

Answer Key

Question 1

- 1. D (1 mark)
- 2. D (1 mark)
- 3. C (1 mark)
- 4. A (1 mark)
- 5. B (2marks)
- 6. B (1 mark)
- 7. C (1mark)
- 8.D (1mark)
- 9.B (2marks)
- 10. D (1mark)
- 11 B (2marks)
- 12 C (2marks)

Question 2

ALLOCATION BASES

	Support Departments		Producing Departments		Total
	Admin	Services	Pilot Training	Main Training	
Salaries and wages	800,000	560,000	640,000	400,000	2,400,000
Percent		35.00%	40.00%	25.00%	100%
Proportion of of employee	24.00%	20.00%	24.00%	32.00%	100.00%
Percent	30.00%		30.00%	40.00%	100%
Salaries	Admin 800,000	Services 560,000	Pilot Training 640,000	Main Training 400,000	2,400,000
Materials	150,000	100,000	1,300,000	200,000	1,750,000
Others	500,000	300,000	600,000	300,000	1,700,000
Totals for All Departments	<u>\$1,450,000</u>	<u>\$960,000</u>	<u>\$2,540,000</u>	<u>\$ 900,000</u>	<u>\$5,850,000</u>

First: Solve the simultaneous equations for Admin and Service (see Below)

Second: Allocate to Producing Departments:

Admin	Admin %	(1,941,899.44)	35.00%
	Alloc. Amt	6,796,664.80	
Services	Service %	(1,639,664.80)	40%
	Alloc. Amt	491899.44	30%

Totals for Production Departments

Number of trainee

Cost per Trainee
 Ser = 960,000 + 0.35Adm----- (1)
 Adm = 1,450,000 + 0.30Ser--- (2)
 Ser = 960,000 + .35 (1,450,000 + 0.30Ser)
 Ser = 960,000 + 507,500 + 0.105Ser
 0.895 Ser = 1,467,500
 Ser = 1,639,664.80
 Adm = 1,450,000 + 0.30(1,639,664.80)
 Adm = 1,450,000 + 491899.44
 Adm = 1,941,899.44

Question 3

(25 marks)

(a) Job-Order Cost Sheets

	<u>CBS102</u> Cribs	<u>PLP086</u> Playpens	<u>DRS114</u> Dressers	<u>STR077</u> Strollers	<u>CRG098</u> Carriages
Beg WIP	\$900,000	\$420,000	250,000	-0-	-0-
Materials	\$155,000	\$253,800	\$211,000	\$143,750	\$252,000
Labor	\$122,400	\$43,200	\$200,500	\$30,000	\$138,000
Applied Overhead *	\$90,000 (12,000 x 7.5)	\$33,000 (4,400 x 7.5)	146,250 (19,500 x 7.5)	\$26,250 (3,500 x 7.5)	\$105,000 (14,000 x 7.5)
Total	\$1,267,400	\$750,000	\$807,750	\$200,000	\$495,000
# units	20,000	25,000	25,000	10,000	5,000
Cost per unit	\$63.37	\$30	X	\$20	\$99

Predetermined Overhead Rate = 4,500,000/600,000 = \$7.5

b.	<u>Actual Overhead</u>
Indirect materials	15,000
Indirect Labor	29,400
Factory supervision	221,100
Factory Rent	30,000
Deprecation on Factory Equipment	100,000
Factory Utilities	40,000
Total Actual Overhead	<u>435,500</u>

Current period Applied OH at the end of month of May

<u>Jobs</u>	<u>Applied OH</u>	<u>Work-in process</u>	<u>Cost of Goods Sold</u>	<u>Finished Goods</u>
CBS102	90,000*		45,000	45,000
PLP086	33,000**		2,112	30,888
DRS114	146,250	146,250		
STR077	26,250***		2,625	23,625
CRG098	105,000			105,000
Total	<u>400,500</u>	<u>146,250</u>	<u>49,737</u>	<u>204,513</u>
Percentage	100.000%	36.517%	12.419%	51.064%

* 90,000 X (10,000/20,000) = 45,000; 90,000 X (10,000/20,000) = 45,000.

** 33,000 X (1,600/25,000) = 2,112; 33,000 X (23,400/25,000) = 30,888.

***26,250 X (1,000/10,000) = 2,625; 26,250 X (9,000/10,000) =23,625.

Under-applied OH = 435,500 – 400,500 = 35,000, below is the journal entry to close Overhead:

Work-in-process	(35,000 X .36517)	12,780.95	
Cost of Goods Sold	(35,000 X .12419)	4,346.65	
Finished Goods	(35,000 X .51064)	17,872.40	
	Overhead		35,000

c.	Adjusted Cost of Goods Sold
Cribs	
(7,500 X 64)	480,000
(10,000 X 63.37)	633,700
Playpens	
(19,400 X 35)	679,000
(1,600 X 30)	48,000
Strollers	
(13,000 X 23)	299,000
(1,000 X 20)	20,000
Dressers(18,000 X 55)	990,000
Carriages (6,000 X 102)	612,000
<u>Add the share of under-applied OH</u>	<u>4,346.65</u>
Adjusted cost of goods sold	<u><u>3,766,046.65</u></u>

Question 4

(18 marks)

Production cost report for the Assembly Department

	<u>Physical units</u>
Total units to account for:	
Beginning inventory	3,000
Units started during the year	<u>45,000</u>
Units to account for	<u>48,000</u>
Accounted for as follows:	
Units transferred out from beginning WIP	3,000
Units started & transferred out during the year	40,000
Units in ending WIP inventory	<u>5,000</u>
Units accounted for	<u>48,000</u>

Equivalent units of production:	<u>Trans In</u>	<u>Materials</u>	<u>Labor</u>	<u>Overheard</u>
Completed from beginning inventory:				
3,000 x (100% -100%)	-0-			
3,000 x (100% -70%)		900		
3,000 x (100% -30%)			2,100	
3,000 x (100% -80%)				600
Units started and transferred out	40,000	40,000	40,000	40,000
Ending inventory:				
5,000 x 100%	5,000			
5,000 x 60%		3,000		
5,000 X 40%			2,000	
5,000 X 70%				<u>3,500</u>
Equivalent units of production	<u>45,000</u>	<u>43,900</u>	<u>44,100</u>	<u>44,100</u>

	<u>Trans In</u>	<u>Material</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
Prior costs	\$ 82,200	\$6,660	8,000	\$11,900	108,760
Current costs	<u>1,237,500</u>	<u>96,580</u>	<u>149,940</u>	<u>260,190</u>	<u>1,744,210</u>
Total					1,852,970
Less Scrap					<u>(5,000)</u>
Total					<u>1,847,970</u>

Cost per equivalent unit this period:	<u>Trans In</u>	<u>Materials</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
Current Costs	\$1,237,500	\$96,580	\$149,940	260,190	
Equivalent units	<u>45,000</u>	<u>43,900</u>	<u>44,100</u>	<u>44,100</u>	
Cost per equivalent unit	<u>\$27.50</u>	<u>\$2.20</u>	<u>\$3.40</u>	<u>\$5.90</u>	<u>\$39.00</u>

Schedule of cost of goods transferred out and costs in ending inventory:

Cost of goods transferred:

Costs in beginning inventory	\$108,760	
Costs to complete beginning inventory		
Trans In (-0- X 27.5)	-0-	
Direct Materials (900 X \$2.2)	1,980	
Direct Labor (2,100 X 3.40)	7,140	
Overhead (600 X 5.90)	3,540	
Less Scrap (5,000 X 3,000/43,000)	<u>(348.84)</u>	
Cost of units transferred out from beginning inventory		121,071.16
Started and Transferred out (40,000 X \$39)	1,560,000	
Less Scrap (5,000 X 40,000 / 43,000)	<u>(4,651.16)</u>	
Costs of units started and transferred out		<u>1,555,348.84</u>
Total cost of goods transferred out		\$1,676,420.00
Cost of ending inventory:		
Trans In (5,000 X 27.50)	137,500	
Direct Materials (3,000 X 2.20)	6,600	
Direct Labor (2,000 X 3.40)	6,800	
Overhead (3,500 X 5.90)	<u>20,650</u>	<u>171,550.00</u>
Total cost accounted for:		<u>\$1,847,970.00</u>

Cash	5,000	
WIP-Assembly		5,000
(To record the sale of scrap)		
WIP- Packaging	1,676,420	
WIP- Assembly		1,676,420
(To record the transfer of goods from Assembly into Packaging)		

Question 5

(25 marks)

Total units to account for:	
Beginning inventory	3,000
Units started during current period	<u>8,000</u>
Units to account for	<u>11,000</u>
Accounted for as follows:	
Units completed	9,000
Units spoiled	250 (75%)
Units in ending WIP inventory	<u>1,750 (90%)</u>
Units accounted for	<u>11,000</u>

# of units inspected for rework	11,150
Less the number of physical units	<u>(11,000)</u>
Rework "effort" units	<u>150</u>
# of units survived the inspection for rework	11,000
Normal rework percentage	<u>1%</u>
Normal rework "effort" units	<u>110</u>
Abnormal rework = 150 – 110 = 40 "effort" units	

# of units reach inspection for spoilage	11,000
Normal spoilage percentage	<u>2%</u>
Normal spoiled units	<u>220</u>
Abnormal spoilage = 250 – 220 = 30 units	

Equivalent units of production:	<u>Material</u>	<u>Labor</u>	<u>Conversion</u>
Completed (9,000 X 100% all)	9,000	9,000	9,000
Normal Rework			
DL (110X 100%)	-0-	110	
OH (110 X 40%)			44
Abnormal Rework			
DL (40X 100%)	-0-	40	
OH (40 X 40%)			16
Normal spoilage #1			
DM & DL (220X 100%)	220	220	
OH (220X75%)			165
Abnormal spoilage			
DM & DL (30X 100%)	30	30	
OH (30X75%)			22.50
Ending WIP			
DM & DL (1,750 X 100%)	1,750	1,750	
<u>OH (1,750 X 90%)</u>			<u>1,575</u>
Total equivalent units	<u>11,000</u>	<u>11,150</u>	<u>10,822.50</u>

	<u>Material</u>	<u>Labor</u>	<u>Overhead</u>	<u>Total</u>
Beginning	6,000	9,000	10,000	25,000
<u>Current</u>	<u>16,000</u>	<u>24,450</u>	<u>44,112.5</u>	<u>84,562.50</u>
Total	22,000	33,450	54,112.5	109,562.50
Equivalent units	<u>11,000</u>	<u>11,150</u>	<u>10,822.50</u>	
Cost per equivalent unit	<u>\$ 2.00</u>	<u>\$ 3.00</u>	<u>\$ 5.00</u>	<u>\$10.00</u>

b)

Cash (250 X 2)	500	
WIP (220 X 2)		440
Loss from Abnormal Spoilage (30X2)		60
(To record Salvage value)		
Finished Goods (see below)	\$91,702.45	
Loss from Abnormal Spoilage (see below)	264.00	
Loss from Abnormal Rework (see below)	200.00	
WIP		92,166.45
(To record the transfer of finished goods, loss from AS, and loss from AR)		

Cost & Management Accounting ACCO 330- Midterm Exam - Solutions Fall 2007

	Completed	Normal Rework	Abnormal Rework	Normal Spoilage	Abnormal Spoilage	Ending WIP
Completed (9,000 X 10)	\$90,000					
Normal Rework						
DL (110X3)		330				
OH (44X 5)		<u>220</u>				
Allocate Normal Rework*	450	(550)		11	1.50	87.50
Abnormal Rework						
DL (40X3)			120			
OH (16X 5)			<u>80</u>			
Normal Spoilage						
DM & DL (220 X [2+3])				1,100		
OH (165 X 5)				<u>825</u>		
Less Salvage (220 X2)				<u>(440)</u>		
Allocate Normal spoilage **	1,252.45			(1,496)		243.55
Abnormal Spoilage						
DM & DL (30 X [2+3])					150	
OH (22.50 X 5)					<u>112.50</u>	
Less Salvage (30 X2)					<u>(60.00)</u>	
Ending Work in process						
DM & DL (1,750 X [2 + 3])						8,750
OH (1,575 X53)						<u>7,875</u>
Total	<u>\$91,702.45</u>	<u>-0-</u>	<u>\$200</u>	<u>-0-</u>	<u>\$204</u>	<u>\$16,956.05-</u>

*

	Completed	Normal Spoilage	Abnormal Spoilage	Ending Work in process	Total
Physical units	9,000	220	30	1,750	11,000
Percentages to allocate Normal Rework	81.82%	2%	.27%	15.91%	100%

**

	Completed	Ending WIP	Total
Physical units	9,000	1,750	10,750
Percentages to allocate Normal Rework	83.72%	16.28%	100%