Chapter 4 – Relevant Costing Exam Prep Handout

1. The Bremmer Company produces 5,000 units of item ZQ98 annually at a total cost of $200,000.

Direct materials	$ 20,000
Direct labor	55,000
Variable overhead	45,000
Fixed overhead	80,000
Total	$200,000

The Daisy Company has offered to supply all 5,000 units of ZQ98 per year for $35 per unit. If Bremmer accepts the offer, $8 per unit of the fixed overhead would be saved. In addition, some of Bremmer's leased facilities could be vacated, reducing lease payments by $30,000 per year. At what price would Bremmer be indifferent to Daisy's offer?

A. $40.
B. $38.
C. $35.
D. $24.

2. The following information relates to the Jax Company for the upcoming year.

	Amount	Per Unit
Sales	$8,000,000	$ 20.00
Cost of goods sold	6,400,000	16.00
Gross margin	1,600,000	4.00
Operating expenses	600,000	1.50
Operating profits	$1,000,000	$ 2.50

The cost of goods sold includes $2,400,000 of fixed manufacturing overhead; the operating expenses include $200,000 of fixed marketing expenses. A special order offering to buy 50,000 units for $15.00 per unit has been made to Jax. Fortunately, there will be no additional operating expenses associated with the order and Jax has sufficient capacity to handle the order. How much will operating profits increase if Jax accepts the special order?

A. $50,000.
B. $125,000.
C. $200,000.
D. $250,000.
E. Operating profits will not increase as a result of accepting the special order.

3. Scherer Corporation is preparing a bid for a special order that would require 720 liters of material U48N. The company already has 560 liters of this raw material in stock that originally cost $6.30 per liter. Material U48N is used in the company's main product and is replenished on a periodic basis. The resale value of the existing stock of the material is $5.80 per liter. New stocks of the material can be readily purchased for $6.65 per liter. What is the relevant cost of the 720 liters of the raw material when deciding how much to bid on the special order? (CIMA adapted)

A. $4,592.
B. $4,788.
C. $4,456.
D. $4,176.

E 4-33. Special Orders

Carlsbad Enterprises has a capacity to produce 400,000 computer cases per year. The company is currently producing and selling 320,000 cases per year at a selling price of $80 per case. The cost of producing and selling one case follows:

Variable manufacturing costs	$32
Fixed manufacturing costs	8
Variable selling and administrative costs	16
Fixed selling and administrative costs	4
Total costs	$60

The company has received a special order for 20,000 cases at a price of $50 per case. Because it does not have to pay a sales commission on the special order, the variable selling and administrative costs would be only $10 per case. The special order would have no effect on total fixed costs. The company has rejected the offer based on the following computations:

Selling price per case	$50
Variable manufacturing costs	32
Fixed manufacturing costs	8
Variable selling and administrative costs	10
Fixed selling and administrative costs	4
Net profit (loss) per case	$(4)

Required

a. What is the impact on profit for the year if Carlsbad accepts the special order? Show computations.

b. Do you agree with the decision to reject the special order? Explain.

E 4-35. Pricing Decisions

Mother's Bottlers, Inc., is a small bottling company that bottles and sells cold teas for $5 per unit. The cost of each unit follows:

Materials	$1.50
Labor	1.00
Variable overhead	0.50
Fixed overhead ($20,000 per month, 20,000 units per month)	1.00
Total costs per unit	$4.00

One of Mother's regular customers asked the company to fill a special order of 2,000 units at a selling price of $3.50 per unit. Mother's can fill the order using existing capacity without affecting total fixed costs for the month. However, Mother's manager was concerned about selling at a price below the $4.00 cost per unit and has asked for your advice.

Required

a. Prepare a schedule to show the impact of providing the special order of 2,000 units on Mother's profits in addition to the regular production and sales of 20,000 units per month.

b. Based solely on the data given, what is the lowest price per unit at which the bottled teas could be sold for the special order without reducing Mother's profits?

c. What other factors might Mother's managers want to consider in setting a price for the special order?

E 4-40. Target Costing

Terracotta, Inc., makes toy soldiers. Company management believes that a new model would sell well at a price of $65. The company estimates unit materials costs to be $16 for the model, and overhead costs would average $20 per unit. The local wage rate for direct labor is $28 per hour. Terracotta has a goal of earning an operating profit of 30 percent of manufacturing costs for each of its products.

Required

What direct labor hour input (hours per unit) could Terracotta allow and still achieve its profit goal?

E 4-44. Dropping Product Lines

Atlantic Soup Company is presently operating at 75 percent of capacity. Worried about the company's performance, the president is considering dropping its clam chowder line. If clam chowder is dropped, the revenue associated with it would be lost and the related variable costs saved. In addition, the company's total fixed costs would be reduced by 15 percent.

Segmented income statements appear as follows:

Product	Tomato	Clam Chowder	Chicken Noodle
Sales	$32,600	$42,800	$51,200
Variable costs	22,000	38,600	40,100
Contribution margin	$10,600	$ 4,200	$11,100
Fixed costs allocated to each product line	4,700	6,000	7,100
Operating profit (loss)	$ 5,900	$ (1,800)	$ 4,000

Required

Prepare a differential cost schedule like the one in Exhibit 4.8 (see below) to indicate whether Atlantic should drop the clam chowder product line.

	Status Quo: Keep Prints	Alternative: Drop Prints	Difference
Sales revenue	$80,000	$70,000	$10,000 decrease
Cost of sales (all variable)	53,000	45,000	8,000 decrease
Contribution margin	$27,000	$25,000	$ 2,000 decrease
Less fixed costs:			
Rent	4,000	4,000	–0–
Salaries	5,000	4,000	1,000 decrease
Marketing and administrative	3,000	2,750	250 decrease
Operating profit (loss)	$15,000	$14,250	$ 750 decrease

Exhibit 4.8 Differential Analysis—U-Develop