ACCT2121

2011-2012 2nd Semester

Suggested Solution

Problem 1

1a)

Predetermined budgeted overhead rate:

3,000,000/600,000 = $5/unit

1b)

	Dark Sweet	Dark Beauty
	$	$
Direct Material	4.2	3.2
Direct Labor	0.3	0.3
Overhead	1.5	1.5
	6	5

2a)

Purchasing	$579,000/1,158=	$500	per purchase order
Materials handling	$720,000/1,800 =	$400	per setup
Quality Control	$144,000/720 =	$200	per batch
Roasting	$961,000/96,100 =	$10	per roasting-hour
Blending	$336,000/33,600 =	$10	per blending-hour
Packaging	$260,000/$26,000 =	$10	per packaging-hour

2b)

	Dark Sweet		Dark Beauty	
	$		$	
Purchasing	2,000	(500x4)	2,000	(500x4)
Materials handling	12,000	(400x30)	4,800	(400x12)
Quality Control	2,000	(200x10)	800	(200x4)
Roasting	10,000	(100,000/100x10)	200	(2,000/100x10)
Blending	5,000	(100,000/100x0.5x10)	100	(2,000/100x0.5x10)
Packaging	1,000	(100,000/100x0.1x10)	20	(2,000/100x0.1x10)
	32,000		7,920	
Product volume	100,000		2,000	
cost per pound	0.32		3.96	

2c)

Total manufacturing cost:

Dark Sweet= $4.2+ 0.3+ 0.32= $4.82/pound

Dark Beauty= $3.2+ 0.3+ 3.96= $7.46/pound

3)

- Product cost subsidization
- Dark Beauty's product cost is undervalued
- Dark Sweet's product cost is overvalued

- Produce more Dark Sweet as it is more cost-saving
- Redesign the production process of Dark beauty to reduce cost

Problem 2

1) Direct manufacturing labor price variance:
   =(SR − AR) × AH
   =[$(311,402/37,700)-8.2]x 37,700
   =$2,262 (U)

2) Direct manufacturing labor efficiency variance:
   =(SH − AH) × SR
   =(37,700- 6,400x6)x $8.2
   =$5,740 (F)

3) Direct material efficiency variance: $1,500 (U)
   Let Y be theActual kilogram of material used.
   (Y - 6400x8) x$5 =1500
   Actual kilogram of material used= 51,500 kg

4) Actual price/ kilogram of direct material
   =$255,440/ 51,500kg
   =$4.96/kg

5) Total amount of DM & DL transferred to finished good inventory
   =$255,440+ 311,402
   =$566,842

Problem 3

1) Total cash collection:
   $290,000x 80% + 20,000 + 24,000/2
   =$264,000

2) Total cash disbursement:
   $192,000x 0.25 + 145,000 + 36,000 + 5,000 + 10,000 + 4,000
   =$248,000

3) Ending balance:
   $15,000 + 264,000 – 248,000
   =$31,000

Problem 4

a) Total manufacturing overhead cost allocated
   $2,145,000/ 1,950,000 x 170,625
   =$187,687.5

b) Variable manufacturing overhead spending variance
   =$(37,375 + 55,000) – (0.23+ 0.31) x 170,625
   =$237.5 (U)

c) Fixed manufacturing overhead spending variance
   =$(26,000 + 27,500 + 40,625) – (27,625 + 22750 + 40625)
   =$3125 (U)

d) Variance manufacturing overhead efficiency variance
   =$(170,625-1,950,000/390,000x 35750) x ($0.23 + 0.31)
   =$4,387.5 (F)

e) Production volume variance
   $(27,625 + 22750 +40,625) – (1,950,000/390,000x 35,750) x (0.17 + 0.14 + 0.25)
   =$91,000 – 100,100
   =$9100 (F)

Problem 5

1)

Full cost	$
Direct material	80
Direct Labor	40
Manufacturing support	160

Marketing cost	70
Full cost	350
45% mark up	157.5
Selling price	507.5

2)

	$
Selling Price	507.5
Less: variable cost	
Direct material	<80>
Direct labor	<40>
Manufacturing support	<72>
Marketing cost	<24.5>
Contribution margin	291

3) Minimum acceptable price
=$80 + 40 + 72
=$192

4) Change in operating profit = increase in contribution margin
=$(360 - 192) x 1,000
=$168,000

5) - Yes
- Profitable
- Can build customer relationship

Part II)

Relevant per unit cost:

Direct Materials

Direct manufacturing Labor

Variable manufacturing overhead

	Accept	Not accept
	$	$
Total production cost	<1200,000>	<960,000>
Expected revenue	180,000	
Elimination of fixed MOH	200,000	
Relevant cost	<820000>	<960,000>

∴Accept offer because lower cost is incurred.

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