

**Multiple Choice**

1. A master budget consists of
  - a) Individual budgets made for short-term goals
  - b) Emphasis is put on cash resources for capital planning
  - c) Interrelated budgets for an action plan for a specific time period
  - d) Focuses on review of progress towards long-term goals
  
2. L Company produces hand tools. For March, budgeted sales are 12,000 units, beginning finished goods inventory will be 1,200 units, and ending finished goods inventory will be 1,400 units. March production will be?
  - a) 10,900
  - b) 11,800
  - c) 12,200
  - d) 14,600

J Company produces hand tools. Budgeted sales will be: March 12,000 units, April 14,000, May 16,000 and June 19,000. Ending finished goods inventory policy is 10% of the following month's sales. March 1 inventory is projected to be 1,500 units.

3. How many units will be produced in March?
  - a) 11,900
  - b) 12,200
  - c) 13,000
  - d) 14,800
  
4. A Company produces leather handbags. The production budget for the next four months is: July 6,000 units, August 8,000, September 7,500, October 8,000. Each handbag requires 0.5 square meters of leather. A Company's leather inventory policy is 30% of next month's production needs. On July 1 leather inventory was expected to be 2,000 square meters. Leather is expected to cost \$6.00 per square meter in July. What is the expected cost of leather purchases in July?
  - a) \$13,100
  - b) \$13,200
  - c) \$16,200
  - d) \$16,300
  
5. Y Company produces chairs. The production budget for the next four months is: July 6,000 units, August 7,000, September 7,500. Each chair requires 2.2 hours of skilled labor (paid \$15 per hour). How much will be paid to skilled labor during the Quarter 3 (July-September)?
  - a) \$292,500
  - b) \$676,500
  - c) \$677,500
  - d) \$742,500

6. B Company has forecast production for the next three months as follows: July 5,000 units, August 6,600 units, September 7,500 units. Monthly manufacturing overhead is budgeted to be \$17,000 plus \$5 per unit produced. What is budgeted manufacturing overhead for July?
- \$24,500
  - \$41,500
  - \$42,000
  - \$47,000
7. S Company has forecast sales to be \$120,000 in February, \$145,000 in March, \$170,000 in April, and \$180,000 in May. All sales are on made on credit and sales are collected 60% in the month of sale, and 40% the month following. What are budgeted cash receipts in March?
- \$131,000
  - \$135,000
  - \$94,500
  - \$91,700
8. F Company has forecast purchases on account to be \$210,000 in March, \$270,000 in April, \$320,000 in May, and \$390,000 in June. Seventy percent of purchases are paid for in the month of purchase, the remaining thirty percent are paid in the following month. What are budgeted cash payments for April?
- \$252,000
  - \$285,000
  - \$159,000
  - \$126,000
9. E Company has forecast sales to be \$225,000 in February, \$235,000 in March, \$250,000 in April, and \$240,000 in May. All sales are made on credit and sales are collected 60% in the month of sale, and 40% the month following. What is the budgeted Accounts Receivable balance on May 31?
- \$69,000
  - \$96,000
  - \$98,000
  - \$106,000
10. N Company is preparing a cash budget for June. The company has \$12,000 cash at the beginning of June and anticipates \$30,000 in cash receipts and \$34,500 in cash disbursements during June. Northern Company has an agreement with its bank to maintain a cash balance of at least \$10,000. To maintain the \$10,000 required balance, during June the company must:
- Borrow \$4,500
  - Borrow \$2,500
  - Borrow \$10,000
  - Borrow \$7,500

**Practice Problems****Practice Problem #1**

Peak sales for J & J Products, a wholesale distributor of leaf rakes, occur in August. Sales the company's planning budget for the third quarter are shown below:

	<u>July</u>	<u>August</u>	<u>September</u>	<u>Total</u>
Budgeted Sales on account	\$600,000	\$900,000	\$500,000	\$2,000,000

From past experience, the company has learned that 20% of a month's sales are collected in the month of sale, another 70% are collected in the month following sale and the remaining 10% are collected in the second month following sale. Bad debts are negligible and can be ignored. May sales totaled \$430,000 and June sales totaled \$540,000.

- Required:
- a) Prepare a schedule of expected cash collections from sales, by month and in total, for the third quarter.
  - b) Compute the accounts receivable as September 30.

**Practice Problem #2**

Micro Corporation has budgeted sales of its microchips for next four month as follows:

	<u>Units Sold</u>
April	20,000
May	25,000
June	35,000
July	40,000

The company is preparing a production budget for the third quarter. Ending inventory level must equal 20% of the next month's sales.

- Required:
- a) Calculate the ending inventory as of March 31.
  - b) Prepare a production budget for the third quarter by month and in total.

**Practice Problem #3**

Z Company sells a single product. Each unit takes two pounds of material and costs \$3.00 per pound. Company A has prepared a production budget by quarters for Year 2 and for the first quarter of Year 3, as follows:

	<u>Year 2</u>				<u>Year 3</u>
	First	Second	Third	Fourth	First
Budgeted production	30,000	60,000	90,000	100,000	50,000

The ending inventory at the end of a quarter must be equal to 25% of the following quarter's production needs. 26,000 pounds of material are on hand to start the first quarter of Year 2. Purchases are paid for 40% in the quarter of purchase and 60% in the following quarter.

- Required:
- Prepare direct materials budget for the chips by quarter and in for Year 2 in total including the dollar amount of purchases.
  - Prepare cash disbursements budget for the chips by quarter and in for Year 2 in total including the dollar amount of purchases.

**Practice Problem #4**

The production department of the H Company has submitted the following forecast of units to be produced by quarter for the upcoming fiscal year.

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>
Units to be produced	8,000	7,500	7,000	9,500

Each unit requires 0.4 direct labor-hours. Direct labor rate is \$10.00 per hour.

- Required: Prepare the direct labor budget for the upcoming fiscal year.

**Practice Problem #5**

The budgeted direct labor-hours for the T Company are as followed:

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>
Budgeted direct labor hours	15,000	16,500	16,000	15,500

T Company's variable manufacturing overhead rate is \$1.50 per direct labor-hour and the company's fixed manufacturing overhead is \$60,000 per quarter. The only non-cash item included in the fixed mfg. overhead is depreciation, which is \$18,000.

- Required:
- Prepare a manufacturing overhead budget for the year. And calculate amounts used for cash disbursements
  - Compute the total manufacturing overhead rates for the year.

**Practice Problem #6**

G Company had cash of \$13,000 on hand on January 1. During the year, the company expected the following cash collections from customers by quarter:

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>
Cash collections	110,000	177,500	183,700	136,000

Direct materials purchases in tons were budgeted as follows:

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>
Direct materials purchases	65,000	75,000	55,000	50,000

The production budget showed the following unit production by quarter with an average labor rate of \$40.00:

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>
Units to be produced	1,500	2,000	1,700	1,500

G Company planned to pay dividends of \$10,000 per quarter during the year. During July, new equipment costing \$60,000 will be purchased. An additional \$16,000 was planned to installation costs during the fourth quarter.

The company was required to maintain a minimum cash balance of \$15,000. A line of credit was available for short-term borrowings in increments of \$1,000. All borrowings will be made at the beginning of a quarter and repaid at the end of a quarter. Interest on the short-term borrowings will be paid at 0.5% per quarter on the amount repaid in any quarter when a loan repayment is made. All other interest expense will be accrued each quarter.

Required: Prepare a cash budget by quarter and for the year in total.

**Solutions**

- 1. C
- 2. C
- 3. A
- 4. B
- 5. B
- 6. C
- 7. B
- 8. A
- 9. B
- 10. B

**Practice Problem #1**

a) Schedule of Cash Collections:

	<u>July</u>	<u>August</u>	<u>September</u>	<u>Total</u>
May sales (\$430,000 X 10%)	\$43,000			\$43,000
June sales (\$540,000 X 70%, 10%)	378,000	54,000		432,000
July sales (\$600,000 X 20%, 70%, 10%)	120,000	420,000	60,000	600,000
August sales (\$900,000 X 20%, 70%)		180,000	630,000	810,000
September sales (\$500,000 X 20%)			<u>100,000</u>	<u>100,000</u>
Total cash collections	\$541,000	\$654,000	\$790,000	\$1,985,000

b) Account receivable at September 30:

From August sales: \$900,000 X 10%	\$90,000
From September sales: \$500,000 X (70% + 10%)	<u>400,000</u>
Total account receivable	\$490,000

**Practice Problem #2**

a) Since the ending inventory for the month of March must be 20% of April's sales of 20,000 units, ending inventory = 4,000 units.

b) Production Budget:

	<u>April</u>	<u>May</u>	<u>June</u>	<u>Quarter</u>
Budgeted sales in units	20,000	25,000	35,000	80,000
Add desired ending inventory*	<u>5,000</u>	<u>7,000</u>	<u>8,000**</u>	<u>8,000</u>
Total needs	25,000	32,000	43,000	88,000
Less beginning inventory	<u>4,000</u>	<u>5,000</u>	<u>7,000</u>	<u>4,000</u>
Required production	21,000	27,000	36,000	84,000

\*10% of the following month's unit sales

\*\*July sales = 40,000 X 20% = 8,000

	<u>Quarter - Year 2</u>				<u>Year 3</u>
	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>	<u>First</u>
- Required production Pounds of material per unit	30,000	60,000	90,000	100,000	50,000
Total production needs	<u>60,000</u>	<u>120,000</u>	<u>180,000</u>	<u>200,000</u>	<u>100,000</u>
Production needs	60,000	120,000	180,000	200,000	560,000
Add desired ending inventory	<u>30,000</u>	<u>45,000</u>	<u>50,000</u>	<u>25,000</u>	<u>25,000</u>
Total needs	90,000	165,000	230,000	225,000	585,000
Less beginning inventory	<u>26,000</u>	<u>30,000</u>	<u>45,000</u>	<u>50,000</u>	<u>26,000</u>
Required purchases	64,000	135,000	185,000	175,000	559,000
Cost of purchase per unit	<u>\$3.00</u>	<u>\$3.00</u>	<u>\$3.00</u>	<u>\$3.00</u>	<u>\$3.00</u>
Total costs of purchase	\$192,000	\$405,000	\$555,000	\$525,000	\$1,677,000

Cash Disbursements:

Fourth Quarter, Year 1 purchases

26,000 x \$3.00 x 60%	\$46,800				\$46,800
First Quarter purchases	76,800	\$115,200			\$192,000
Second Quarter purchases		162,000	\$243,000		\$405,000
Third Quarter purchases			222,000	\$333,000	\$555,000
Fourth Quarter purchases				<u>210,000</u>	<u>\$210,000</u>
	\$123,600	\$277,200	\$465,000	\$543,000	\$1,408,800

**Practice Problem #4**

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>	<u>Year</u>
Required production	8,000	7,500	7,000	9,500	32,000
Direct labor-hour per unit	<u>0.4</u>	<u>0.4</u>	<u>0.4</u>	<u>0.4</u>	<u>0.4</u>
Total direct labor hours	3,200	3,000	2,800	3,800	12,800
Direct labor costs per dlh	<u>\$10.00</u>	<u>\$10.00</u>	<u>\$10.00</u>	<u>\$10.00</u>	<u>\$10.00</u>
Total direct labor cost*	\$32,000	\$30,000	\$28,000	\$38,000	\$128,000

\*Assume that the direct labor workforce will be fully adjusted to the total direct labor-hours needed each quarter

**Practice Problem #5**

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>	<u>Year</u>
Budgeted direct labor-hours	15,000	16,500	16,000	15,500	63,000
Variable mfg. overhead rate	<u>\$1.50</u>	<u>\$1.50</u>	<u>\$1.50</u>	<u>\$1.50</u>	<u>\$1.50</u>
Variable mfg. overhead	\$22,500	\$24,750	\$24,000	\$23,250	\$94,500
Fixed mfg. overhead	<u>60,000</u>	<u>60,000</u>	<u>60,000</u>	<u>60,000</u>	<u>240,000</u>
Total mfg. overhead	\$82,500	\$84,750	\$84,000	\$83,250	\$334,500
Less depreciation	<u>18,000</u>	<u>18,000</u>	<u>18,000</u>	<u>18,000</u>	<u>72,000</u>
Cash disbursement for mfg. overhead.	\$64,500	\$66,750	\$66,000	\$65,250	\$262,500

Total manufacturing overhead					<u>\$334,500</u>
Budgeted direct labor-hours					63,000
overhead rate for the year					= \$5.31

**Practice Problem #6**

	<u>First</u>	<u>Second</u>	<u>Third</u>	<u>Fourth</u>	<u>Year</u>
Beginning cash balance	\$13,000	\$15,000	\$15,380	\$15,080	\$13,000
+ Cash collections	<u>110,000</u>	<u>177,500</u>	<u>183,700</u>	<u>136,000</u>	<u>607,200</u>
= Cash available	\$123,000	\$192,500	\$199,080	\$151,080	\$620,200
- Cash Disbursements:					
Direct materials purchases	65,000	75,000	55,000	50,000	245,000
Direct labor	60,000	80,000	68,000	60,000	268,000
Plant assets			60,000	16,000	76,000
Dividends	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>	<u>10,000</u>	<u>40,000</u>
Excess (deficiency)	(\$12,000)	\$27,500	\$6,080	\$15,080	(\$8,800)
Financing:					
+ Borrowings	27,000		9,000		36,000
- Repayments		(12,000)			(12,000)
- Interest paid		<u>(120)</u>			<u>(120)</u>
= Ending cash balance	\$15,000	\$15,380	\$15,080	\$15,080	\$15,080
- Interest paid	\$12,000	X 0.5%	X 2 qtrs		= \$120