45/100

ACCT 305
Cost Accounting
Examination 1

Name Riyadh Alhamrani
Signature

This is an open book/open note examination. You have 2 hours to complete it and may use a calculator. Computer access is not allowed. **Please write on only one side of any paper submitted to be graded.** You may use your own paper when needed. **I WILL ONLY GRADE THE FRONT SIDE OF ANY PAPER SUBMITTED!!**

1. (10 points) For each of the following costs incurred in a manufacturing firm, indicate whether the costs are most likely a direct material, direct labor, manufacturing overhead or period cost.

a. Depreciation of office building — Period cost ✓
b. Assembly line workers' wages — direct labor ✓
c. Property taxes on the factory building — Period cost
d. Sales commissions for sales personnel — Period cost ✓
e. Welders' wages to produce steel handrails for inventory — direct material
f. Concrete used in the production of concrete steps in inventory — direct material ✓
g. Controller's salary — Period cost ✓
h. Steel used in production of handrails in inventory — direct material ✓
i. Painters' wages for painting handrails — direct labor ✓
j. Utilities in the office building — Manufacturing overhead ✓

x 8
-2

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h. Steel used in production of handrails in inventory	direct material ✓
i. Painters' wages for painting handrails	direct labor ✓
j. Utilities in the office building	Manufacturing overhead ✓

x 8

-2

2. (19 points) Seattle Manufacturing Company had the following account balances for the quarter ending December 31 in alphabetical order:

Beginning direct materials inventory	$37,000
Beginning finished goods inventory	65,000
Beginning work in process inventory	54,000
Direct labor	120,000
Direct materials purchases	150,000
Ending direct materials inventory	35,000
Ending finished goods inventory	68,000
Ending work in process inventory	48,000
Fixed manufacturing overhead	20,000
Fixed selling and administrative expenses	90,000
Revenues or Sales	700,000
Variable manufacturing overhead	30,000
Variable selling and administrative expenses	75,000

Required:

a. What is the amount of direct materials used during the period?
b. What is the amount of cost of goods manufactured during the period?
c. What is the amount of cost of goods sold during the period?
d. What is the amount of net income (assuming no income taxes)?
e. What is the total amount of conversion costs?
f. What is the total amount of prime costs?

a) $37,000 + 150,000 - 35,000 = 152,000$ ✓

b) $54,000 + 120,000 + 152,000 = 326,000$

c) $700,000 - (65,000 + 326,000 - 68,000) = 700,000 - 323,000 = 377,000$

d) $377,000 - 48,000 - 90,000 - 75,000 = 164,000$

e) $120,000 + 20,000 + 30,000 = 170,000$ ✓

f) $152,000 + 120,000 = 272,000$ ✓

+13
-6

3. (17 points) Ralph Company has the following cost information:

Price	$20 per unit
Variable cost	$12 per unit
Fixed costs	$120,000
Tax rate	40 percent

Required:

a. What is the contribution margin percentage?
b. What is the net income (after-tax income) for Ralph Company assuming that its sales were 25,000 units?
c. What is the breakeven in **units**?
d. What is the breakeven in **sales dollars**?
e. What is the sales quantity **in units** needed to obtain an after-tax profit of $60,000?

CM = 20 − 12 = 8

-2 a) 12 ÷ 20 = 0.6

b) 25,000 × 20 = 500,000
25,000 × 12 = 300,000
= 800,000

(contribution = sales − variable cost)

800,000 − 120,000 = 680,000

-3 Fixed Product cost = 120,000 − 680,000 = 560,000

Less tax 40% × 120,000 = 48,000

Net Income 120,000 − 48000 = 72,000

c) 120,000 ÷ 12 = 10,000 units

d) 120,000 ÷ 0.6 = 200,000

e) (60,000 + 120,000) ÷ 8 = 22,500 units

20 − 12 = 8

-2

+10

4. (18 points) Barry Company has the following budgeted operating results for 2011 for 20,000 units:

Revenues	$200	per unit
Variable selling and administrative expenses	25	per unit
Variable production costs	90	per unit
Fixed selling and administrative expenses	$450,000	
Fixed production costs	860,000	

A foreign wholesaler wants to buy 3,000 units at a price of $135 per unit. All fixed costs would remain within the relevant range (up to capacity). **The variable selling costs would only be on the regular units sold.** In other words, there would not be any variable selling expenses on the special units sold. Barry Company has the capacity to produce 24,000 units per year.

Required:

a. Produce a contribution income statement without the special order (assume no income taxes.)

b. Should Barry Company produce the special order? Justify your answer. If Barry Company accepts the special order, they must produce and sell the entire 3,000 units for $135 per unit.

c. Should Barry Company produce a special order for 5,000 units for $135 per unit? Justify your answer by redoing the income statement assuming the special order. If Barry Company accepts the special order, they must produce and sell the entire 5,000 units for $135. In other words, they may lose regular customers.

a)

b) 135 per units − (virriabl cost 90 ÷ 200) × 3000

135 − 0.45 × 3000 = 403,650

Yes they should, they will make more profet.

c) 20 × 5000 = 100,000

+4

−14

5. (16 points) Franklin Company currently buys 50,000 units of a part used to manufacture its product at $50 per unit. Recently the supplier informed Franklin Company that a 20 percent increase will take effect next year. Franklin has some additional space and could produce the units for the following per-unit costs (based on 50,000 units):

Direct materials	$20
Direct labor	15
Variable overhead	14
Fixed overhead	13
Total	$62

If the units are purchased from the supplier, $250,000 of fixed costs will continue to be incurred.

Required:

a. Should Franklin Company buy the parts externally or make them internally? Support your answer with numerical analysis.

b. Should Franklin Company buy the parts externally or make them internally, assuming that the plant can be rented for $200,000 per year when the parts are purchased externally? Support your answer with numerical analysis.

a) Yes they should

Total MOH / units = per unit

6. (20 points) Yakima Company produced and sold 20,000 units in 2011. The units sold for $200 each. During the period, the following costs were incurred:

Variable selling and administrative expenses per unit	$20 x 20,000 = 400,000
Variable manufacturing overhead per unit	40
Direct labor per unit	30 x 20,000 = 600,000
Direct materials per unit	35 x 20,000 = 700,000
Fixed selling and administrative expenses	$540,000
Fixed manufacturing overhead	220,000

Tax rate is 30 percent.

Required:

a. Calculate each of the following:

i. Variable production cost per unit
ii. Full absorption cost per unit
iii. Variable cost per unit
iv. Full (total) cost per unit
v. Contribution margin per unit

b. Produce a gross margin income statement.

a(i) 40 ÷ 20,000 = 0.002 Variable MOH / number of units

ii) 400,000 + 600,000 + 700,000 + 540,000 + 220,000 = 2,460,000 ÷ 20,000 = 123

iii) 20 + 30 + 35 + = 85

iv) 220,000 ÷ 20,000 = 11 , 540,000 ÷ 20,000 = 27

11 + 27 + 20 + 30 + 35 = 123

v) 20 + 30 + 35 + ? =

Yakima Company
Income statement
For the year ended 31 december, 2011

+8
-12

Sales	4000,000	2,460,000
costs of goods sold		
gross profit	1,340,000	
		1,120,000
Income before tax		
Income tax	336,000	