**Sample MC by chapter by 3 levels of difficulty, choices not shown as not needed for this purpose: just try to solve it (answers at end of this doc)**

**Chap 5:**

1. Easy : 1. Given that BE revenue is $1,000,000 and Budgeted revenue is $1,100,000, what is the MOS %?
2. Medium: Independent of question 1, now assume that MOS % is 20%, and Budgeted revenue from increased unit sales is $150,000, what is the BE revenue dollars?
3. Difficult: Same facts as the medium one above, and given that FC are $60,000, what is the total budgeted VC associated with the budgeted revenues?

**Chap 6:**

1. Easy: A cost that would be included in product costs under both absorption costing and variable costing is:

supervisory salaries.

factory rent.

variable manufacturing costs.

variable selling expenses.

2. Medium : Assume the following information for a company that produced 10,000 units and sold 9,000 units during its first year of operations:

|  | **Per Unit** | **Per Year** |
| --- | --- | --- |
| **Selling price** | $ 200 |  |
| **Direct materials** | $ 74 |  |
| **Direct labor** | $ 50 |  |
| **Variable manufacturing overhead** | $ 10 |  |
| **Sales commission** | $ 8 |  |
| **Fixed manufacturing overhead** |  | $ 289,000 |

Which of the following choices explains the relationship between the absorption costing net operating income and the variable costing net operating income?

The absorption costing net operating income will be lower than the variable costing net operating income by $28,900.

The absorption costing net operating income will be lower than the variable costing net operating income by $100,900.

The absorption costing net operating income will be higher than the variable costing net operating income by $28,900.

The absorption costing net operating income will be higher than the variable costing net operating income by $100,900.

1. Difficult : Assume the following information for a company that produced and sold 10,000 units during Year 1. It also produced 15,000 units and sold 12,000 units during Year 2, while producing 12,000 units and selling 15,000 units in Year 3.

|  | **Per Unit** | **Per Year** |
| --- | --- | --- |
| **Selling price** | $ 240 |  |
| **Direct materials** | $ 75 |  |
| **Direct labor** | $ 55 |  |
| **Variable manufacturing overhead** | $ 10 |  |
| **Sales commission** | $ 11 |  |
| **Fixed manufacturing overhead** |  | $ 450,000 |
| **Fixed selling and administrative expense** |  | $ 150,000 |

Using absorption costing, what is the cost of goods sold for Year 3?

**Chap 7:**

1. Easy:   
   Which of the following is **false**?

Activity-based costing treats direct manufacturing costs as product costs.

Activity-based costing treats direct nonmanufacturing costs as product costs.

Traditional absorption costing treats direct manufacturing costs as product costs.

Traditional absorption costing treats direct nonmanufacturing costs as product costs.

1. Medium:

Assume a company’s activity-based costing system contains an activity called Engineering Change Orders (ECOs). This activity cost pool includes a total of $152,000 in its numerator. One of the company’s products was charged $400 from this activity because it required two ECOs during the year. How many ECOs were used to calculate the ECO activity rate?

1. Difficult: Assume a company manufactures only two products—14,000 units of Product A and 6,000 units of Product B. It is considering implementing an activity-based costing (ABC) system that allocates all of its manufacturing overhead to three cost pools. The following additional information is available for the company as a whole and for Products A and B:

| **Activity Cost Pool** | **Activity Measure** | | | **Estimated Overhead Cost** | | **Expected Activity** | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Machining** | **Machine-hours** | | | $ 300,000 | | 10,000 | MH |
| **Machine setups** | **Number of setups** | | | $ 150,000 | | 200 | Setups |
| **Product design** | **Number of products** | | | $ 78,000 | | 2 | Products |
| **Activity Measure** | | **Product A** | **Product B** | |
| **Machine-hours** | | 9,000 | 6,000 | |
| **Number of setups** | | 50 | 150 | |
| **Number of products** | | 1 | 1 | |

Using the ABC system, how much total overhead cost would be assigned from all of the activities to Product A?

**Chap 8:**

1. Easy : Which of the following statements is **false** with respect to a cash budget?

It includes cash paid for selling and administrative costs.

It includes cash paid for manufacturing overhead costs.

It excludes dividends because they are subtracted from retained earnings on the balance sheet.

It excludes sales and instead reports cash collections from customers.

2. Medium: Assume a company’s direct labor budget for July estimates 10,000 labor-hours to meet the month’s production requirements. The variable manufacturing overhead rate used for budgeting purposes is $4.00 per direct labor-hour. The budgeted fixed manufacturing overhead for July is $60,000 including $5,000 of depreciation. What is the amount of budgeted cash disbursements for manufacturing overhead for July?

3.Difficult: Assume that a company expects to produce 11,300, 12,300, and 14,300 units of finished goods in January, February, and March, respectively. Each unit of finished goods requires 4 pounds of raw material and each pound of raw material costs $4.25. The company always maintains an ending raw materials inventory equal to 25% of next month’s production needs. What is the amount of expected raw materials purchases for February?

**Solutions:**

**Chap 5:**

1. Given that BE revenue is $1,000,000 and Budgeted revenue is $1,100,000, what is the MOS %?

($1,100,000 -$1.000.000 ) / $1,100,000 = $100,000 / $1,100,000 = 9.09%

2.Independent of question 1, now assume that MOS % is 20%, and Budgeted revenue from increased unit sales is $150,000, what is the BE revenue dollars?

$150,000 x 20% = $30,000 total MOS; therefore BE revenue must have been $30,000 less or $120,000

Proof: $150,000 budgeted rev - $120,000 BE = $30,000 MOS; and $30,000 MOS / $150,000 budgeted rev = 20%

3. Same facts as No 2, and given that FC are $60,000, what is the total budgeted VC associated with the budgeted revenues?

Budgeted VC would be at the same VC ratio as under BE. BE revenue from No 2 was $120,000, FC was $60,000, so CM must have also been $60,000, which means VC at BE revenue of $120,000 must also be $60,000, so VC ratio is 50%; therefore VC at budgeted sales of $150,000 must be $75,000.

4. Same facts as Number 2 and 3, what is the budgeted net income?

Budgeted Rev of $150,000 - VC of $75,000 = CM $75,000 - FC $60,000 = Net income $15,000

**Chapter 6:**

1. Variable manufacturing costs
2. The absorption costing net operating income will be higher than the variable costing net operating income by $28,900.

|  |  |
| --- | --- |
| **Total fixed manufacturing overhead** | $ 289,000 |
| **Number of units produced** | 10,000 |
| **Fixed manufacturing overhead per unit** | $ 28.90 |
| **Units produced but not sold (10,000 units − 9,000 units), i.e. in ending in inventory** | | 1,000 |
| **Fixed manufacturing overhead per unit** | | $ 28.90 |
| **Fixed manufacturing overhead deferred in ending inventory under absorption costing** | | $ 28,900 |



|  | | **Year 2 Year 3** | |
| --- | --- | --- | --- |
|  | |  | |
| **Direct materials** | $ 75.00 | | $ 75.00 |
| **Direct labor** | 55.00 | | 55.00 |
| **Variable manufacturing overhead** | 10.00 | | 10.00 |
| **Fixed manufacturing overhead ($450,000 ÷ 15,000 units; $450,000 ÷ 12,000 units)** | 30.00 | | 37.50 |
| **Unit product cost under absorption costing** | $170.00 | | $ 177.50 |

|  |  |
| --- | --- |
| **Units produced in Year 3 and sold in Year 3 (12,000 units × $177.50)** | $ 2,130,000 |
| **Units produced in Year 2 and sold in Year 3 (3,000 units × $170.00)** | 510,000 |
| **Cost of goods sold in Year 3** | $ 2,640,000 |

**Chapter 7:**

1. traditional absorption costing treats direct nonmanufacturing costs as product costs.
2. 760
3. Machining (9,000 MH × $30 per MH) $ 270,000

Machine setups (50 setups × $750 per setup) 37,500

Product design (1 product × $39,000 per product) 39,000

Total overhead assigned to Product A $ 346,500

|  |  |
| --- | --- |
|  |  |

**Chapter 8:**

1. It excludes dividends because they are subtracted from retained earnings on the balance sheet
2. Budgeted direct labor-hours 10,000

Variable manufacturing overhead rate $ 4.00

Total budgeted variable manufacturing overhead (a) × (b) $ 40,000

Budgeted fixed manufacturing overhead less depreciation ($60,000 − $5,000) 55,000

Total budgeted cash disbursements for manufacturing overhead for July $ 95,000

1. Required production in units of FG = 12,300 @ 4 pds /unit = 49,200 pds RM needed

Add desired units in ending raw materials inventory (14,300 × 4 × 25%) 14,300

Less pounds of beginning raw materials inventory (49,200 × 25%) 12,300

Pounds of raw materials to be purchased 51,200 @ $4.25 /pd = 217,600