Managerial Accounting Acct 2301 Fall 2007 Final Exam

Name: KEY

There are 32 questions on this exam. Fill in an answer for each question on your scantron!. Rounding error within $25 is acceptable on all time-value-of-money problems. Good Luck!

1. Rilo Company produces and sells gizmos. The company incurred the following production costs for 2006:

Direct Materials	$15 per unit	$40/unit
Direct Labor	$20 per unit	
Variable Manufacturing Overhead	$ 5 per unit	
Fixed Manufacturing Overhead	$190,000 ÷ 10,000 units = $19/unit	

The company produced 10,000 units and sold 8,000 during 2006. What was the ending inventory balance at 12/31/06 using the absorption costing method?

   a. $104,000
   b. $416,000
   c. $320,000
   d. $ 80,000
   e. None of the above

$59/unit × 2,000 units in inventory = $118,000 end inv.

2. A multi-department company's desired return is 8%. The service department currently has a return of 12% using $250,000 of operating assets. The company is considering purchasing an additional new $150,000 machine for the service department. The new machine is expected to have a 11% return. What will be the service department's residual income if the investment is accepted?

   a. $13,000
   b. $10,000
   c. $3,000
   d. $14,500
   e. None of the above

		R.I.
4% × 250,000	=	$10,000
3% × 150,000	=	4,500
		$14,500

3. Ug Incorporated is considering purchasing a new piece of equipment. The company requires a minimum rate of return 12%. The new equipment is expected to generate sales of $100,000 per year, but is also expected to generate $20,000 of expenses per year. All sales and expenses are cash. The new equipment will cost $250,000. The equipment has a 7 year useful life and a $5,000 salvage value. What is the net present value for this investment? (Ignore taxes.)

   a. <$66,980>
   b. $41,219
   c. $113,315
   d. $56,405
   e. None of the above

	PV factor		Future Cash		
Annuity:	4.564	×	80,000	=	365,120
simple:	.452	×	5,000	=	2,260
					367,380 − 250,000 = 117,38

4. Dan's Delivery is considering purchasing a new van. The cost of the van is $42,340. The van has a 4 year useful life and a $5,000 salvage value. The van is depreciated using the straight-line depreciation method. Dan's requires a minimum rate of return of 8% on all new investments. The van is expected to generate additional cash sales of $15,000 per year and also generate cash expenses of $2,500 annually. (This excludes depreciation). Should Dan purchase the new van? Ignore taxes.

   a. Yes, because the actual return is greater than the required.
   b. No, because the actual return is greater than the required.
   c. Yes, because the actual return is less than the required.
   d. No, because the actual return is less then the required.
   e. None of the above

PV factor		Future CASH		
3.312	×	12,500	=	41,400
.735	×	5,000	=	3,675
				45,075
				vs.
				$\boxed{42,340 \text{ cost}}$

5. Orten Company has a normal costing system and applies overhead based on direct labor hours. The company estimated that it would incur $400,000 of overhead and 100,000 labor hours for 2006. The company made 100,000 units and sold 80,000 units during 2006. The company incurred the following costs to produce the units: $500,000 raw material; $350,000 production labor; $410,000 actual overhead. The production workers actually worked 95,000 hours. At the end of the year, the company adjusts for any over or underapplied overhead. What was the company's cost of goods sold for 2006 after all adjustments were made?

OH rate
$4/DL Hr.
x 95,000 Hrs
$380,000 Applied

a. $1,014,000
b. $984,000
c. $998,000
d. $1,004,000
e. None of the above

OH control

Actual 410	380 Applied
	30 correct

COGS

correct 30	

DM 500 K
DL 350 K
OH 380 K

1,230K ÷ 100,000 units = $12.30/unit x 80,000 sold = 984,000
+ 30,000 correct
1,014,000

6. The Dalton Corporation began business on January 1, 2006. The following transactions took place during the year (Assume all transactions involve cash):
   1.) Acquired $5,000 of capital from the owners.
   2.) Purchased $7,000 of direct raw materials.
   3.) Used $3,500 of direct raw materials.
   4.) Paid production workers $2,500.
   5.) Paid $1,500 for manufacturing overhead. (Applied and actual overhead are the same.)
   6.) Started and completed 2,000 units of WIP inventory
   7.) Sold 1,500 units for $8 each.
   8.) Paid $2,500 for selling and administrative expenses.

The amount of raw materials inventory reported on the balance sheet at December 31, 2006 would be:

a. $0
b. $1,875
c. $3,500
d. $4,000
e. None of the above

RAW Material

(#2)	7,000	3,500	(#3)
End	3,500		

7. Bob's Boat manufactures custom boats and began business on January 1, 2006. During 2006, the company began work on three boats. The following is the job order cost sheet data for all three boats:

	SOLD	Still WIP	Finished Good
	Boat #101	Boat #202	Boat #303
Direct Materials	$6,000	$7,500	$6,500
Direct Labor	$4,500	$5,000	$5,500
Labor Hours	450	500	550 x $5 = 2,750

$14,750

The company applies overhead based on direct labor hours. The company calculated a predetermined overhead rate of $5.

During 2006, the company completed Boat #101 and Boat #303. Boat #202 was still in production at the end of the year. Boat #101 was sold for $18,000 on December 1, 2006. What was the balance in finished goods inventory on 12/31/06? (round to the nearest dollar)

a. $15,000
b. $14,750
c. $14,933
d. $14,667
e. None of the above

8. Harvey's Home ~~Store has~~ three departments: Tools, Plumbing and Hardware. The store incurred $30,000 of worker's compensation insurance for 2006. The departments identified the following cost drivers for 2006:

	Tools	Plumbing	Hardware
Labor dollars	$535,000	$700,000	$240,000
Square footage	3,000	8,000	1,000
# of sales transactions	300,000	900,000	90,000

Using the most appropriate cost driver, how much worker's comp insurance should be allocated to the Plumbing Department? (round to the nearest dollar)

a. $15,000
b. $10,000
c. $20,930
d. $10,355
e. None of the above

Overhead $\qquad$ Plumbing's use of OH

$$\$30{,}000 \times \frac{700}{(535+700+240)} = \$\underline{\underline{14{,}237}}$$

9. Ethelle Allen makes two types of chairs. One of the chairs is a rocking chair. The other is a straight-back chair. It requires approximately 5 hours of direct labor to make one chair of either kind. During March, the company made 50 rocking chairs and 100 straight-back chairs. The materials handling cost amounted to $15,000 for the month. The rocking chair requires one-half hour of materials handling time per chair while the straight-back chair requires one-quarter hour of materials handling time per chair. In total, how much materials handling cost should be allocated to the rocking chairs for March? (round to the nearest dollar)

a. $10,000
b. $ 5,000
c. $ 7,500
d. $15,000
e. None of the above

Rocking: ½ hr × 50 chairs = 25 hrs
Straight back: ¼ hr × 100 chairs = 25 hrs
each product is allocated ½ of the $15,000 OH cost

10. ListenUp Audio Systems sells and installs car stereo systems. Rosemary Patterson needs to prepare a purchases budget for the last quarter of 2007. The company's sales budget for the fourth quarter is provided below:

	October	November	December
Budgeted Sales	$90,000	$102,000	$104,000

	Nov	Dec
Budgeted Cogs	81,600	83,200
Budgeted Beg. Inv	16,320	16,640

Rosemary expects the company's cost of goods sold to be 80% of sales. The ending inventory balance each month should be 20% of the next month's cost of goods sold. Based on this information, how much inventory does Rosemary need to purchase for November?

a. $78,400
b. $98,040
c. $80,640
d. $79,360
e. None of the above

Nov - Inv

B.	16,320	81,600 COGS
Purchase	81,920	
End	16,640	

11. During its first year of operations, Overton Company paid $20,000 for direct material and $50,000 for production workers' wages. Lease payment and utilities on the production facility amounted to $12,000. General, selling and administrative expenses amounted to $6,000. The company made 20,000 units and sold 16,000 units for $6.50 each. What was the amount of the company's net income for the first year?

a. $37,200
b. $43,200
c. $37,800
d. $42,000
e. None of the above

DM $20K
DL $50K
MOH $12K
$82K
÷ 20K units
$4.10 per unit

6.50 - 4.10 = 2.40 cm/unit
× 16,000 units
38,400 CM
- 6,000 SG&A
32,400 N.I.

12. Spacely Sprockets' sales budget shows the following expected total sales:

Month	Total Sales	Credit Sales
January	$30,000	
February	$40,000	
March	$35,000	28,000 x 70% = 19,600
April	$30,000	

The company expects 80% of its sales to be on account (credit sales). Credit sales are collected as follows: 30% in the month of sale and 70% in the month following the sale. What is the budgeted accounts receivable balance at the end of the first quarter?

a. $19,600
b. $24,500
c. $16,800
d. $22,800
e. None of the above

13. Geerts Industries' sales budget shows the following expected total sales for the third quarter of 2007:

Month	Total Sales
July	$50,000
August	$52,000
September	$60,500

The company expects 75% of its sales to be credit sales. Credit sales are expected to be collected as follows: 20% in the month of sale, 75% in the month following the sale with the remainder being uncollectible and written off in the month following the sale. What is the budgeted amount of total cash collections for August?

a. $50,125
b. $36,375
c. $52,000
d. $22,000
e. None of the above

Collections for:
July Credit SALES = 37,500 x 75% = 28,125
Aug. Credit SALES = 39,000 x 20% = 7,800
Aug. CASH SALES = 52,000 x 25% = 13,000
48,925

14. The Raiderland Company produces a number of products, including a Texas Tech flag. The company, which began operations at the beginning of the year, uses a standard cost system. The standard costs for one Texas Tech flag are provided below:

Direct Material (0.5 yds @ $2.00 per yard)	$1.00 / unit
Direct Labor (1 hr @ $8.50 per hour)	$8.50 / unit

The company produced and sold 35,000 flags during 2006 at the following costs:

Direct Materials (18,000 yards)	$ 17,280
Direct Labor (36,000 hours)	$374,400

What is the company's material usage variance for 2006?

a. $1,000 favorable
b. $1,000 unfavorable
c. $500 favorable
d. $500 unfavorable
e. None of the above

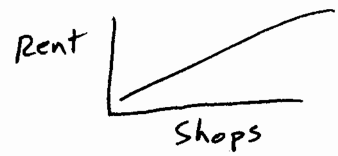
SP \$2 AQ 18,000

SP \$2 SQ (.5 x 35,000 flags)

500 yards x \$2 per yard

= \$1,000 U

15. Coffee Café operates a chain of coffee shops in Lubbock. The company pays rent of $24,000 per year for each location. Supplies (napkins, bags, and condiments) are purchased as needed. The managers of each shop are paid a salary of $3,000 per month and all other employees are paid on an hourly basis. Relative to the number of shops, the cost of the rent is which kind of cost?
   a. Fixed cost
   b. Variable cost
   c. Mixed cost
   d. Inadvertent cost
   e. None of the above



16. The Brody Company provided the following standard cost information for each unit is produces:

Direct Material (3 ft. @ $1.50 per foot)	$ 4.50 / unit
Direct Labor (1.5 hrs @ $10 per hour)	$15.00 / unit

During 2006, the company produced and sold 4,500 units at the following cost:

Direct Material (14,000 feet)	$24,500
Direct Labor (7,000 hours)	$66,500

AP AQ 7,000 SP $10 AQ 7,000

$ 66,500 $ 70,000

$ 3,500 F

What was the company's labor rate variance for 2006?
   a. $2,250 Unfavorable
   b. $2,250 Favorable
   c. $3,500 Unfavorable
   d. $3,500 Favorable
   e. None of the above

17. The Coldwall Company provided the following cost information for 2006:

Wages paid to production workers	$25,000
Wages paid to factory maintenance	$10,000 *
Raw materials used in production	$50,000
Indirect materials	$15,000 *
Factory utilities	$ 8,000 *
Rent on the production facility	$12,000 *
Sales commissions	$40,000

* = MOH item

$\sum * = \$45,000$

What is the total amount of the company's manufacturing overhead for 2006?
   a. $120,000
   b. $ 90,000
   c. $ 45,000
   d. $ 20,000
   e. None of the above

18. The Magnus Company incurs production cost of $5 per unit for direct material and $12 per unit for direct labor. The company pays rent of $10,000 per year for its production facility. If the company produces 5,000 units and sells 4,400 units during the year, what will be the company's cost of goods sold?
   a. $89,700
   b. $81,400
   c. $95,000
   d. $101,000
   e. None of the above

$\frac{\$10,000}{5,000u} = \$2$ per unit MOH
5 DM
12 DL
$ 19 cost per unit
x 4,400 units
$ 83,600 COGS

19. AbCo Inc. produces a product that is sold for $20 each. The variable cost to produce each unit is $15 and there is $10,000 in total fixed cost. The company would like to have a $30,000 profit. What amount of total sales does the company need in order to earn the desired profit?
    a. $25,000
    b. $75,000
    c. $100,000
    d. $125,000
    e. None of the above

$5 CM/unit × units − $10,000 = $30,000

units = 8,000 × $20 price per unit = $160,000

20. The following income statement is provided:

Sales revenue (2,000 * $5)	$10,000
Variable COGS (2,000 * $1.25)	(2,500)
Fixed COGS	(4,000)
Gross Margin	$ 3,500
Depreciation	(1,000)
Supplies (2,000 * $0.50)	(1,000)
Net Income	$ 1,500

$5
− 1.25 VAR COGS
− .50 VAR SG&A
$3.25 CM/unit

If sales increase to 2,800 units, what will be the company's contribution margin?
    a. $6,500
    b. $9,375
    c. $8,125
    d. $7,125
    e. None of the above

$3.25
× 2,800 units
$9,100 CM

21. Best Thing, Inc. sells a product at $60 per unit that has unit variable cost of $40. The company's break even point is $120,000 in total sales. How much profit will the company make if it sells 5,000 units?
    a. <$20,000>
    b. $60,000
    c. $100,000
    d. $120,000
    e. None of the above

CM ratio = 20/60

20/60 × SALES$ ($120,000) − Fixed Cost = 0 ⇒ FC = 40,000

($20 cm × 5,000 units) − 40,000 = 60,000 profit

22. Alcott Company has a contribution margin of 25%. The company desires to earn a profit of $50,000. The company has fixed costs of $220,000. What sales revenue would the company have to have in order to earn the desired profit?
    a. $680,000
    b. $480,000
    c. $200,000
    d. $100,000
    e. None of the above

25% × Sales$ − 220,000 = 50,000

Sales$ = 270,000 / .25

= 1,080,000

23. Evelyn Company began the accounting period with $13,500 in accounts receivable. The ending balance in accounts receivable was $5,000. If the credit sales during the period were $22,000, what is the amount of cash received from customers?
    a. $13,500
    b. $22,000
    c. $30,500
    d. $40,500
    e. None of the above

A Rec.

Beg.	13,500	
Add <New Credit Sales>	22,000	30,500
End	5,000	

Subtract <collect credit sales>

24. Stevens Associates uses the indirect method for preparing the statement of cash flows. The following accounts and balances were drawn from the company's accounting records:

Account Title	Beginning Balance	Ending Balance	Δ
Account Receivable	$15,000	$20,000	−5,000
Prepaid Insurance	2,300	500	+ 1,800
Accounts Payable	12,000	12,900	+ 900
Unearned Revenue	3,200	1,900	− 1 300

Σ = − 3,600

Net income for the period was $16,000, which includes $5,000 of depreciation expense. The net cash flows from operating activities would be;

a. $17,400
b. $18,600
c. $20,000
d. $24,600
e. None of the above

Net Income 16,000
+ Depreciation 5,000
− Δ in sht B/S 3,600
CFO $ 17,400

25. Production in 2007 for Big Snow Mobiles was at its highest point in the month of June when 40 units were produced at a total cost of $700,000. The low point in production was in January when only 15 units were produced at a cost of $340,000. The company is preparing a budget for 2008 and needs to project expected fixed cost for the budget year. Using the high/low method, the projected amount of fixed cost per month is

a. $260,000
b. $240,000
c. $184,000
d. $ 10,400
e. None of the above.

$\frac{700,000 - 340,000}{40 - 15} = \$14,440$ VC estimate

(14,400 × 15 units) + FC = $340,000 ⇒ FC_{est} = $124,000

26. Western Company can purchase an asset that costs $1,166,900. The asset is expected to produce net cash inflows of $300,000 per year for five years. Based on this information alone, the investment is expected to yield an internal rate of return closest to

a. 6%
b. 9%
c. 10%
d. 12%
e. None of the above

27. XYZ Company has an opportunity to purchase an asset that will cost the company $60,000. The asset is expected to increase cash flow by $12,000 per year. Assume the asset has a 5-year useful life, depreciation is straight line, a zero salvage value, a 14% required return, and no taxation. The net present value of the investment will be:

a. Less than zero
b. Greater than zero, but less than $10,000
c. Greater than $10,000, but less than $20,000
d. Greater than $20,000, but less than $40,000
e. Greater than $40,000

no need to calculate...
future payments = $60,000
ANY discounting makes "A" true.

28. Return on investment can be broken into two components:

a. profit margin and asset turnover
b. contribution margin and asset turnover
c. segment margin and asset turnover
d. profit margin and inventory turnover
e. the good part and the bad part

Use the following for the next three questions.

Miller Company provided the following balance sheet and income statement:

Miller Company
Balance Sheet
December 31, 2007 and 2006

	2007	2006	CFO: Δ Short-term B/S Accts	Δ Long-term
Assets				
Cash	$ 480	$ 1,080		
Accounts Receivable	1,800	1,680	−120	
Inventory	11,520	12,000	+480	
Plant & Equipments	9,720	12,600		
Less: Accumulated Depreciation	(1,440)	(1,080)		
Land	7,200	10,200		
Total Assets	$ 29,280	$ 36,480		
Liabilities & Stockholders' Equity				
Accounts Payable	$ 1,320	$ 960	+360	
Salaries Payable	5,160	4,080	+1,080	
Long-term Note Payable	-	3,000		−3,000
Bonds Payable	4,800	1,200		+3,600
Capital Stock	9,600	12,000		−2,400
Retained Earnings	8,400	15,240		
Total Liabilities & Stockholders' Equity	$ 29,280	$ 36,480	+1800	

CFF = Σ ⊛

−3,000 + 3,600 − 2,400 = −1,800 ⊛

RE was
15,240 begin
+8,640 Net Inc
23,880 Expected end
− 8,400 Actual end
⊛ 15,480 ⇒ dividend to owners

Miller Company
Income Statement
For the Year Ended December 31, 2007

Sales	$ 24,720	
Less: COGS	12,600	
Gross Margin	$ 12,120	
Less: Operating Expenses		
Depreciation	960	
Salaries	3,240	
Other	2,400	
Operating Income	$ 5,520	
Nonoperating Revenues and Expenses		
Interest Expense	600	
Gain on Sale of Equipment	3,720	
Net Income	$ 8,640	

4,920
+ 960 Depreciation
+ 1,800 ΔShort-term B/S
7,680

29. What is the company's net cash flow from operating activities for 2007?
   a. $ 7,680
   b. $11,400
   c. $ 6,720
   d. $ 7,920
   e. None of the above

30. What is the company's net cash flow from investing activities for 2007?
   a. $3,000
   b. $6,000
   c. $12,000
   d. $9,000
   e. None of the above

Difficult... see next page for the complete calculation... A quick solution is:

Begin Cash + CFO + CFI + CFF = End Cash

$1,080 + $7,680 + CFI + ⟨17,280⟩ = $480

CFI = $9,000

Admittedly, You must answer #29 & 31 correctly to use the quick solution.

31. What is the company's net cash flow from financing activities for 2007?
  a. $600
  b. ($14,880)
  c. ($17,280)
  d. ($2,400)
  e. None of the above

See prior page for (*) items

$-1,800$ Δ in L.T. L&E Accounts
$-15,480$ dividends to owners
$ 17,280

32. The following results for the year are for the Clark Division of First Enterprises:

Sales	$150,000
Variable costs	50,000
Contribution margin	$100,000
Fixed expenses	40,000
Segment income	$ 60,000

Clark's average operating assets are $300,000. Clark's minimum required rate of return is 15 percent.
Return on investment for the Clark Division is:
  a. 50.0%
  b. 40.0%
  c. 33.3%
  d. 20.0%
  e. None of the above

$$\frac{\$60,000}{\$300,000} = 20\%$$

#30 CFI Associated w/ Long-term B/S Assets

Δ Land = + 3,000 (Sold Land)
PP&E = + 6,000 Sold Equipment *
$ 9,000

* Calculating the cash received from sold equipment is – without question – the most difficult problem on the exam. You must calculate the book value of sold equipment & add that figure to the Gain on Sale of Equipment:

$ 3,720 = Gain
+ 2,280 = Book Value of Sold Equip
6,000

2,880 change in historical cost
− 600 Accum depn on sold equipment
2,280

On A positive note... ~~there~~ this was the only really difficult problem