Chapter 17

RESPONSIBILITY ACCOUNTING AND REPORTING

MULTIPLE CHOICE

Question Nos. 8, 10, 11-13, and 16-24 are AICPA adapted.
Question No. 21 is ICMA adapted.
Question No. 9 is CIA adapted.

E **1.** **Internal reports prepared under the responsibility accounting approach should highlight:**
- **A. cost properly allocable to the cost center under generally accepted accounting principles**
- **B. fixed cost of production**
- **C. variable cost of production**
- **D. conversion cost**
- **E. controllable cost**

C **2.** **A company has three producing departments and one service department. Due to a scheduling error in the service department, an unfavorable variance was created. A sound responsibility accounting system would dictate that the variance be:**
- **A. ignored**
- **B. allocated to producing departments, but not on the same basis as ordinary charges for use of the service**
- **C. charged to the service department causing the variance and not allocated to other departments**
- **D. allocated to both producing and service departments**
- **E. allocated to producing departments on the basis of usage**

A **3.** **The control of service department costs at the source level is accomplished by means of:**
- **A. predetermining service requirements in user departments**
- **B. allocating service usage on the basis of priority of need**
- **C. limiting the number of hours of service used**
- **D. organizing maintenance labor**
- **E. limiting the number of hours of service provided**

B **4.** **The rate used to distribute service hours to recipient departments is denoted by all of the following terms *except:***
- **A. sold-hour rate**
- **B. burden rate**
- **C. charging rate**
- **D. transfer rate**
- **E. billing rate**

E **5.** **The cost item least likely to appear in a performance report based on responsibility accounting techniques for the supervisor of an assembly line in a large manufacturing situation is:**

A. materials
B. repairs and maintenance
C. direct labor
D. other indirect labor
E. supervisor's salary

D **6.** **Responsibility reports should possess all of the following characteristics *except:***

A. being issued with regularity
B. fitting the organization chart
C. being consistent in form and content each time they are issued
D. being stated only in dollars for operating management
E. comparing budgeted with actual figures

D **7.** **Controllable costs are:**

A. costs that fluctuate in total in response to small changes in the rate of capacity utilization
B. costs that will be unaffected by current managerial decisions
C. costs that management decides to incur in the current period to enable the company to achieve objectives other than filling customers' orders
D. costs that are likely to respond to the amount of attention devoted to them by a specified manager
E. costs that are governed mainly by past decisions that established present levels of operating and organizational capacity and that change slowly only in response to changes in capacity

D **8.** **An accounting system in which the operations of the business are broken down into cost centers and the control function of a supervisor or manager is emphasized is:**

A. control accounting
B. budgetary accounting
C. absorption accounting
D. responsibility accounting
E. operations-research accounting

C **9.** **In a responsibility accounting system, costs are classified into categories on the basis of:**

A. prime and overhead costs
B. administrative and nonadministrative costs
C. controllable and noncontrollable costs
D. direct and indirect costs
E. fixed and variable costs

C **10.** **When used for performance evaluation, periodic internal reports based on a responsibility accounting system should *not:***

A. distinguish between controllable and noncontrollable costs
B. be related to the organization chart
C. include allocated fixed overhead
D. include variances between actual and budgeted controllable costs
E. all of the above

D 11. The most desirable measure of departmental performance for evaluating the departmental manager is departmental:

A. contribution to indirect expenses
B. revenue less departmental variable expenses
C. revenue less departmental fixed expenses
D. revenue less controllable departmental expenses
E. net income

D 12. Internal reports prepared under the responsibility accounting approach should be limited to which of the following costs?

A. only costs properly allocable to the cost center under generally accepted accounting principles
B. only variable costs of production
C. only conversion costs
D. only controllable costs
E. all of the above

B 13. Of most relevance in deciding how or which costs should be assigned to the responsibility center is the degree of:

A. variability
B. controllability
C. avoidability
D. causality
E. linearity

C 14. A company's only service department provides the following data:

Service Center	Monthly Budget	Service Hours Available	Actual Monthly Expense
Carpenter Shop	$40,000	1,600	$47,800

It serves three producing departments that show the following budgeted and actual cost and service-hours data:

Department No.	Estimated Services Required Carpenter Shop	Actual Services Used Carpenter Shop
1	350 hrs.	600 hrs.
2	800 hrs.	750 hrs.
3	450 hrs.	650 hrs.

The sold-hour rate for the carpenter shop is:

A. $29.88
B. $20.00
C. $25.00
D. $23.90
E. none of the above

SUPPORTING CALCULATION:

$40,000 ÷ 1,600 = $25

A 15. A company's only service department provides the following data:

Service Center	Monthly Budget	Service Hours Available	Actual Monthly Expense
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It serves three producing departments that show the following budgeted and actual cost and service-hours data:

Department No.	Estimated Services Required Carpenter Shop	Actual Services Used Carpenter Shop
1	350 hrs.	600 hrs.
2	800 hrs.	750 hrs.
3	450 hrs.	650 hrs.

The spending variance for the carpenter shop, assuming that 80% of the budgeted expense is fixed, is:

A. $5,800 unfav.
B. $7,800 unfav.
C. $5,800 fav.
D. $7,800 fav.
E. none of the above

SUPPORTING CALCULATION:

Actual factory overhead		$ 47,800
Budget allowance:		
Variable ($5 x 2,000)	10,000	
Fixed (80% x $40,000)	32,000	42,000
Spending variance		$ 5,800

B 16. The primary difference between a fixed (static) budget and a variable (flexible) budget is that a fixed budget:

A. cannot be changed after the period begins; while a variable budget can be changed after the period begins
B. is a plan for a single level of sales (or other measure of activity); while a variable budget consists of several plans, one for each of several levels of sales (or other measure of activity)
C. includes only fixed costs; while variable budget includes only variable costs
D. is concerned only with future acquisitions of fixed assets; while a variable budget is concerned with expenses that vary with sales
E. none of the above

C 17. A flexible budget is:

- **A. appropriate for control of direct materials and direct labor but not for control of factory overhead**
- **B. not appropriate when costs and expenses are affected by fluctuations in volume limits**
- **C. appropriate for any relevant level of activity**
- **D. appropriate for control of factory overhead but not for control of direct materials and direct labor**
- **E. none of the above**

B 18. A flexible budget is appropriate for a:

	Direct Labor Budget	Marketing Budget
A.	**yes**	**no**
B.	**yes**	**yes**
C.	**no**	**no**
D.	**no**	**yes**

C 19. If a company wishes to establish a factory overhead budget system in which estimated costs can be derived directly from estimates of activity levels, it should prepare a:

- **A. discretionary budget**
- **B. fixed budget**
- **C. flexible budget**
- **D. capital budget**
- **E. cash budget**

C 20. Flexible budgeting is a reporting system wherein the:

- **A. statements included in the budget report vary from period to period**
- **B. budget standards may be adjusted at will**
- **C. planned level of activity is adjusted to the actual level of activity before the variance report is prepared**
- **D. reporting dates vary according to the levels of activity reported upon**
- **E. none of the above**

B 21. Flintstone Company uses flexible budgeting for cost control. Flintstone produced 10,800 units of a product during March, incurring indirect material costs of $13,000. Its static budget for the year reflected variable indirect material costs of $180,000 at a production volume of 144,000 units. A flexible budget for March production would reflect indirect material costs of:

- **A. $13,000**
- **B. $13,500**
- **C. $13,975**
- **D. $11,700**
- **E. none of the above**

SUPPORTING CALCULATION:

($180,000 ÷ 144,000) x 10,800 = $13,500

B 22. A company uses a two-way analysis for overhead variances: spending and idle capacity. The idle capacity variance is based on the:
- **A. variable overhead application rate**
- **B. fixed overhead application rate**
- **C. semivariable overhead application rate**
- **D. total overhead application rate**
- **E. volume of total expenses at various activity levels**

B 23. In analyzing factory overhead variances, an idle capacity variance is the difference between the:
- **A. master budget application rate and the flexible budget application rate times actual hours worked**
- **B. budget allowance for actual units produced for the period and the amount of applied factory overhead**
- **C. actual amount spent for factory overhead items during the period and the amount applied during the period**
- **D. actual factory overhead incurred and the budget allowance estimated for the capacity used**
- **E. amount shown in the flexible budget and the amount shown in the master budget**

B 24. The spending variance for variable overhead based on direct labor hours is the difference between the actual variable overhead cost and the variable overhead cost that should have been incurred for the actual hours worked. This variance results from:
- **A. differences caused by variations in production volume**
- **B. price and quantity differences for overhead costs**
- **C. differences caused by variations in sales volume**
- **D. price differences for overhead costs**
- **E. quantity differences for overhead costs**

C 25. In the traditional view of responsibility accounting where individuals are evaluated rather than operating systems, all of the following dysfunctional results may occur, *except:*
- **A. managers tend to take actions that are self-serving rather than beneficial to the company as a whole**
- **B. managers concentrate on meeting the budget rather than the best level of performance that can be achieved**
- **C. managers tend to focus their attention on long-run targets and ignore the short-term needs of the company**
- **D. many competent managers leave the company**
- **E. all of the above may occur**

D 26. All of the following are reasons why responsibility reports are of limited use to managers in helping them to control costs, *except:*
- **A. most responsibility accounting systems improperly base allowable budgets on volume-based measures of activity**
- **B. control data available in a responsibility reporting system are too aggregated to be useful**
- **C. control data available to managers are not easily interpreted by all operating managers**
- **D. control data available to managers is too timely to be precise**
- **E. all of the above are reasons**

PROBLEMS

PROBLEM

1.
Costs Allocated to Producing Departments; Variance Analysis. Starsky Inc. has two departments providing service to its producing departments—the Building Services Department and the General Plant Department. Relevant data for June are:

	Building Services Department	General Plant Department
Budgeted fixed overhead	$50,000	$100,000
Variable overhead	$25 per service hour	$15 per direct labor hour
Normal activity level	10,000 hours per month	50,000 direct labor hours
June activity	12,000 hours	45,000 direct labor hours
Actual department costs	$358,000	$755,000

Required:

(1)Compute the predetermined billing rates used for allocating each service department's costs at normal activity.
(2)Compute the costs allocated to the producing departments from each service department, using the predetermined rates.
(3)Compute the spending and idle capacity variances for each service department.

SOLUTION

(1)Building Services Department: [$50,000 + ($25 x 10,000 hrs.)]/10,000 hrs. = $300,000/10,000 hrs. = $30 per service hour
General Plant Department: [$100,000 + ($15 x 50,000 hrs.)]/50,000 hrs. = $850,000/50,000 hrs. = $17 per direct labor hour
(2)Building Services Department: 12,000 hrs. x $30 = $360,000
General Plant Department: 45,000 hrs. x $17 = $765,000
(3)

	Building Services Department		General Plant Department	
Actual overhead		$ 358,000		$ 755,000
Less overhead allowed for capacity achieved:				
Fixed	$ 50,000		$100,000	
Variable				
($25 x 12,000 hrs.)	300,000			
($15 x 45,000 hrs.)		350,000	675,000	775,000
Spending variance		$ 8,000 unfav.		$ (20,000) fav.
Overhead allowed for capacity achieved		$ 350,000		$ 775,000
Less overhead applied [from (2)]		360,000		

765,000		
Idle capacity variance	**$ (10,000) fav.**	**$ 10,000 unfav.**

PROBLEM

2.

Variable Cost Rate; Over- or Underdistributed Variable Cost. Greco Gear Co. has two producing departments—Assembly and Finishing—and one service department—Utilities. Allocation of fixed service department costs is based on readiness-to-serve capacity provided for each department. Variable service department costs are charged on the basis of actual consumption. These costs are distributed to departments at a predetermined rate based on variable costs at capacity. Present relevant data are:

	Producing Departments	
	Assembly	Finishing
Power consumption (based on kilowatt-hours this month)	35,000	56,000
Maximum kilowatt-hours required	40,000	60,000

	Utilities Department
Budgeted fixed cost (this month)	$25,000
Budgeted variable cost at capacity	10,000
Actual variable cost (this month)	8,550

Required:

(1) Compute the rate per kwh used to distribute variable cost.
(2) Compute the distribution of fixed and variable Utilities Department costs for the month.
(3) Compute the over- or underdistributed variable cost and explain what kind of variance it is and who is responsible for the variance.

SOLUTION

(1) Budgeted variable cost at capacity/Capacity provided = $10,000/(40,000 kwh + 60,000 kwh) = $.10 kwh for distribution of variable costs

(2)

	Producing Departments	
	Assembly	Finishing
Fixed cost distribution:		
$25,000 x 40,000 kwh/100,000 kwh	$10,000	
$25,000 x 60,000 kwh/100,000 kwh		$15,000
Variable cost distribution:		
$.10 per kwh x 35,000 kwh	3,500	
$.10 per kwh x 56,000 kwh		5,600
Total cost distributed	$13,500	$20,600

(3)

Over- or underdistributed variable cost:		
Total variable cost		**$8,550**
Cost distributed:		
Assembly Department	**$3,500**	
Finishing Department	**5,600**	**9,100**
Overdistributed cost		**$ (550)**

Because all of the fixed cost was billed to user departments on the basis of maximum capacity available, there is no idle capacity variance. The entire variance is a spending variance. The manager of the Utilities Department is responsible for controlling variable cost; therefore, this variance should appear on the manager's monthly performance report.

PROBLEM

3.

Over- or Underdistributed Cost; Variance Analysis. Watergate Hotel provides the following data on overhead costs for its Room Service Division:

Budgeted departmental expenses:		
Variable expense	**$ 26,000**	
Fixed expense	**15,000**	
Total departmental expense (direct)	**$ 41,000**	
Budgeted distributed costs from other departments:		
Personnel Department (fixed)	**7,000**	
Food Service Department (variable)	**32,000**	
Total departmental overhead	**$ 80,000**	
Distribution rate (based on 10,000 calls)	**$ 8**	**per call to room service**
Actual data for the current period:		
Calls to room service	**11,000**	
Fixed expense	**$ 14,500**	
Variable expense	**26,000**	
Distributed cost:		
Personnel Department	**7,500**	
Food Service Department	**39,000**	

Required:

(1) Determine the departmental over- or underdistributed cost.

(2) Determine the spending and idle capacity variances for the Room Service Division's costs, plus the spending variances as distributed from the other departments. (Round all answers to two decimal places.)

SOLUTION

(1)			
Cost incurred:			
Fixed expense		**$14,500**	
Variable expense		**26,000**	
Personnel Department cost		**7,500**	
Food Service Department cost		**39,000**	**87,000**
Distributed cost (11,000 calls @ $8)			**$ 88,000**
Overdistributed cost			**$ (1,000)**
(2)			
Overhead incurred in Room Service Division		**$40,500**	
Spending variance			**$ (3,100) fav.**
Overhead expected at 11,000 calls:			
Fixed	**$15,000**		
Variable: $26,000/10,000 x 11,000	**28,600**	**43,600**	
Idle capacity variance			**(1,500) fav.**
Applied overhead:			
$41,000/10,000 x 11,000		**45,100**	
Overabsorbed overhead			**$ (4,600) fav.**
Overhead distributed from other departments:			
Personnel Department (fixed):			
Actual			**$ 7,500**
Estimated			**7,000**
Spending variance			**$ 500**
unfav.			
Food Service Department (variable):			
Actual distributed cost			**$ 39,000**
Cost expected at capacity attained			**35,200[1]**
Spending variance			**$ 3,800**
unfav.			
Total variances from other departments			**$ 4,300**
unfav.			

[1]$32,000/10,000 x 11,000 = $35,200

PROBLEM

4.

Responsibility Report. In April, the vice president of sales of Petro Products asks the controller to prepare a responsibility report for the performance evaluation of the manager of its Division Y, which is organized into Sections A and B.

The following cost items related to the operation of Division Y for the month of May, 19-- are presented by the controller:

Item	Actual Cost	Budgeted Cost
Division Y costs:		
Staff wages	**$ 20,000**	**$ 18,500**
Supplies	**6,000**	**4,800**
Manager's salary	**8,000**	**6,400**
Other expenses	**15,000**	**13,400**
Total Division Y cost	**$ 49,000**	**$ 43,100**
Administration cost allocable to Division Y	**$ 17,000**	**$ 14,500**
Unit output—Division Y	**10,000**	**10,000**
Section A costs:		
Supervisor's salary—Section A	**8,000**	**9,500**
Employees' wages—Section A:		
Juracek	**2,000**	**1,900**
Molloy	**3,500**	**3,600**
Nienaber	**3,300**	**3,250**
Oats	**4,100**	**4,050**
Peterson	**5,800**	**5,650**
Washington	**5,000**	**5,000**
Materials cost—Section A	**4,500**	**5,200**
Indirect labor—Section A	**7,800**	**7,300**
Other overhead costs—Section A	**18,000**	**19,600**
Total Section A costs	**$ 62,000**	**$ 65,050**
Section B costs:		
Supervisor's salary—Section B	**$ 7,000**	**$ 7,500**
Employees' wages—Section B:		
Laurie	**4,400**	**4,350**
Potash	**3,600**	**3,800**
Tillman	**2,100**	**2,050**
Other overhead costs—Section B	**15,000**	**14,500**
Total Section B costs	**$ 32,100**	**$ 32,200**

Required: **Prepare a responsibility report for the month of May in a format suitable for evaluating the performance of Division Y's manager.**

SOLUTION

Petro Products
Responsibility Report
Manager, Division Y
For May, 19--

Cost Item	Actual Cost	Over- Under- Budgeted Cost	
Division Y costs:			
Staff wages	$ 20,000	$ 1,500	U
Supplies	6,000	1,200	U
Manager's salary	8,000	1,600	U
Other expenses	15,000	1,600	U
Section A cost	62,000	(3,050)	F
Section B cost	32,100	(100)	F
Total	$ 143,100	$ 2,750	U

PROBLEM

5.
Flexible Budget. At normal capacity, Boulder Products Corp. manufactures 10,000 trail bikes. At that level, unit variable costs for the Assembly Department are:

Direct materials	$ 30
Direct labor	60
Indirect labor	30
Repairs and maintenance	15
General factory expenses	15
	$ 150

Fixed expenses are $150,000 for indirect labor, $175,000 for repairs and maintenance, and $80,000 for general factory.

Required: **Prepare a flexible budget for the Assembly Department at 70%, 80%, 90%, and 100% of normal capacity.**

SOLUTION

Assembly Department
Flexible Budget

	70%	80%	90%	100%
Percentage of capacity				
Units	7,000	8,000		
	9,000	10,000		
Variable cost:				
Direct materials	$ 210,000	$ 240,000	$ 270,000	$ 300,000
Direct labor	420,000	480,000	540,000	600,000
Indirect labor	210,000	240,000	270,000	300,000
Repairs and maintenance	105,000	120,000	135,000	150,000
General factory expenses	105,000	120,000	135,000	150,000
Total variable cost	$ 1,050,000	$ 1,200,000	$ 1,350,000	$ 1,500,000
Fixed cost:				
Indirect labor	150,000	150,000	150,000	150,000
Repairs and maintenance	175,000	175,000	175,000	175,000
General factory	80,000	80,000	80,000	80,000
Total fixed cost	$ 405,000	$ 405,000	$ 405,000	$ 405,000
Total cost	$ 1,455,000	$ 1,605,000	$ 1,755,000	$ 1,905,000

PROBLEM

6.
Overhead Analysis; Report to Supervisors. The cost and operating data on June factory overhead for Department 711 are as follows:

	Budgeted Factory Overhead	Actual Factory Overhead
Variable departmental overhead:		
Supplies	$ 4,000	$ 3,400
Repairs and maintenance	1,600	1,400
Indirect labor	8,000	7,400
Power and light	2,400	2,000
Heat	800	600
Subtotal	$ 16,800	$ 14,800
Fixed departmental overhead:		
Building expense	$ 1,600	$ 1,520
Depreciation—machinery	4,800	4,800
Property tax and insurance	800	760
Subtotal	$ 7,200	$ 7,080
Total	$ 24,000	$ 21,880
Operating data:		
Normal capacity hours	4,000	
Factory overhead rate per hour	$6	
Actual hours	3,600	

Required: **Prepare a departmental report for the supervisor of Department 711 that shows the departmental spending variance for each item of factory overhead and includes a single idle capacity variance.**

SOLUTION

	Original Budget	Budget Allowance	Actual Cost	Spending Variance (Unfav./ Fav.)
Capacity hours	4,000	3,600	3,600	
Variable costs:				
Supplies	$ 4,000	$ 3,600	$ 3,400	$ (200)
Repairs and maintenance	1,600	1,440	1,400	(40)
Indirect labor	8,000	7,200	7,400	200
Power and light	2,400	2,160	2,000	(160)
Heat	800	720	600	(120)
Subtotal	$ 16,800	$ 15,120	$ 14,800	
Fixed costs:				
Building expense	$ 1,600	$ 1,600	$ 1,520	(80)
Depreciation—machinery	4,800	4,800	4,800	0
Property tax and insurance	800	800	760	(40)
Subtotal	$ 7,200	$ 7,200	$ 7,080	
Total costs	$ 24,000	$ 22,320	$ 21,880	$ (440)
Applied factory overhead		21,600		
Idle capacity variance		$ 720	unfav.	
Actual factory overhead		$ 21,880		
Applied factory overhead		21,600		
Underapplied factory overhead		$ 280		
Spending variance		$ (440)		
Idle capacity variance		720		
Underapplied factory overhead		$ 280		