Answer Key

Solution MCQ Question 1 (30 marks)

1. D **(1 mark)**
2. E **(1 mark)**
3. B **(1 mark)**
4. B **(1 mark)**
5. D **(1 mark)**
6. E **(1 mark)**
7. A **(1 mark)**
8. E **(1 mark)**
9. C **(1 mark)**
10. D **(1 mark)**
11. B **(1 mark)**
12. A **(1 mark)**
13. B **(1 mark)**
14. C **(1 mark)**
15. B **(1 mark)**
16. A **(1 mark)**
17. C **(1 mark)**
18. B **(1.5 marks)**
19. A**(1.5 marks)**
20. D **(2 marks)**
21. A **(2 marks)**
22. D **(2 marks)**
23. C **(2 marks)**
24. D **(2 marks)**

Question 2

a.1 Direct Method

	Service Departments			Producing Departments		
To From	Utilities	Maintenance	Personnel	Machining	Assembly	
Utilities	-	-	-	333/683	350/683	
Maintenance	-	-	-	8/9	1/9	
Personnel	-	-	-	147/167	20/167	

a.2 Step Method

	Service Departments			Producing Departments		
To From	Utilities	Maintenance	Personnel	Machining	Assembly	
Utilities	-	12/700	5/700	333/700	350/700	
Maintenance	-	-	1/46	40/46	5/46	
Personnel	-	-	-	147/167	20/167	

(7.5 marks)

b. Step Method

	Utilities	Maintenance	Personnel	Machining	Assembly
Budgeted costs	$800,000	$650,000	$400,000	$1,230,000	$370,000
	Allocate Service Department Costs to Production Departments				
First Step					
Utilities %	-	12/700	5/700	333/700	350/700
Amount	(800,000)	**$13,714.29**	**$5,714.29**	**$380,571.42**	**$400,000**
Second Step					
Maintenance %	-	-	1/46	40/46	5/46
Amount		**($663,714.29)**	**$14,428.57**	**$577,142.86**	**$72,142.86**
Third Step					
Personnel %	-	-	-	147/167	20/167
Amount			**($420,142.86)**	**$369,826.35**	**$50,316.51**
Totals Costs		-		**$2,557,540.63**	**$892,459.37**
/ Activity				500,000 MH	60,000 DLH
Rate				$5.115	$14.874
				per MH	per DLH

(7.5 marks)

Question 3 **(15 marks)**

a. Total units to account for:

Beginning inventory	3,000
Units started during current period	40,000
Units to account for	43,000
Accounted for as follows:	
Units completed from beginning	3,000
Units started and completed	38,000
Units in ending WIP inventory	2,000
Units accounted for	43,000

Equivalent units of production:	X	Y	Z	DL	OH
Completed from Beginning:					
3,000 x (100% -100%)	-0-				
3,000 x (100% - 0%)		3,000			
3,000 x (100% - 0%)			3,000		
3,000 x ([70%-30%] / [70% - 20%])				2,400	
3,000 x (100% - 30%)					2,100
Units started and completed	38,000	38,000	38,000	38,000	38,000
Ending inventory:					
2,000 x 100%	2,000				
2,000 x 100%		2,000			
2,000 x 0%			-0-		
2,000 x ([65%-20%] / [70% - 20%])				1,800	
2,000 x 65%					1,300
Equivalent units of production	40,000	43,000	41,000	42,200	41,400

	X	Y	Z	DL	OH
Current period costs	38,000	38,700	21,320	18,146	20,286
Equivalent units	40,000	43,000	41,000	42,200	41,400
Cost per equivalent unit	$ 0.95	$ 0.90	$ 0.52	$ 0.43	$ 0.49

Question 4 **(20 marks)**

a.

(i). To record the sale of normal spoilage attributable to Job Y12

Cash	500	
Work-in-process -Job Y12		500

(j). To record the normal and abnormal spoilages incurred in Job D20

Factory Overhead	300	
Loss from Abnormal Spoilage	100	
Work-in-process- Job D20		400

(k). To record the scrap sold attributable to a specific Job E33

Cash	60	
Work-in-process -Job E33		60

(l). To record the scrap sold common to all jobs

Cash	110	
Factory Overhead		110

(5 marks)

b. **Job Cost Sheets**
For the year ended April 30th, 2004

	Job Y12	Job D20	Job E33	Total
Beg WIP	21,000	-0-	-0-	21,000
DM	46,000	84,000	44,000	174,000
DL	12,220	8,060	3,640	23,920
OH Applied *	**(A)**9,776	**(B)**6,448	**(C)**2,912	19,136
Normal Spoilage	**(D)**-0-	**(E)**(300)	**(F)**-0-	(300)
Abnormal Spoilage	**(G)**-0-	**(H)** (100)	**(I)**-0-	(100)
Salvage /Scrap	**(J)**(500)	**(K)**-0-	**(L)**(60)	(560)
Total	88,496	98,108	50,492	237,096

* [12,220/20 X 16**]; [8,060/20 X 16]; and [3640/20 X 16]
** Predetermined OH rate = 256,000 / 16,000 = $16 per DLH

(6 marks)

c.

	Actual OH
Indirect Materials	$8,000
Indirect Labor	5,000.
Depreciation	4,400
Utility	2,600
Other	3,200
Normal Spoilage	300
Scrap	(110)
Total Actual OH	23,390
Less Applied OH	19,136 (from requirement (3))
Under- applied OH	$4,254 **(3 marks)**

d.

	Current Applied OH	**%**		**Under-applied OH**	**Share**
WIP –D20	$6,448	33.696%	X	4,254	1,433.43
WIP-E33	$2,912	15.217%	X	4,254	647.33
FG-Y12	$9,776	51.087%	X	4,254	2,173.24
Total	$19,136	100%			$4,254.00

The Journal entry to close out the factory overhead as follows:

Work-in-process-D20	**1,433.43**	
Work in process-E33	**647.33**	
Finished goods-Y12	**2,173.24**	
Factory overhead		**4,254**

OR

Factory overhead applied	**19,136.00**	
Work-in-process-D20	**1,433.43**	
Work in process-E33	**647.33**	
Finished goods-Y12	**2,173.24**	
Factory overhead		**23,390**

(3 marks)

e.

Sales	148,000
Less CGS	(108,000)
Administrative Salaries	(12,000)
Depreciation	(3,400)
Advertising	(12,000)
Abnormal Loss	(100)
Net Income	$12,500 **(3 marks)**

Question 5 **(20 marks)**

Total units to account for:	
Beginning inventory	3,000
Units transferred in during current period	45,000
Units to account for	48,000
Accounted for as follows:	
Units completed and transferred out	40,000
Units spoiled	4,000 (70%)
Units in ending WIP inventory	4,000 (20%)
Units accounted for	48,000

# of units survived the inspection for spoilage (48,000 – 4,000 – 4,000)	40,000
Normal spoilage percentage	5%
Normal spoiled units	2,000

Abnormal spoilage = 4,000 – 2,000 = 2,000 units .

# of units inspected for rework		41,500
Less the number of physical units	[48,000 – 4,000 -4,000]	(40,000)
Rework "effort" units		1,500
# of units survived the inspection for rework	40,000	
Normal rework percentage	2%	
Normal rework "effort" units	800	

Abnormal rework = 1,500 – 800 = 700 "effort" units

Equivalent units of production:	Transferred In	Material	Conversion
Completed (40,000 X 100% all)	40,000	40,000	40,000
Normal spoilage			
TI (2,000 X 100%)	2,000		
DM (2,000 X 0%)		-0-	
CC (2,000 X 70%)			1,400
Abnormal spoilage			
TI (2,000 X 100%)	2,000		
DM (2,000 X 0%)		-0-	
CC (2,000 X 70%)			1,400
Normal Rework			
TI (800 X 0%)	-0-		
DM (800 X 100%)		800	
CC (800 X 25%)			200
Abnormal Rework			
TI (700 X 0%)	-0-		
DM (700 X 100%)		700	
CC (700 X 25%)			175
Ending WIP			
TI (4,000 X 100%)	4,000		
DM (4,000 X 0%)		-0-	
CC (4,000 X 20%)			800
Total equivalent units	48,000	41,500	43,975

Transferred In	Material	Conversion	Total

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Beginning WIP	$70,000.00	$6,495.00	$11,868.75	$88,363.75
Current costs	$1,130,000.00	$96,840.00	$236,590.00	$1,463,430.00
Total	$1,200,000.00	$103,335.00	$248,458.75	$1,551,793.75
Equivalent units	48,000	41,500	43,975	
Cost per equivalent unit	$ 25.00	$ 2.49	$ 5.65	$33.14

Cost of Goods Transferred out from Assembly	
Completed (40,000 X 33.14)	$1,325,600
Add Normal Spoilage *	47,910 **(see below)**
Add Normal Rework**	3,122 **(see below)**
Total costs	1,376,632

* Normal Spoilage

TI (2,000X 25)	50,000
CC (1,400 X 5.65)	7,910
Salvage value (2,000 X 5)	(10,000)
Total	47,910

** Normal Rework

DM (800X 2.49)	1,992
CC (200 X 5.65)	1,130
Total	3,122