Answers to the midterm exam_ADM3346A _2012Fall

Question 1 (7)

Solution:

1. BI + Total costs incurred = Transferred out to FG inventory + EI
   Job No. 83 is the only job in EI
   Assigned costs to Job No.83 = BI + Total costs incurred - Transferred out to FG inventory
   = 10,000 *1*+ (60,000+40,000+32,000) *1*– 120,000 *1*= $22,000 *1*
2. Overhead costs for Job No. 83 = 80%*DL = 80%*$5,000 = $4,000 *1*
   DL = $5,000 *1*
   DM of Job No. 83 = Total incurred costs for Job No. 23 – OH – DL
   = 22,000 – 4,000 – 5,000 = $13,000 *1*

Question 2 (6)

Solution: 1.

Rental Cost	$600
Adm. & Mkt.	900
Band Expense	400
Fixed Cost	$1,900 *1*

$ per ticket	$40.00
Catering	15.00
Cont. Margin	$25.00 *1*

Break-even point = total fixed cost / contribution margin
Opt. 1 : $1,900 / $25 = 76 tickets *1*

2. Fixed cost = 1080 +900 +400= $2380 *1*
$40X - $12X - $2,380 = OI *1*
$40(250) - $12(250) - $2,380 = OI
OI = $10,000 - $3,000 - $2,380 = $4,620 *1*

Question 3 (16)

Solution:

1. Budgeted manufacturing overhead rate = Budgeted overhead/ budgeted volume of DL hours
   =300,000/100,000= $3/hour *1*
   Overhead applied= 3*110,000 =$330,000 *1/2* > actual overhead costs ($325,000)
   Overapplied = 330,000-325,000 = $5000 *1*

Account	***Dec. 31 Balance (Before Proration) (1)***	**Balance as a Percent of Total (2) = (1) ÷ $850,000**	**Proration of $5,000 Overallocated Manuf. Overhead (3) = (2)× $5,000**	**Dec. 31, 2011 Balance (After Proration) (4) = (1) – (3)**
WIP	*$50,000*	*1.0588*	*$2941*	*$49,706 1/2*
FG	*240,000*	*1.2824*	*1,4121*	*238,588 1/2*
COGS	*560,000*	*1.6588*	*3,2941*	*556,706 1/2*
Total	*$850.000*	*1.000*	*$5,000*	*$845,000*

2. Journal Entries: 2

Manufacturing Overhead Applied	$5,000	
Ending Work in Process Inventory		$ 294
Ending Finish Goods Inventory		1,412
Cost of Goods Sold		3,294

3. No. *1*

The overallocation is not material, which is less than 2% of OH = 5,000/325,000 *1*

Write-off to COGS approach or Adjusted allocation rate approach. *1(either one)*

(either one of the following approaches)

Write-off to COGS approach: under this approach, the total under- or over-allocated manufacturing overhead is included in this year's Cost of Goods Sold. 1

Or Adjusted allocation-rate approach: to restart all overhead entries in the general ledger and subsidiary ledgers using actual cost rates rather than budgeted cost rates. 1

Question 4 (8)

Solution:

1.	Large Customers	Medium Customers	Small Customers
Average sale	$6,000	$2,000	$1,200
Commission rate	× 0.10	× 0.07	× 0.05
Average commission	$600	$140	$60
Hours per customer	/ 6	/ 4	/ 3
Commission per hour	$100 *1*	$35 *1*	$20 *1*

First, the firm should service all the large customers because they provide the most commissions per hour.
20 large customers × 6 hours = 120 hours *1*
This leaves 52 hours (172 - 120) for the next best group, the medium customers.
52 hours / 4 hours = 13 Medium customers *1*
2.
Total commissions:

Large customers 20 × $600	$12,000 *1*
Medium customers 13 × $140	1,820 *1*
Total	$13,820 *1*

Question 5 (14)

Solution:

1. *t* Statistics of # of salesperson = Coefficients/Standard Error = 0.01/0.0007 = 14.29 *1*
2. *a) Sales volume*
   - *Adj R^2 is 51%, above 30% guideline 1*
   - *"t" value for FC is 2.19 lightly above rough guideline of 2.00, indicating margin significance 1*
   - *"t" value for VC is 14.13 well above rough guideline of 2.00, indicating significance 1*
   - *DW statistic=1.15<2, indicating residuals significantly correlated to dependent variable. There may be other factors impact department costs. 1*

   *b) Sales volume **and** number of salesperson*
   - *Adj R^2 is 86 % which is much higher than 30% and increased comparing to model (a) 1*
   - *"t" value for FC is 2.47 above guideline of 2.00, indicating significance 1*
   - *"t" values for two VC are significant 1*
   - *DW statistic=2.89>2, indicating residuals are not correlated to dependent variable. 1*

3. model b) is better to be used for the marketing department costs. *1*
   - *Better model – additional variable adds value to explanation or prediction power 1*
   - *Correlation between the Xs is not a problem 0.43 < 0.70 1*
4. Total costs = 184.26 + 0.12 Sales volume + 0.01 number of salespersons *2*

Question 6 (14)

Solution:

1. Manufacturing overhead cost driver rates:
   Setup activity is $1,000/setup = $500,000/500 setups. *1*
   Machine-related activity is $6.67/machine hour = $4,000,000/600,000 machine hours. *1*
   Packing activity is $20/shipment = $5,000,000/250,000 shipments. *1*

2. Overhead costs per unit:
   Deluxe-entry door is $68.02 per unit
   = [($1,000 × 400) + ($6.67 × 300,000) + ($20 × 50,000)] / 50,000 units *1*

Standard-entry door is $15.25 per unit
= [($1,000 × 100) + ($6.67 × 300,000) + ($20 × 200,000)] / 400,000 units. *1*
Manufacturing cost per unit for the deluxe-entry door is $248.02 = $180.00 + $68.02*1*
Manufacturing cost per unit for the standard-entry door is $145.25 = $130.00 + $15.25 *1*

3. Yes*1*, the standard door is more profitable than using traditional method because more of the overhead costs should be assigned to the deluxe door when using an ABC system.

Traditional method:

Unit operating income of Deluxe-entry door= 650 – (180+80) =$390*1*

Unit operating income of standard-entry door= 475 – (130+120) =$225*1*

ABC method:

Unit operating income of Deluxe-entry door= 650 – 248.02 =$401.98*1*

Unit operating income of standard-entry door= 475 – 145.25 =$329.75*1*

4. *1*for each suggestion. *(*total *2)*

The ABC system better captures the resources needed for producing Deluxe-entry and Standard-entry door.

Suggestions:

- Based on the ABC system to make better pricing for Standard-entry door. For example, it might decide to decrease the prices charged for Standard.
- Make better product mix decisions.
- Reduce costs by eliminating processes and activities that do not add value by identifying and evaluating value-added or non-value-added activities.