

Chapter 8 – Master Budgeting

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Exercise 8-1

2

Northeast Products is a wholesale distributor of swim accessories. Peak sales occur in May of each year as shown in the company's sales budget for the second quarter, given below:

	April	May	June	Total
Budgeted sales (all on account)	\$780,000	\$1,010,000	\$850,000	\$2,640,000

From past experience, the company has learned that 25% of a month's sales are collected in the month of sale, another 60% are collected in the month following sale, and the remaining 15% are collected in the second month following sale. Bad debts are negligible and can be ignored. February sales totaled \$660,000, and March sales totaled \$725,000.

Required:

1. Prepare a schedule of expected cash collections from sales, by month and in total, for the second quarter.
2. Assume that the company will prepare a budgeted balance sheet as of June 30. Compute the accounts receivable as of that date.

[LO2]

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Requirement 1: Prepare a schedule of expected cash collections from sales, by month and in total, for the second quarter.

	April	May	June	Total
February sales:				
\$660,000 × 15%	\$ 99,000			\$ 99,000
March sales:				
\$725,000 × 60%, 15%	435,000	\$ 108,750		543,750
April sales:				
\$780,000 × 25%, 60%, 15%	195,000	468,000	\$ 117,000	780,000
May sales:				
\$1,010,000 × 25%, 60%		252,500	606,000	858,500
June sales:				
\$850,000 × 25%			212,500	212,500
Total cash collections	<u>\$ 729,000</u>	<u>\$ 829,250</u>	<u>\$ 935,500</u>	<u>\$ 2,493,750</u>

Requirement 2: Assume that the company will prepare a budgeted balance sheet as of June 30. Compute the accounts receivable as of that date.

From May sales: \$1,010,000 × 15%	\$ 151,500
From June sales: \$850,000 × (60% + 15%)	637,500
Total accounts receivable	<u>\$ 789,000</u>

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Exercise 8-2

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Diamond Telecom has budgeted the sales of its innovative smartphone over the next four months as follows:

	Sales in Units
January	45,000
February	70,000
March	90,000
April	75,000

The company is now in the process of preparing a production budget for the first quarter. Past experience has shown that end-of-month finished goods inventories must equal 15% of the next month's sales. The inventory at the end of December was 6,750 units.

Required:

Prepare a production budget for the first quarter showing the number of units to be produced each month and for the quarter in total.

[LO3]

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Required: Prepare a production budget for the first quarter showing the number of units to be produced each month and for the quarter in total.

	January	February	March	Quarter
Budgeted sales in units	45,000	70,000	90,000	205,000
Add desired ending inventory	<u>10,500</u>	<u>13,500</u>	<u>11,250</u>	<u>11,250</u>
Total needs	55,500	83,500	101,250	216,250
Less beginning inventory	<u>6,750</u>	<u>10,500</u>	<u>13,500</u>	<u>6,750</u>
Required production	<u>48,750</u>	<u>73,000</u>	<u>87,750</u>	<u>209,500</u>

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Exercise 8-3

8

Mini Products, Inc., has developed a small digital clock. Each clock requires five small batteries that cost \$6 each and are purchased from an overseas supplier. Mini Products has prepared a production budget for the clock by quarters for Year 3 and for the first quarter of Year 4, as shown below:

	Year 3				Year 4
	First	Second	Third	Fourth	First
Required production of clocks	40,000	45,000	55,000	60,000	44,000

The battery used in production of the clock is sometimes hard to get, so it is necessary to carry large inventories as a precaution against stockouts. For this reason, the inventory of batteries at the end of a quarter must equal 25% of the following quarter's production needs. A total of 50,000 batteries will be on hand to start the first quarter of Year 3.

Required:

Prepare a direct materials budget for batteries, by quarter and in total, for Year 3. At the bottom of your budget, show the dollar amount of purchases for each quarter and for the year in total.

[LO4]

Required: Prepare a direct materials budget for batteries, by quarter and in total, for Year 3. At the bottom of your budget, show the dollar amount of purchases for each quarter and for the year in total.

	Year 3				Year
	First	Second	Third	Fourth	
Required production - clocks	40,000	45,000	55,000	60,000	200,000
Batteries needed per clock	<u>× 5</u>	<u>× 5</u>	<u>× 5</u>	<u>× 5</u>	<u>× 5</u>
Production needs—batteries	200,000	225,000	275,000	300,000	1,000,000
Add desired ending inventory—batteries	<u>56,250</u>	<u>68,750</u>	<u>75,000</u>	<u>55,000</u>	<u>55,000</u>
Total needs—batteries	256,250	293,750	350,000	355,000	1,055,000
Less beginning inventory—batteries	<u>50,000</u>	<u>56,250</u>	<u>68,750</u>	<u>75,000</u>	<u>50,000</u>
Required purchases—batteries	206,250	237,500	281,250	280,000	1,005,000
Cost per battery	<u>× \$6</u>	<u>× \$6</u>	<u>× \$6</u>	<u>× \$6</u>	<u>× \$6</u>
Cost of purchases	<u>\$1,237,500</u>	<u>\$1,425,000</u>	<u>\$1,687,500</u>	<u>\$1,680,000</u>	<u>\$6,030,000</u>

Exercise 8-5

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The direct labor budget of Island Corporation for the upcoming fiscal year includes the following budgeted direct labor-hours.

	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
Budgeted direct labor-hours	10,000	11,000	11,500	10,750

The company's variable manufacturing overhead rate is \$2.30 per direct labor-hour and the company's fixed manufacturing overhead is \$60,000 per quarter. The only noncash item included in fixed manufacturing overhead is depreciation, which is \$20,000 per quarter.

Required:

1. Construct the company's manufacturing overhead budget for the upcoming fiscal year.
2. Compute the company's manufacturing overhead rate (including both variable and fixed manufacturing overhead) for the upcoming fiscal year. Round off to the nearest whole cent.

[LO6]

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Requirement 1: Construct the company's manufacturing overhead budget for the upcoming fiscal year.

Island Corporation					
Manufacturing Overhead Budget					
	Q1	Q2	Q3	Q4	Year
Budgeted direct labor-hours	10,000	11,000	11,500	10,750	43,250
Variable overhead rate	<u>x\$2.30</u>	<u>x\$2.30</u>	<u>x\$2.30</u>	<u>x\$2.30</u>	<u>x\$2.30</u>
Variable manufacturing overhead	\$23,000	\$25,300	\$26,450	\$24,725	\$99,475
Fixed manufacturing overhead	<u>60,000</u>	<u>60,000</u>	<u>60,000</u>	<u>60,000</u>	<u>240,000</u>
Total manufacturing overhead	83,000	85,300	86,450	84,725	339,475
Less depreciation	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>	<u>80,000</u>
Cash disbursements for manufacturing overhead	<u>\$63,000</u>	<u>\$65,300</u>	<u>\$66,450</u>	<u>\$64,725</u>	<u>\$259,475</u>

Requirement 2: Compute the company's manufacturing overhead rate for the upcoming fiscal year. Round off to the nearest whole cent.

Total budgeted manufacturing overhead for the year (a)	\$339,475
Total budgeted direct labor-hours for the year (b)	43,250
Predetermined overhead rate for the year (a) ÷ (b)	<u>\$7.85</u>