the thermostat internally:

	Per unit	**15,000 units per year**
Direct material	$6 `	$90,000
Direct labour	8	120,000
Fixed manufacturing overhead, traceable	5*	75,000
Fixed manufacturing overhead, common, but allocated	10	150,000
	$30	$450,000

*40% supervisory salaried; 60% depreciation of special equipment (no resale value)

Required:

1. Assuming that the company has no alternative use for the facilities now being used to

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FINAL EXAMINATION, JUNE & JULY 2009: AFFLIATED COLLEGES
MANAGIRAL ACCOUNTING: BA (M) - 602
MBA – IV

Date: June 27, 2009 **Max Marks: 60**
Instruction: Attempt all questions. **Max Time: 3 Hrs**

Q1 Xavier Company produced a single product. Variable manufacturing is applied to products on the basis of direct labor-hours. The standard costs for one unit of the product are as follows: 10

Direct material: 6 ounces at $ 0.50 per ounce………………………..	$ 3
Direct labor: 1.8 hours at $ 10 per hour………………………………	18
Variable manufacturing overhead: 1.8 hours at $ 5 per hour…………	9
Total standard variable cost per unit………………………………….	$ 30

During June 2000 units were produced. The costs associated with Junes operations were as follows:

Material purchased: 18,000 ounces at $ 0.60 per ounce………............	$ 10,800
Material used in production: 14,000 ounces…………………………...	-----
Direct labor: 4,000 hours at $ 9.75 per hour…………………………...	39,000
Variable manufacturing overhead costs incurred………………………	20,800

Required:

- Compute the materials, labor, and variable manufacturing overhead variances.

Q2 (a) Crystal Telecom has budget the sales of its innovative mobile phone over the next four months as follows:

	Sales in Units
July………………….	30,000
August………………	45,000
September…………..	60,000
October……………..	50,000

The company is now in the process of preparing a production budget for the third quarter. Past experience has shown that end-of-month inventories of finished goods must equal 10% of the next month's sales. The inventory at the end of June was 3,000 units.

Required:

- Prepare a production budget for the third quarter showing the number of units to be produced each month and for the quarter in total.

Q2 (b) The direct labor budget of Krispin Corporation for the upcoming fiscal year contains the following details concerning the budgeted direct labor-hours.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Budgeted direct labor-hours	5,000	4,800	5,200	5,400

The company's variable manufacturing overhead rate is $ 1.75 per direct labor hour and the company's fixed manufacturing overhead is $ 35,000 per quarter. The only noncash items included in the fixed manufacturing overhead is depreciation, which is $ 15,000 per quarter.

Required:

1. Construct the company's manufacturing overhead budget for upcoming fiscal year.
2. Compute the company's manufacturing overhead rate (including both variable and fixed manufacturing overhead) for the upcoming fiscal year. Round off to the nearest whole cent.

Q3: Answer the following questions:

1. What is the difference between the contribution approach to the income statement and the traditional approach to the income statement?
2. Explain how a shift in the sales mixed should result in both a high break-even point and lower net sales?
3. Under absorption costing how is it possible to increase net operating income without increase sales?
4. If variable manufacturing overhead is applied to production on the basis of direct labor-hour and the direct labor efficiency variance is unfavorable, will the variable overhead efficiency variance be favorable or unfavorable, or could it be either? Explain.

Q4: During Denton Company's first two years of operations, the company reported net operating incomes as follows absorption costing basis. 10

	Year 1	Year 2
Sales (at $ 50 per unit)…………………………………..	$1,000,000	$1,500,000
Less cost of goods sold:		
Beginning inventory…………………………………….	0	170,000
Add cost of goods manufactured (at $ 34 per unit)……..	850,000	850,000
Goods available for sale…………………………………..	850,000	1,020,000
Less ending inventory (at $ 34 per unit)…………………	170,000	0
Cost of goods sold………………………………………..	680,000	1,020,000
Gross margin……………………………………………...	320,000	480,000
Less selling and administrative expenses*………………..	310,000	340,000
Net operating income………………………………………	$ 10,000	$ 140,000

*$3 per unit variable; $250,000 fixed each year.

The company's $ 34 unit product cost is computed as follows:

Direct materials…………………………………………………	$ 8
Direct labor……………………………………....................	10
Variable manufacturing overhead………………………………	2
Fixed manufacturing overhead ($ 350,000 ÷ 25,000 units)…….	14
Unit product cost………………………………………………..	$ 34

Production and data for the two years are given below:

	Year 1	Year 2
Unit produced……………………..	25,000	25,000
Units sold………………………….	20,000	30,000

Required:

1. Prepare an income statement for each year in the contribution format using variable costing.
2. Reconcile the absorption costing and variable costing net operating income figures for each year.

Q5: Marlin Company has been operating for only a few months. The company sells three products sinks, mirrors, and vanities. Budgeted sales by product and net income figures for each year

	Product						
	Sinks		Mirrors		Variance		Total
Percentage of Total sales…….	48%		20%		32%		100%
Sales……………	$240,000	100%	$100,000	100%	$160,000	100%	$500,000
Less Variable Expenses………	72,000	30%	80,000	80%	88,000	55%	240,000
Contribution Margin………...	168,000	70%	20,000	20%	72,000u	45,%	260,000
Less fixed Expenses………							223,600
Net Operating Income………...							36,400

Break-even point In dollar sales $= \frac{\text{Fixed expenses}}{\text{CM ratio}} = \frac{\$\ 223{,}600}{0.52} = \$\ 430{,}000$

As shown by these data, net operating income is budgeted at $ 36,400 for the month, and break even sales at $ 430,000. Assume that actual sales for the month total $ 500,000 as planned. Actual sales by product are:
Sinks, $ 160,000; mirror, $ 200,000; and vanities, $ 140,000

Required:

1. Prepare a contribution income statement for the month based on actual sales data. Present the income statement in the format shown above.
2. Compute the break-even sales for the month, based on your actual data.
3. Considering the fact that the company met its $ 500,000 sales budgets for the month, the president is shocked at the result shown on your income statement in (1) above.

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MBA – IV

Date: January 15, 2009 Max Marks: 60
Instruction: Attempt any five questions. Max Time: 3 Hrs

Q1 (a) what is meant by an activity base when dealing with variable costs? Give four (4) examples of activity bases. 4

Q1 (b) Speedy Parcel Service operates a fleet of delivery trucks in a large metropolitan area. A careful study by the company's cost analysis has determine that if a truck is driven 120,000 miles during a year, the average operating cost is 11.6 cents per mile. If a truck is driven only 80,000 miles during a year, the average operating cost increases to 13.6 cents per mile. 8

Required:

1. Using the high-low method, estimate the variable and fixed cost elements of the annual cost of truck operation.
2. Express the variable and fixed costs in the form Y = a + bX.
3. If a truck were driven 100,000 miles during a year, what total cost would you expected to be incurred?

Q2 Advance products, Inc., has just organized a new division to manufacture and sell specially designed tables using selected hardwoods for personal computers. The company's new plant is highly automated and thus requires high monthly fixed costs, as shown in the schedule below: 12

Manufacturing costs:	
Variable costs per unit:	
Direct materials	$ 86
Variable manufacturing overhead	4
Fixed manufacturing overhead costs (total)	240,000
Selling and administrative costs:	
Variable	15% of sales
Fixed (total)	$ 160,000

Advance products regard all of its worker as full time employees and the company has a long-standing no-layoff policy. Furthermore, production is highly automated. Accordingly, the company has included in its fixed manufacturing overhead all of its labor costs.

During the first month of operations, the following activity was recorded:

Unit produced	4,000
Units sold	3,200
Selling price per unit	$ 250

Required:

1. Compute the unit product cost under:
   a. Absorption costing
   b. Variable costing
2. Prepare an income statement for the month using absorption costing.
3. Prepare an income statement for he month using variable costing.
4. Assume that in order to continue operations, the company must obtain additional financing. As a member of top management, which of the following statement that you have prepared in (2) and (3) above would you prefer to take with you as you negotiate with the bank? Why?
5. Reconcile the absorption costing net operating income figures in (2) and (3) above for the month.

Q3 Transvaal Mining tools Ltd. Of South Africa makes specialty tools used in the mining industry. The company uses an activity-based costing system for internal decision-making purposes. The company has four activity cost pools as listed below: 12

Activity Cost Pool	Activity Measure	Activity Rate
Order size	Number of direct labor-hours	$ 17.60 per direct labor-hour*
Customer orders	Number of customer orders	$ 360 per customer order
Product testing	Number of testing hours	$ 79 per testing hour
Selling	Number of sales calls	$ 1,494 per sales call

The managing director of the company would like information concerning the cost of a recently completed order for hard-rock drill. The order required 150 direct labor-hours, 18 hours of product testing, and three sales calls.

Required:

Prepare a report showing the overhead cost of the order of the hard-rock drills according to the activity cased costing system. What is the total overhead cost assigned to the order?

Q4 (a) How does zero-based budgeting differ from traditional budgeting? 4

Q4 (b) peak sales for Midwest Products Inc., occur in August. The company's sales budget for the third quarter showing these peak sales is given below: 8

	July	August	September	Total
Budget sales	$ 600,000	$ 900,000	$ 500,000	$ 2,000,000

From past experience, the company has learning that 20% of a month's sales are collected in the month of sales, that another 70% is collected n the nine month following sales, and that the remaining 10% is collected in the second month following sale. Bad debts are negligible and can be ignored. May sales totaled $ 430,000 and June sales totaled $ 40,000.

Required:

1. Prepare a schedule of expected cash collections from sales by month and in total for the third quarter.
2. Assume that the company will prepare a budgeted balance sheet as of September 30. Compute the accounts receivable as of that date.

Q5 Topaz Company produces a single product. The company has set standards as follows for material labor: 12

	Direct Materials	**Direct Labor**
Standard quantity or per unit	? Pounds	2.5 hours
Standard price or rate	? Per pounds	$ 9 per hours
Standard cost per unit	?	$ 22.50

During the past month, the company purchased 6,000 pounds of direct materials at a cost of $ 16,500. all of this material was used in the production of 1,400 units of product. Direct labor cost totaled $ 28,500 for the month. The following variances have been computed:

Materials quantity variance	$ 1,200 U
Total materials variance	300 F
Labor efficiency variance	4,500 F

Required:

1. For direct materials:
   a. Compute the standard price per pound for materials.
   b. Compute the standard quantity allowed for materials for the month's production.
   c. Compute the standard quantity of materials allowed per unit of product.
2. for direct labor:
   a. Compute the actual direct labor cost per hour for the month.
   b. Compute the labor rate variance.

Q6 (a) Under or over-applied overhead can be broken down into what four variances? 4

Q6 (b) The cost formulas for Swan Company's manufacturing overhead costs are given below. The costs cover a range of 8,000 to 10,000 machine hours. 8

Overhead Costs	Cost Formula
Supplies	$ 0.20 per machine-hour
Indirect labor	$ 10.000 plus $ 0.25 per machine-hour
Utilities	$ 0.15 per machine hour
Maintenance	$ 7,000 plus $ 0.10 per machine-hour
Depreciation	$ 8,000

Required:

Prepare a flexible budget in increments of 1,000 machine-hours. Include all costs in your flexible budget.

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MBA – IV

Max Marks: 60 Max Time: 3 Hours
Date: January 15, 2009

Instruction: Attempt any five questions. All questions carry equal marks.

Q#1: (a) Superior Door Company sells prehung doors to home builders. The doors are sold for $60 each. Variable costs are $42 per door, and fixed cost total $450,000 per year. The company is currently selling 30,000 doors per year.

Required:

1. Prepare a contribution format income statement for the company at the present level of sales and compute the degree of operating leverage.
2. Management is confident that the company can sell 37,500 doors next year (an increase of 7,500 doors, 25% over current sales).
   a) The expected percentage increase in net operating income for next year.
   b) The expected total dollar net operating income for next year. (Do not prepare an income statement use the degree of operating leverage to compute your answer.)

Q#1: (b) Super Sales Company is the exclusive distributor for a revolutionary bookbag. The product sells for $ 60 per unit and has a CM ratio of 40%. The company's fixed expenses are $360,000 per year.

Required:

1. What are the variable expenses per unit?
2. using the equation method:
   a) What is the break even point in units and in sales dollar?
   b) What sales level in units and in sales dollars is required to earn and annual profit of $90,000?
   c) Assume that through negotiation with the manufacture the Super Sales Company is able to reduce its variable expenses by $3 per unit. What is the company's new break even point in units and in sales dollar?

Q#2: Shastri Bicycle of Bombay, India, produce an inexpensive, yet rugged, bicycle for use on the city's crowed streets that it sells for 500 rupees, (India currency is denominated in rupees, denoted by R.) Selected data for the company's operations last year follow:

Units in beginning inventory ………………………………...........	0
Units produced ………………………………………………….	10,000
Units sold ……………………………………………………….	8,000
Units in ending inventory ……………………………………….	2,000
Variable costs per unit:	
Direct materials ………………………………………….	R. 120
Direct labor ………………………………………………	140
Variable manufacturing overhead ………………………..	50
Variable selling and administrative ………………………	20
Fixed Costs:	
Fixed manufacturing overhead ……………………………	R. 600,000
Fixed selling and administrative ………………………….	400,000

Required:

1. Assume that the company uses absorption costing. Compute the unit product cost for one bicycle.
2. Assume that the company uses variable costing. Compute the unit product cost for one bicycle.

Q#3: Theatre Seating Inc., makes high quality adjustable seats for theatres. The company's activity based costing system has four activity cost pools, which are listed below along with their activity measured and activity rates.

Activity Cost Pool	Activity Measure	Activity Rate
Volume	Number of direct labor-hours	$ 12 direct labor-hour
Batch processing	Number of batches	$ 96 per batch
Order processing	Number of orders	$ 284 per order
Customer service	Number of customers	$ 2,620 per customer

The company just completes a single order from CineMax Entertainment Corporation for 2,400 custom seats. The order was produced in four batches. Each seat required 0.8 direct labor hour. The selling price was $ 137.95 per seat, the direct materials cost was $ 112.00 per seat, and direct labor cost was $ 14.40 per seat. This was only order from CineMax Entertainment for the year.

Required:

1. Prepare a report showing the product margin for this order. Ignore the customer service costs.
2. Prepare a report showing the customer margin sales to CineMax Entertainment for the year.

Q#4: Calgon Products, a distributor of organic beverages, needs a cash budget for September. The following information is available:

a) The cash balance at the beginning of September is $ 9,000.

b) Actual sales for July and August and expected sales for September are as follows:

	July	August	September
Cash sales………………………...	$ 6,500	$ 5,250	$ 7,400
Sales on account………………….	20,000	30,000	40,000
Total sales………………………..	$26,500	$35,250	$47,40

Sales on account are collected over a three month period in the following ratio: 10% collected in the month of sale, 70% collected in the month following sale, and 18% collected in the second month following sale. The remaining 2% is uncollectible.

c) Purchases of inventory will total $25,000 for September. Twenty percent of a month's inventory purchases are paid for during the month of purchase. The accounts payable remaining from Augusts' inventory will total $ 16,000, all of which be paid in September.

d) Selling and administrative expenses are budgeted at $13,000 for September. Of this amount, $4,000 is for depreciation.

e) Equipment costing $18,000 will be purchased for cash during September, and dividends totaling $3,000 will be paid during the month.

f) The company must maintain a minimum cash balance of $5,000. An open line of credit is available from the company's bank to bolster the cash position as needed.

Required:

1. Prepare a schedule of expected cash collections for September.
2. Prepare a schedule of expected cash disbursements during September for inventory purchases.
3. Prepare a cash budget for September. Indicate in the financing section any borrowing that will be needed during September.

Q#5: The check-clearing office of San Juan is responsible for processing all checks that come to the bank for payment. Managers at the bank believe that variable overhead costs are essentially proportional to the number of labor-hours worked in the office, so labor hours are used as the activity base for budgeting and for performance reports for variable overhead cost I the department. Data for October, the most recent month, appear below:

Budgeted labor-hours……………………………………………	865
Actual labor-hours……………………………………………….	860
Standard labor-hours allowed for the actual number of checks processed…………………………………………………………	880

	Cost Formula (Per labor-hour)	Actual Costs Incurred In October
Variable overhead costs:		
Office supplies…………………	$ 0.15	$ 146
Staff office lounge……………..	0.05	124
Indirect labor…………………...	3.25	2,790
Total variable overhead cost……	$ 3.45	$ 3,060

Required:

Prepare a variable overhead performance report for the check clearing office that inculses both spending and efficiency variances.

Q#6: Climate Control Inc., manufactures a variety of heating and air conditioning units. The company is currently manufacturing all of its own component parts. An outside supplier has offered to sell a thermostat to Climate-Control of $20 per unit. To evaluate this offer, Climate-Control Inc., has gathered the following relating to its own cost of producing the thermostat internally:

	Per Unit	**15,000 Units per Year**
Direct material …………………………………	$ 6	$ 90,000
Direct labor …………………………………….	8	120,000
Variable manufacturing overhead……………….	1	15,000
Fixed manufacturing overhead, traceable …........	5*	75,000
Fixed manufacturing overhead, common, but allocated…	10	150,000
	$ 30	$ 450,000

* 40% supervisory salaries; depreciation of special equipment (no resale value).

Required:

1. Assuming that the company has no alternative use for the facilities now being used to produce the thermostat, should the outside supplier's offer be accepted? Show all computations.
2. Suppose that if the thermostats were purchased, Climate-Control, Inc., could used the freed capacity to launch a new products. The segment margin of the new product would be $ 65,000 per year. Should Climate-Control, accepted the offer to buy the thermostats from the outside supplier for $ 20 each? Show computations.

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MBA – IV

Max Time: 3 Hours **Max Marks: 60**
Date: January 26, 2008

Instruction: Attempt any five questions.

Q.No.1 Silicon Optics supplies he following data for use in its activity-based costing system:

Overhead Costs	
Wages and salaries……………….	Rs. 350,000
Other overhead costs…………….	200,000
Total overhead costs…………….	Rs. 550,000

Activity Cost Pool	Activity Measure	Total Activity
Volume……………	Number of direct labor hours	10,000 DLHs
Order processing….	Number of orders	500 orders
Customer support…	Number of customers	100 customers
Other………………	These costs are not allocated to products or customers	No applicable

Distribution of Resource Consumption

	Volume	Order Processing	Customer Support	Other	Total
Wages and salaries……	30%	35%	25%	10%	100%
Other overhead costs…	25%	15%	20%	40%	100%

During the year Silicon Optics completed an order for a special optical switch for a new customer, Indus Telecom. This customer did not order any other products during this year. Data concerning that order follow:

Data Concerning the Indus Telecom Order	
Selling price ………………………………………..	Rs. 295 per unit
Units ordered ………………………………………	100 unit
Direct materials …………………………………….	Rs. 264 per unit
Direct labor-hours…………………………………..	0.5 DLH per unit
Direct labor-rate …………………………………….	Rs. 25 per DLH

Required:

i. Prepare a report showing the first-stage allocation of overhead costs to the activity cost pools.
ii. Compute the activity rate for the activity cost pools.
iii. Prepare a report showing the overhead costs for the order from Indus Telecom. Do not include customers support costs at this point in the analysis.
iv. Prepare a report showing the product margin for the order and the customer margin for Indus Telecom.

Q.No.2 (a) Ready Parcel Service operates a fleet of delivery trucks in a large metropolitan area. A careful by the company's cost analyst has determined that if a truck is driven 120,000 miles during year, the average operating cost is Rs. 11.6 per mile. If a truck is driven only by 80,000 miles during a year, the average operating cost increase to Rs. 13.6 per mile.

Required:

i. Using the High Service operates method, estimates the variable and fixed cost elements of the annual cost of truck operation.
ii. Express the variable and fixed cost in the form Y = a + bX.
iii. If a truck were driven 100,000 miles during a year, what total cost would you expect to be incurred?

(b) Haaki shop Inc., is a large of water sports equipment. An income statement for the company's surfboard department for a recent quarter is presented below:

THE HAAKI SHOP, INC
Income statement – Surfboard Department
For the Quarter Ended May 31

Sales ……………………………………………….		Rs. 800,000
Less cost of goods sold ……………………………		300,000
Gross margin ………………………………………		500,000
Less operating expenses:		
Selling expenses ………………………..	Rs. 250,000	
Administrative expenses ……………….	160,000	

The surfboard sells, on the average, for Rs. 400 each. The department's variable selling expenses are Rs. 50 per surfboard sold. The remaining selling expenses are fixed. The administrative expenses are 25% variable and 75% fixed. The company purchases its surfboards from a supplier at a cost of Rs. 150 per surfboard.

Required:

i. Prepare an income statement for the quarter using the contribution approach.

ii. What was the contribution toward fixed expenses and profits from each surfboard sold during the quarter? (State the figure in a single rupee amount per surfboard.)

Q.No.3 Jackson County Senior Services is a nonprofit organization devoted to providing essential services to seniors who live in their own homes within the Jackson County area. Three services are provide for seniors – home nursing, meals on wheels, and house keeping. In the home nursing program, nurses visit seniors on a regular basis to check on their general health and to perform tests order by their physicians. The housekeeping services provide weekly housecleaning and maintenance services. Data on revenue and expenses for the past year follow:

	Total	**Home Nursing**	**Meals on Wheels**	**House Keeping**
Revenues……………………..	Rs. 900,000	Rs. 260,000	Rs. 400,000	Rs. 240,000
Less variable expenses ………	490,000	120,000	210,000	160,000
Contribution margin …………	410,000	140,000	190,000	80,000
Less fixed expenses:				
Depreciation ………	68,000	8,000	40,000	20,000
Liability insurance …	42,000	20,000	7,000	15,000
Program administrator's salaries	115,000	40,000	38,000	37,000
General administrative overhead*	180,000	52,000	80,000	48,000
Total fixed expenses …………...	405,000	120,000	165,000	120,000
Net operating income (loss) ……	Rs. 5,000	Rs. 20,000	Rs. 25,000	Rs. (40,000)

The head administrative of Jackson County Senior Services, Judith Miyama is concerned about the organization's finances and considers the operating income of Rs. 5,000 last year to be razor-thin, (last year results were very similar to the results for previous years and are representative of what would be expected in the figure). She feels that the organization should be building its financial reserves at a more rapid rate in order to prepare for the next inevitable recession. After seeing the above report, Ms. Miyama asked for more information about the financial advisability perhaps discounting the housekeeping program.

The depreciation in housekeeping is for small van that is used to carry the housekeeping and their requirement from job to job. If the program were discontinued, the van would be donated to a charitable organization. Depreciation charges assume zero salvage value. None of the general administrative overhead would be avoided of the housekeeping program were dropped, but the liability insurance and the salary of the program administrative would be avoided.

Required:

i. Should the housekeeping program be discontinued? Explain. Show computations to support your answer.

ii. Recast the above data in the format that would be more useful to management in assessing the long-run financial viability of the various services.

Q.No.4 Miyamoto Jewelers is considering a special order for 10 handcrafted gold bracelets to be give as gifts to members of a wedding party. The normal selling price of gold bracelet is Rs. 389.95 and its unit product cost is Rs. 264.00 as shown below:

Materials……………………………	Rs. 143.00
Direct labor………………………….	86.00
Manufacturing overhead…………….	35.00
Unit product cost……………………	Rs 264.00

Most of the manufacturing overhead is fixed and unaffected by variations. In how much jewelry is produced in any given period. However, Rs. 7 of the overhead is variable with respect to number of bracelets produced. The customer who is interest in the special bracelets order would like special filigree applied to bracelets. This filigree would require additional materials costing Rs. 6 per bracelet and would also require acquisition of a special tool costing Rs. 465 that would have no other use once that specific order is completed. This order would have no effect on the company's regular sales and the order would be fulfilled using the company's existing capacity without affecting any other order.

Required:

What effect would accepting this order have on the company's net operating income if a special price of Rs. 349.95 is offered per bracelet for this order? Should the special order be accepted at this price?

Q.No.5 Climate Control Inc., manufactures a variety of heating and air conditioning units. The company is currently manufacturing all of its own component parts. An outside supplier has offered to sell a thermostat to Climate-Control of $20 per unit. To evaluate this offer, Climate-Control Inc., has gathered the following relating to its own cost of producing the thermostat internally:

	Per Unit	15,000 Units per Year
Direct material …………………………………	$ 6	$ 90,000
Direct labor …………………………………….	8	120,000
Variable manufacturing overhead……………….	1	15,000
Fixed manufacturing overhead, traceable ….........	5*	75,000
Fixed manufacturing overhead, common, but allocated…	10	150,000
	$ 30	$ 450,000

* 40% supervisory salaries; depreciation of special equipment (no resale value).

Required:

i. Assuming that the company has no alternative use for the facilities now being used to produce the thermostat, should the outside supplier's offer be accepted? Show all computations.

ii. Suppose that if the thermostats were purchased, Climate-Control, Inc., could used the freed capacity to launch a new products. The segment margin of the new product would be $ 65,000 per year. Should Climate-Control, accepted the offer to buy the thermostats from the outside supplier for $ 20 each? Show computations.

Q.No.6 (1) Explain the difference between a product cost and a period cost and gives at least two examples of each.

(2) What is meant by the term cost behavior?

(3) What is meant by operating leverage?

(4) What is the difference between absorption costing and variable costing?

(5) What is meant by product's CM ratio? How is this ratio useful in planning business operations, give at least two examples.

(6) Name three approaches to break-even analysis. Briefly explain how each approach works?

Department of Business Administration
University of Karachi
Final Examination: Spring 2006 (Affiliated Colleges)
Managerial Accounting
MBA IV {BA (M)-602}

Date: June 22, 2006 Max. Marks: 60

INSTRUCTION: Attempt any six questions. Show necessary computation.

Q.No.1 The Goldsmith Company had the following manufacturing data for the year 2005.

Beginning and ending inventories	none
Direct material used	Rs. 425,000
Direct labor	350,000
Supplies	20,000
Utilities (variable portion)	45,000
Utilities (fixed portion)	15,000
Indirect labor (variable portion)	100,000
Indirect labor (variable portion)	50,000
Depreciation	110,000
Property taxes	20,000
Supervisory salaries	50,000

Selling expense were Rs. 325,000 (including Rs. 70,000 that were variable) and General Administrative expenses were Rs. 148,000 (including Rs. 24,000 that were variable). Sales were Rs. 1.9 million.

Required:
Prepare Income Statement for year 2005 by using.
a) Contribution approach
b) Absorption approach

Q.No.2 (a) Fuji Steel Company was preparing its sales budget for the first quarter of 2006. Forecast sales are as:

January	Rs. 180,000
February	Rs. 210,000
March	Rs. 270,000

Sales are 20% cash and 80% on credit. Fifty percent of the credit accounts are collected in the month of sales, 40% in the following the sale, and 10% in the following month. Accounts receivable at the beginning of 2006 are Rs. 96,000 (10% November credit sales of Rs. 200,000 and 50% of December credit sales of Rs. 152,000)

Required:
Prepare a schedule showing sales and cash collection for January, February and March and quarter 2006.

Q.No.2 (b) "Budgets are primarily a tool used to limit expenditures." Do you agree? Explain.

Q.No.3 (a) Given: Selling price per unit, Rs. 80; total fixed expenses, Rs. 160,000; variable expenses per unit, Rs. 60. Assume that variable expenses are reduced by 20% per unit, and the total fixed expenses are increased by 10%. Assuming no change in selling price

Required:

- Fine sales in unit to achieve a profit of Rs. 48,000.

Q.No.3 (b) given: Selling price per unit. Rs. 15; total fixed expenses Rs. 185,000 variable expenses per unit, Rs. 7. Assuming no change in selling price

Required:

a) Find the break-even point in sales amount.
b) Find total sales in units to achieve a profit of Rs. 35,000.
c) Find the Margin of Safety.

Q.No.4 Mitchels Farms produces strawberries and raspberries. Annual fixed costs are Rs. 14400. The cost driver for variable costs is pints of fruit produced. The variable costs is Rs. 0.40 per pint of strawberries and Rs. 0.60 per pint of raspberries. Strawberries sell for Rs. 0.75 per pint of, raspberries for Rs. 0. 1.10 per pint. Two pints of strawberries are produced for every pint of raspberries.

Required:

a) Compute the number of pints of strawberries and the number of pints of raspberries produced and sold at the break-even point.
b) Suppose only raspberries are produced and sold. Compute the break-even point in pints.
c) Suppose only strawberries are produced and sold. Compute the break-even point in pints.

Q.No.5 (a) Silver Star Company has been manufacturing 5000 unit of part A100, which is used in the manufacture of one of its products. At this level of production, the cost per unit of manufacturing part A100 is as follows:

Direct Material	Rs. 2
Direct labor	Rs. 8
Variable overhead	Rs. 4
Fixed overhead	Rs. 6
Total	Rs. 20

ABC Company has offered to sell Silver Star Company 5000, units of part A100 for Rs. 19 a unit. Silver Star Company has determined that it could use the facilities currently used to manufacture part A100, to manufacture product B200 and generate an operating profit of Rs. 4000. Silver Star Company has also determined that two-thirds of the fixed overhead will continue even if part A100 is purchased from ABC Company.

Required:

- Determine should Silver Star Company purchase the part B200 form ABC Company or make.

Q.No.5 (b) How do committed fixed cost differ from discretionary fixed costs? Give three examples of each.

Q.No.6 (a) Colony Company manufacturing of lamps, budgeted sales of 400,000 lamps at Rs. 20.00 per unit for 2004 variable manufacturing costs were budgeted at Rs. 8.00 per unit, and fixed manufacturing costs at Rs. 5.00 per unit. A special ordering offering to buy 40,000 lamps for Rs. 11.50 per unit was received by Colony Company in March 2004.

Colony Company has sufficient plant capacity to manufacture the additional quantity of lamps, however, the production would have to be done by the present work force on an overtime basis at an estimated additional cost of Rs. 1.50 per lamps. Colony Company will not incur any selling expenses as a result of the special order.

Required:

- What would be the effect on operating income