Assignment # 1	স্কুল অব বিজনেস	MBA 4327

Bangladesh Open University
MBA Program
Semester 162 (4th Level)

Course: Strategic Management Accounting **Due on: October 20, 2017**

Instructions

- **Answer all the questions in your own handwriting on A4 size white paper.**
- **The assignment must be submitted on the assigned date to the Coordinator of the study center you are attached with.**
- **Spiral binding is strictly prohibited. Instead, transparent folder or file cover or any other soft binding may be used.**

Questions

1. (a) Explain how a shift in the sales six could result in both a higher break-even point and a lower net income.

   (b) Puleva Milenario SA, a company located in Toledo, Spain, manufactures and sells two models of luxuriously finished cutlery – Alvaro and Bazan. Present revenue, cost and sales data on the two products appear below. All currency amounts are stated in terms of Spanish pesetas (e.g., 400 ptas represents 400 Spanish pesetas).

	Alvaro	**Bazan**
Selling price per unit --------------------	400 ptas	600 ptas
Variable expenses per unit --------------	240 ptas	120 ptas
Number of units sold monthly ----------	200units	80 units

Fixed expenses are 66,000 ptas per month.

Required:

i. Assuming the sales mix above, do the following:
   (a) Prepare a contribution income statement showing both Peseta and Percent columns for each product and for the company as a whole.
   (b) Compute the break-even point in pesetas for the company as a whole and the margin of safety in both pesetas and percent of sales.

ii. The company has developed another product, Cano, that company plans to sell for 800 ptas each. At this price, the company expects to sell 40 units per month of the product. The variable expenses would be 600 ptas per unit. The company's fixed expenses would not change.
   (a) Prepare another contribution income statement, including the Cano product (sales of the other two products would not change.)
   (b) Compute the company's new break-even point in pesetas for the company as a whole and the margin of safety in both pesetas and percent of sales.

iii. The president of the company was puzzled by your analysis. He did not understand why the break-even point has gone up even though there has been no increase in fixed costs and the addition of the new product has increased the total contribution margin. Explain to the president what has happened.

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2. (a) When activity-based costing is used, why are manufacturing overhead costs often shifted from high-volume products to low-volume products?

(b) Emphasize is given in the use of activity-based costing in internal decisions. However, a modified form of activity-based costing can also be used to develop product costs for external financial reports. For this purpose, product costs include all manufacturing overhead costs and exclude all nonmanufacturing costs.

Erte, Inc., manufactures two models of high-pressure steam valves, the XR7 model and the ZD5 model. data regarding the two product follow:

Product	**Direct Labor-hours**	**Annual production**	**Total Direct Labor-hours**
XR7 ---------	0.2 DLHs per unit	20,000 units	4,000 DLHs
ZD5 ---------	0.4 DLHs per unit	40,000 units	16,000 DLHs
			20,000 DLHs

Additional information about the company follows;

i. Product XR7 required $35 in direct materials per unit, and product ZD5 requires $25.

ii. The direct labor rate is $20 per hour.

iii. The company has always used direct labor-hours as the base for applying manufacturing overhead cost to products. Manufacturing overhead totals $1,480,000 per year.

iv. Product XR7 is more complex to manufacture than product ZD5 and requires the use of a special milling machine.

v. Because of the special work required in (d) above, the company is considering the use of activity-based costing to apply overhead cost to products. Three activity cost pools have been identified and the first-stage allocations have completed. Data concerning these activity cost pools appear below:

			Total Activity		
Activity Cost pool	**Activity Measure**	**Total Cost**	**XR7**	**ZD5**	**Total**
Machine setups ---	Number of setups	$ 180,000	150	100	250
Special milling ----	Machine-hours	300,000	1,000	0	1,000
General factory ----	Direct labor-hours	1,000,000	4,000	16,000	20,000
		$ 1,480,000			

Required:

i. Assume that the company continues to use direct labor-hours as the base for applying overhead cost to products.

(a) Compute the predetermined overhead rate.

(b) Determine the unit product cost of each product.

ii. Assume that the company decides to use activity-based- costing to apply overhead cost to product.

(a) Compute the activity rate for each activity cost pool. Also compute the amount of overhead cost that would be applied to each product.

(b) Determine the unit product cost of each product.

iii. Explain why overhead cost shifted from the high-volume product to the low-volume product under activity-based costing.

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3. (a) Under what circumstances would you expect the volume variance to be favorable? Unfavorable? Does the variance measure deviations in spending for fixed overhead items? Explain.

(b) The KGV Blood bank, a private charity party supported by government grants, is located on the Caribbean island of St. Lucia. The Blood Bank has just finished its operations for September, which was a particularly busy month due to a powerful hurricane that hit neighboring islands, causing many injuries. The hurricane largely by passed St. Lucia, but residents of St. Lucia willingly donated their blood to help people on other islands. As a consequence, the blood bank collected and processed over 25% more blood than had been originally planned for the month.

A report prepared by a government official comparing actual costs to budgeted cost for the Blood Bank appears below. (The currency on St. Lucia is the East Caribbean dollar). Continued support from the government depends on the Blood Bank's ability to demonstrate control over its costs.

KGV BLOOD BANK
Cost Control Report
For the Month Ended September 30

	Actual	Budget	Variance
Liters of blood collected ---------	780	600	180 F
Variable costs:			
Medical supplies -------------------	$ 9,252	$ 7,110	$ 2,142 U
Lab tests ----------------------------	10,782	8,610	2,172 U
Refreshments for donors ----------	1,186	960	226 U
Administrative Supplies -----------	189	150	39 U
Total variable costs ----------------	21,409	16,830	4,579 U
Fixed costs:			
Staff salaries ------------------------	13,200	13,200	
Equipment depreciation -----------	2,100	1,900	200 U
Rent ---------------------------------	1,500	1,500	
Utilities -----------------------------	324	300	24 U
Total fixed costs --------------------	17,124	16,900	224 U
Total costs --------------------------	$ 38,533	$ 33,730	$ 4,803 U

The managing director of the Blood Bank was very unhappy with this report, claiming that his costs were higher than expected due to the emergency on the neighboring islands. He also pointed out that the additional cost had been fully covered by payments from grateful recipients on the other islands. The government official who prepared the report countered that all of the figures had been submitted by the blood bank to the government; he was just pointing out that actual costs were a lot higher than promised in the budget.

Required:

1. Prepare a new performance report for September using the flexible budget approach. (Note: Even though some of these costs might be classified as direct cost rather than as overhead, the flexible budget approach can still be used to prepare a flexible budget performance report.)
2. Do you think any of the variances in the report you prepared should be investigated? Why?

Note: Submit your assignment to the Coordinator of the Study Center you are attached with.

Assignment # 2

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MBA 4327

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MBA Program
Semester 162 (4^{th} Level)

Course: Strategic Management Accounting **Due on: December 15, 2017**

(Answer all the questions in own handwriting on A4 size white pages)

1. (a) Distinguish between a cost center, a profit center, and an investment center.

   (b) In cases 1-3 below, assume that Division A has a product that can be sold either to Division B of the same company or to outside customers. The managers of both divisions are evaluated based on their own division's return on investment (ROI). The managers are free to decide if they will participate in any internal transfers. All transfer prices are negotiated. Treat each case independently.

	Case			
	1	2	3	4
Division A:				
Capacity in units -----------------------------	50,000	300,000	100,000	200,000
Number of units now being sold to Outside costumers --------------------------	50,000	300,000	75,000	200,000
Selling price per unit on the outside market	\$ 100	\$ 40	\$ 60	\$ 45
Variable costs per unit----------------------	\$ 63	\$ 19	\$ 35	\$ 30
Fixed costs per unit (based on capacity) -----	\$ 25	\$ 8	\$ 17	\$ 6
Division B:				
Number of units needed annually -----------	10,000	70,000	20,000	60,000
Purchase price now being paid to an outside supplier -----------------------------	\$ 92	\$ 39	\$ 60	-

Before any quantity discount.

Required:

1. Refer to case 1 above. A study has indicated that Division A can avoid \$5 per unit in variable costs on any sales to Division B. Will the managers agree to a transfer and if so, within what range will the transfer price be? Explain.
2. Refer to case 2 above. Assume that Division A can avoid \$4 per unit in variable cost on any sales to Division B.
   - (a) Would you expect any disagreement between the two divisional managers over what the transfer price should be? Explain.
   - (b) Assume that Division A offers to sell 70,000 units to Division B for \$38 per unit and that Division B refuses this price. What will be the loss in potential profit for the company as a whole?
3. Refer to case 3 above. Assume that Division B is now receiving a 5% quantity discount from the outside supplier.
   - (a) Will the managers agree to a transfer? If so, within what range will the transfer price be?

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(b) Assume the Division B offers to purchase 20,000 units from Division A at $52 per unit. If Division A accepts this price, would you expect its ROI to increase, decrease, or remain unchanged? Why?

4. Refer to case 4 above. Assume that Division B wants Division A to provide it with 60,000 units of a different product from the one that Division A is now producing. The new product would require $25 per unit in variable costs and would require that Division A cut back production of its present product by 30,000 units annually. What is the lowest acceptable transfer price from Division A's perspective?

2. (a) "All future costs are relevant in decision making." Do you agree? Why?

(b) Bronson Company manufactures a variety of ballpoint pens. The company has just received an offer from an outside supplier to provide the ink cartridge for the company's Zippo pen line, at a price of $0.48 per dozen cartridges. The company is interested in this offer, since its own production of cartridges is at capacity.

Bronson Company estimates that if the supplier's offer were accepted, the direct labor and variable overhead costs of the Zippo pen line would be reduced by 10% and the direct materials cost would be reduced by 20%

Under present operations, Bronson Company manufactures all of its own pens from start to finish. The Zippo pens are sold through wholesalers at $4 per box. Each box contains one dozen pens. Fixed overhead costs charged to the Zippo pen line total $50,000 each year. (The same equipment and facilities are used to produce several pen lines.) The present cost of producing one dozen Zippo pens (one box) is given below:

Direct materials --------------------------	$ 1,50
Direct labor --------------------------------	1.00
Manufacturing overhead ---------------	0.80
Total cost ---------------------------------	$ 3.30

*Includes both variable and fixed manufacturing overhead, based on production of 100,000 boxes of pens each year.

Required:

1. Should Bronson Company accept the outside supplier's offer? Show computations.
2. What is the maximum price that Bronson Company should be willing to pay the outside supplier per dozen cartridges?
3. Due to bankruptcy of a competitor, Bronson Company expects to sell 150,000 boxes of Zippo pens next year. As stated above, the company presently has enough capacity to produce the cartridges for only 100,000 boxes of Zippo pens annually. By incurring $30,000 in added fixed cost each year, the company could expand its production of cartridges to satisfy the anticipated demand for Zippo pens. The variable cost per unit to produce the additional cartridges would be the same as at present. Under these circumstances, should all 150,000 boxes be purchased from the outside supplier, or should some of the 150,000 boxes be made by Bronson? Show computations to support your answer.
4. What qualitative factors should Branson Company consider in determining whether it should make or by the ink cartridges?

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3. (a) Explain how the cost of capital serves as a screening tool when dealing with (a) the net present value method and (b) the internal rate of return method.

(b) Austin Company is investigating five different investment opportunities. Information on the five projects under study is given below:

	Project Number				
	1	**2**	**3**	**4**	**5**
Investment required--	$ (480,000)	$ (360,000)	$ (270,000)	$ (450,000)	$ (400,000)
Present value of cash inflows at a 10% discount rate -	567,270	433,400	336,140	522,970	379,760
Net present value ----	$ 87,270	$ 73,400	$ 66,140	$ 72,970	$ 20,240
Life of the project ---	6 years	12 years	6 years	3 years	5 years
Internal rate of return	16%	14%	18%	19%	8%

Since the company's required rate of return 10%, a 10% discount rate has been used in the present value computations above. Limited funds are available for investment, so the company can't accept all of the available projects.

Required:

1. Compute the profitability index for each investment project.
2. Rank the five projects according to preference, in terms of:
   a. Net present value.
   b. Profitability index.
   c. Internal rate of return.
3. Which ranking do you prefer? Why?

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