Managerial Accounting  Acct 2301 Fall 2007 Final Exam

Name: KEY

There are 12 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. The company produces and sells gadgets. The company incurred the following production costs for 2006:

- Direct Materials: $15 per unit
- Direct Labor: $20 per unit
- Variable Manufacturing Overhead: $6 per unit
- Fixed Manufacturing Overhead: $190,000

Total production cost per unit = $59

The company produced 10,000 units and sold 8,000 during 2006. What was the ending inventory balance as of December 31, 2006, using the absorption costing method?

- a. $104,000
- b. $416,000
- c. $320,000
- d. $80,000

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

3. UPG Incorporated is considering purchasing a new piece of equipment. The company requires a minimum rate of return of 12%. The new equipment is expected to generate sales of $300,000 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. $131,315
- d. $56,405

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 less than the required.
- c. Yes, because the actual return is above the required.
- d. No, because the actual return is below the required.
- e. None of the above

Acct 2301 1 Final Exam
5. Orion Company has a normal costing system and applies overhead based on direct labor hours. The company estimated that it would incur $600,000 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's cost of goods sold for 2006 after all adjustments were made:

- Direct materials: $984,000
- Direct labor: $1,004,000
- Overhead applied: $596,000
- Overhead included in cost of goods completed: $540,000
- Underapplied overhead: $56,000

What was the company's cost of goods sold for 2006 after all adjustments were made?

6. The Dunton 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.
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

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

<table>
<thead>
<tr>
<th>Boat</th>
<th>Direct Materials</th>
<th>Direct Labor</th>
<th>Labor Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>#101</td>
<td>$4,000</td>
<td>$4,300</td>
<td>450</td>
</tr>
<tr>
<td>#202</td>
<td>$3,000</td>
<td>$5,300</td>
<td>550</td>
</tr>
<tr>
<td>#303</td>
<td>$3,000</td>
<td>$5,500</td>
<td>550</td>
</tr>
</tbody>
</table>

The company applies overhead based on direct labor hours. The company calculated a predetermined overhead rate of 500%. The company closed out the balances in Finished Goods on December 31, 2006, and the balance in finished goods on December 31, 2006, was $2,750.

- $14,750
- $14,250
- $14,933
- $14,667
- None of the above
8. Harvey’s Home Store has three departments: Tools, Plumbing, and Hardware. The store incurred $30,000 of workers’ compensation insurance for 2006. The departments identified the following cost drivers for 2006:

<table>
<thead>
<tr>
<th>Cost Driver</th>
<th>Tools</th>
<th>Plumbing</th>
<th>Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor dollars</td>
<td>$33,000</td>
<td>$70,000</td>
<td>$240,000</td>
</tr>
<tr>
<td>Square footage</td>
<td>3,000</td>
<td>8,000</td>
<td>1,000</td>
</tr>
<tr>
<td># of sales transactions</td>
<td>300,000</td>
<td>900,000</td>
<td>90,000</td>
</tr>
</tbody>
</table>

Using the most appropriate cost driver, how much work’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

Plumbing’s use of cost driver: 

\[ \frac{30,000 \times \text{Overhead}}{500} = \frac{14,237}{5} \]

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

Materials handling time per chair:

- Rocking: 0.5 hr x 50 chairs = 25 hrs
- Straight-back: 0.25 hr x 100 chairs = 25 hrs

Total materials handling cost:

\[ \text{Overhead} = \frac{15,000 \times \text{Overhead}}{50 + 100} = \text{14,237} \]

Each product is allocated \( \frac{1}{2} \) of the $15,000 cost.

10. Listen-Up 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:

<table>
<thead>
<tr>
<th>Budgeted Sales</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50,000</td>
<td>$100,000</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

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

November-November: 

\[ \text{Purchases} = 20\% \times 18,160 = 3632 \]

\[ \text{Ending inventory} = 20\% \times 81,920 = 16,384 \]

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. $41,200
- c. $37,800
- d. $42,000
- e. None of the above

\[ \text{DM} = 20\% \times 20,000 = 4,000 \]

\[ \text{DL} = 60\% \times 20,000 = 12,000 \]

\[ \text{MWH} = 82\% \times 20,000 = 16,400 \]

\[ \text{Units} = \frac{4,10}{5} = \text{4,10 per unit} \]

\[ 6,50 - 4,10 = 2,40 \text{ cm/Unit} \]

\[ 38,400 \text{ cm} = 6,000 \text{ 6 cm) } \]

\[ 2,400 \text{ N I.} \]
12. Spacely Sprockets’ sales budget shows the following expected total sales:

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Sales</th>
<th>Credit Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>$30,000</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>$40,000</td>
<td>$28,000 x 70% = $19,600</td>
</tr>
<tr>
<td>March</td>
<td>$55,000</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>$30,000</td>
<td></td>
</tr>
</tbody>
</table>

The company expects 80% of its sales to be on account (credit sales). Credit sales are collected as follows: 50% 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. $24,500
- b. $16,800
- c. $22,800
- d. None of the above
- e. None of the above

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

<table>
<thead>
<tr>
<th>Month</th>
<th>Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>July</td>
<td>$50,000</td>
</tr>
<tr>
<td>August</td>
<td>$52,000</td>
</tr>
<tr>
<td>September</td>
<td>$60,500</td>
</tr>
</tbody>
</table>

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 and 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

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

\[ \text{Sp #2: } \text{SP} \times 35,000 = 18,000 \times \frac{500}{2} \times \frac{1}{2} = 37,500 \text{ yd} \times 1 \times 1 = 37,500 \text{ yd} \]

\[ \text{Sp $2: } \text{SP} \times 35,000 = 18,000 \times \frac{500}{2} \times \frac{1}{2} = 37,500 \text{ yd} \times 1 \times 1 = 37,500 \text{ yd} \]

\[ \text{500 yards } \times \text{ $2 per yard } = \text{ $1,000 unfavorable} \]
15. Coffee Café operates a chain of coffee shops in Lubbock. The company pays a rent of $24,000 per year for each location. Supplies (napkins, tags, and condiments) are purchased as needed. The managers of each shop are paid a salary of $5,000 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. Inevitable cost
   e. None of the above

16. The Brody Company provided the following standard cost information for each unit it 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

   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

   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 a rent of $10,000 per year for its production facility. If the company produces 5,000 units and sells 4,000 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

\[ \text{Cost per unit} = \frac{\text{Total Cost}}{\text{Units produced}} \]

\[ \frac{10,000}{5,000} = 2 \text{ per unit} \]

\[ \frac{50,000}{12} = 4,167 \text{ cost per unit} \]

\[ \frac{4,000}{83,600} = 0.065 \text{ units} \]
19. ABC 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 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

20. The following income statement is provided:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue (2,000 * $5)</td>
<td>$10,000</td>
</tr>
<tr>
<td>Variable COGS (2,000 * $1.25)</td>
<td>(2,500)</td>
</tr>
<tr>
<td>Fixed COGS</td>
<td>(4,000)</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>$3,500</td>
</tr>
<tr>
<td>Depreciation</td>
<td>(1,000)</td>
</tr>
<tr>
<td>Supplies (1,000 * $0.50)</td>
<td>(500)</td>
</tr>
<tr>
<td>Net Income</td>
<td>$1,500</td>
</tr>
</tbody>
</table>

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

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. $60,000
- b. $100,000
- c. $120,000
- d. $160,000
- e. None of the above

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

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
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:

<table>
<thead>
<tr>
<th>Account Title</th>
<th>Beginning Balance</th>
<th>Ending Balance</th>
<th>∆</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts Receivable</td>
<td>$15,000</td>
<td>$20,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Prepaid Insurance</td>
<td>$2,300</td>
<td>$500</td>
<td>$1,800</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>$12,000</td>
<td>$12,910</td>
<td>$910</td>
</tr>
<tr>
<td>Unearned Revenue</td>
<td>$2,200</td>
<td>$1,900</td>
<td>$300</td>
</tr>
</tbody>
</table>

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. $17,800
b. $18,600
c. $20,000
d. $24,600
e. None of the above

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

\[ \frac{700,000 - 340,000}{40 - 15} = \frac{360,000}{25} = 14,400 \]  

FC = 14,400

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 $50,000. 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

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
Miller Company provided the following balance sheet and income statement:

**Miller Company**
**Balance Sheet December 31, 2007 and 2006**

<table>
<thead>
<tr>
<th>Assets</th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$480</td>
<td>$1,080</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>1,800</td>
<td>1,880</td>
</tr>
<tr>
<td>Inventory</td>
<td>11,520</td>
<td>12,000</td>
</tr>
<tr>
<td>Plant &amp; Equipment</td>
<td>9,720</td>
<td>12,600</td>
</tr>
<tr>
<td>Less: Accumulated Depreciation</td>
<td>(1,440)</td>
<td>(1,080)</td>
</tr>
<tr>
<td>Land</td>
<td>7,200</td>
<td>10,200</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$29,280</td>
<td>$36,480</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities &amp; Stockholders' Equity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts Payable</td>
<td>$1,320</td>
<td>$960</td>
</tr>
<tr>
<td>Salaries Payable</td>
<td>8,160</td>
<td>4,080</td>
</tr>
<tr>
<td>Long-term Note Payable</td>
<td>3,000</td>
<td>3,000</td>
</tr>
<tr>
<td>Bonds Payable</td>
<td>4,000</td>
<td>1,200</td>
</tr>
<tr>
<td>Capital Stock</td>
<td>9,050</td>
<td>12,000</td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>8,400</td>
<td>15,240</td>
</tr>
<tr>
<td><strong>Total Liabilities &amp; Stockholders' Equity</strong></td>
<td>$29,280</td>
<td>$36,480</td>
</tr>
</tbody>
</table>

**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                            | 740     |
| **Operating Income**             | $6,500  |
| Non-operating Revenues and Expenses |         |
| Interest Expense                 | 300     |
| Gain on Sale of Equipment        | 7,720   |
| **Net Income**                   | $8,640  |

**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

**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. $(97,280)
   d. $2,000
   e. None of the above

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: $60,000 = 20%
   $300,000

    $30 CFI Associated w/ Long-term B/s assets

\[ \Delta \text{Land} = +3,000 \]  (Sold Land)
\[ \Delta \text{EE} = +6,000 \]  (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:

\[ \frac{3,720}{2,280} = \text{Gain} \]
\[ \frac{2,280}{6,000} = \text{Book Value of Sold Equip} \]

Final Exam

Amr 2301

A positive note... This was the only really difficult problem