ACCOUNTING, FINANCE AND CONTROL 2018-2019

MULTIPLE CHOICE TEST – BUDGETING

For each question, select the correct answer (only 1 answer is correct)

1. The sales forecast for the next year for products A, B, C manufactured by Company Z are respectively 500 units, 450 units, and 200 units. Prices are 1,300 €/unit (A), 1,700 €/unit (B), and 2,300 €/unit (C). Knowing this …
   - ☐ Production budget = 1,875,000 €;
   - ☐ Sales (revenues) budget = 1,150 units;
   - ☐ Sales (revenues) budget = 1,075,000 €;
   - ☐ Sales (revenues) budget = 1,875,000 €.

Solution:

$$Sales\ (revenues)\ budget$$
$$= 500\ units * 1{,}300\frac{€}{unit} + 450\ units * 1{,}700\frac{€}{unit} + 200\ units * 2{,}300\frac{€}{unit}$$
$$= 1{,}875{,}00\ €$$

2. The sales forecast for the next year for products A, B, C manufactured by Company Z are respectively 500 units, 450 units, and 400 units. The Company works without inventories and uses a plant with an annual production capacity of 6,000 hours. The time needed to produce is 5 hours/unit for all products. The contribution margins are 555 €/unit (A), 700 €/unit (B), and 885 €/unit (C). Knowing this …
   - ☐ Production budget = 350 units (A), 450 units (B), and 400 (C);
   - ☐ Production budget = 500 units (A), 450 units (B), and 400 units (C);
   - ☐ Production budget = 500 units (A), 300 units (B), and 400 units (C);
   - ☐ Production budget = 500 units (A), 450 units (B), and 250 units (C).

Solution:

$$Needed\ production\ hours = (500\ units + 450\ units + 400\ units) * 5\frac{hours}{unit}$$
$$= 6{,}750\ hours > Annual\ production\ capacity = 6{,}000\ hours$$
$$Lost\ margin\ (A) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} * 555\frac{€}{units} = 83{,}250\ €$$

$$Lost\ margin\ (B) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} * 700 \frac{€}{units} = 105{,}000\ €$$

$$Lost\ margin\ (C) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} * 885 \frac{€}{units} = 132{,}750\ €$$

Since lost margin (A) is the lowest, Company Z will reduce the production of product A

$$Reduction\ (A) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} = 150\ units$$

$$Production\ budget = 350\ units\ (A), 450\ units\ (B), 400\ units\ (C)$$

3. The sales forecast for the next year for products A, B, C manufactured by Company Z are respectively 450 units, 500 units, 200 units. The difference between required production hours and annual production capacity is 350 hours. The time needed to produce A, B, C is respectively 5.5 hours/unit (A), 5 hours/unit (B), and 7 hours/unit (C). The contribution margins are 700 €/unit (A), 555 €/unit (B), 885 €/unit (C). Knowing this…
   - ☐ Production budget = 350 units (A), 450 units (B), 400 units (C);
   - ☐ Production budget = 450 units (A), 430 units (B), 200 units (C);
   - ☐ Production budget = 382 units (A), 500 units (B), 200 units (C);
   - ☐ Production budget = 450 units (A), 500 units (B), 146 units (C).

Solution:

$$Lost\ margin\ (A) = \frac{350\ hours}{5.5\ hours/unit} * 700 \frac{€}{units} = 44{,}545\ €$$

$$Lost\ margin\ (B) = \frac{350\ hours}{5\ hours/unit} * 555 \frac{€}{units} = 38{,}850\ €$$

$$Lost\ margin\ (C) = \frac{350\ hours}{7\ hours/unit} * 885 \frac{€}{units} = 44{,}250\ €$$

Since lost margin (B) is the lowest, Company Z will reduce the production of product B

$$Reduction\ (B) = \frac{350\ hours}{5\ hours/unit} = 70\ units$$

$$Production\ budget = 450\ units\ (A), 430\ units\ (B), 200\ units\ (C)$$

4. The sales forecast for the next year for products A and F manufactured by Company Z are respectively 50,000 units and 40,000 units. While the required use of direct materials is 1 kg/unit for A and 1.5 kg/unit for F, the required use of direct labour is 6 minutes/unit for both products. The costs for direct materials and direct labour is respectively 0.4 €/kg and 16

€/hour. Indirect fixed costs of the current year are expected to be 20,000 € (pre-consumptive), equally distributed between the two products, and they are expected to grow by 10% for the next year. Budgeted period costs are 10,000 €. Knowing this, the **production cost budget** is equal to:

- ☐ 210,000 €;
- ☐ 187,800 €;
- ☐ 220,000 €;
- ☐ 208,000 €.

Solution:

$$Budgeted\ production\ cost\ (A) = \left(1\frac{kg}{unit} * 0.4\frac{€}{kg} + 6\frac{minutes}{unit} * \frac{16\frac{€}{hour}}{60\frac{minutes}{hours}}\right) *$$

$$50{,}000\ units + \frac{1}{2} * 20{,}000 * (1 + 10\%) = 111{,}000\ €$$

$$Budgeted\ production\ cost\ (B)$$

$$= \left(1.5\frac{kg}{unit} * 0.4\frac{€}{kg} + 6\frac{minutes}{unit} * \frac{16\frac{€}{hour}}{60\frac{minutes}{hours}}\right) * 40{,}000\ units + \frac{1}{2}$$

$$* 20{,}000 * (1 + 10\%) = 99{,}000\ €$$

$$Production\ cost\ budget = 111{,}000\ € + 99{,}000\ € = 210{,}000\ €$$

5. The sales forecast for the next year for products A, B, C manufactured by Company Z are respectively 500 units, 450 units and 400 units. The company uses a plant with an annual production capacity of 6,000 hours. The time needed to produce each unit is 5 hours/unit. While prices of products A, B and C are respectively 1,300 €/u, 1,700 €/u, and 2,300 €/u, the variable costs per unit are respectively 745 €/unit, 1,000 €/unit and 1,415 €/unit. Knowing this…

   - ☐ Sales (revenues) budget = 2,335,000 €;
   - ☐ Sales (revenues) budget = 2,000,000 €;
   - ☐ Sales (revenues) budget = 2,140,000 €;
   - ☐ Production budget = 2,120,000 €.

Solution:

$$Sales\ (revenues)\ budget = 500\ units * 1{,}300\frac{€}{unit} + 450\ units * 1{,}700\frac{€}{unit} + 400\ units * 2{,}300\frac{€}{unit} = 2{,}355{,}000\ €$$

Check the feasibility of the budgeted production:

$$Needed\ production\ hours = (500\ units + 450\ units + 400\ units) * 5\frac{hours}{unit}$$
$$= 6{,}750\ hours > Annual\ production\ capacity = 6{,}000\ hours$$

$$Lost\ margin\ (A) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} * 555\frac{€}{units} = 83{,}250\ €$$

$$Lost\ margin\ (B) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} * 700\frac{€}{units} = 105{,}000\ €$$

$$Lost\ margin\ (C) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} * 885\frac{€}{units} = 132{,}750\ €$$

Since lost margin (A) is the lowest, Company Z will reduce the production of product A

$$Reduction\ (A) = \frac{(6{,}750\ hours - 6{,}000\ hours)}{5\ hours/unit} = 150\ units$$

New sales (revenues) budget

$$= 350\ units * 1{,}300\frac{€}{unit} + 450\ units * 1{,}700\frac{€}{unit} + 400\ units * 2{,}300\frac{€}{unit}$$
$$= 2{,}140{,}00\ €$$

6. The operating budgets include:
   - ☐ Budgets for sales(revenues), production, cost of goods sold, period costs;
   - ☐ Budgets for sales(revenues), production, cost of goods sold, capital expenditures;
   - ☐ budgets for sales(revenues), production, cost of goods sold, capital expenditures, and period costs;
   - ☐ budgets for production, cost of goods sold, period costs and cash.

7. The sales forecast for the next year for products A, B, C manufactured by Company Z are respectively 450 units, 500 units, and 200 units. The time needed to produce the products is 5 hours/unit. The company uses a plant with an annual production capacity of 6,000 h. The

contribution margins are 700 €/unit (A), 555 €/unit for (B), and 885 €/unit (C). For product C, the beginning finished goods inventory is 75 units and the target ending finished good inventory is 125 units. Knowing this…

- ☐ Production budget = 450 units for A, 500 units for B and 200 units for C;
- ☐ Production budget = 450 units for A, 500 units for B and 250 units for C;
- ☐ Production budget = 450 units for A, 500 units for B and 325 units for C;
- ☐ The required product hours exceed the annual capacity.

Solution

$$Needed\ production\ hours$$

$$= (450\ units\ (A) + 500\ units\ (B) + 200\ units\ (C)\ units) * 5\frac{hours}{unit}$$

$$+ (125 - 75)\ units\ (C) * 5\frac{hours}{unit} = 6{,}000\ hours$$

$$\leq Annual\ production\ capacity = \ 6{,}000\ hours$$

$$Production\ budget = 450\ units\ (A), 500\ units\ (B), 250\ units\ (C)$$

8. The Zero-Based approach to budgeting:
   - ☐ Defines the minimum set of resources required for running an activity of an organizational unit;
   - ☐ Is less precise than the Incremental approach;
   - ☐ Uses a coefficient that takes into account inflation and the expected company's growth;
   - ☐ Is faster than the Incremental approach.

9. The "period costs" budget includes:
   - ☐ Selling and marketing expenses, administrative and general expenses, and production indirect costs;
   - ☐ Selling and marketing expenses, capital expenditures, research & development expenses;
   - ☐ Capital expenditures; selling and marketing expenses, administrative and general expenses;
   - ☐ Selling and marketing expenses, administrative and general expenses, research & development expenses.

10. The “Master Budget” includes:
    - ☐ Operating budgets, production budgets and capital expenditure budgets;
    - ☐ Operating budgets, capital expenditure budgets and financial budgets;
    - ☐ Budgeted income statement, budgeted cash flow statement and budgeted balance sheet;
    - ☐ Operating budgets, period cost budgets and financial budgets.

11. While drafting the **operating budgets** in a manufacturing company…
    - ☐ The budgeted EBIT using the Profit and Loss Account (P&LA) by destination (by function) will be more than the budgeted EBIT using the P&LA by nature;
    - ☐ The budgeted EBIT using the (P&LA) by destination (by function) will be less than the budgeted EBIT using the P&LA by nature;
    - ☐ The budgeted EBIT using the P&LA by destination (by function) will be more than the budgeting EBIT using the P&LA by nature only when the Gross Margin will be equal to EBITDA;
    - ☐ None of the previous answers.

12. Operating budgets are relevant for:
    - ☐ Checking the expected difference between revenues and costs;
    - ☐ Checking the expected difference between cash inflows and cash outflows;
    - ☐ Checking the expect value for shareholders (e.g. through ROE);
    - ☐ None of the previous answers.

13. Consider the following data about Company Z and product BB. Selling price per unit is 15 €/unit, variable cost per unit is 9 €/unit, fixed costs are 15,000 €, financial costs are 2,400 €. What is the breakeven point (EBIT=0) in units for Company Z?
    - ☐ 1,000 units;
    - ☐ 2,900 units;
    - ☐ 2,500 units;
    - ☐ None of the previous answers.

Solution

$$\left(15\frac{€}{unit} - 9\frac{€}{unit}\right) * BEP - 15{,}000\ € = 0$$

$$BEP = \frac{15{,}000€}{(15\frac{€}{unit} - \frac{9€}{unit})} = 2{,}500\ units$$

14. Company Z has the following information about product T, the only product that is manufactured and sold. The selling price per unit is 20 €/unit, the variable cost per unit is 8 €/unit, fixed costs are 50,000 € and financial costs are 10,000 €. Company's current tax rate of profits before taxes is 25%. If Company Z wants to earn 60,000 in profits after taxes, how many units must it sell?
    - ☐ 6,000 units;
    - ☐ 8,750 units;
    - ☐ 11,667 units;
    - ☐ None of the previous answers.

Solution

$$\left[\left(20\frac{€}{unit} - 8\frac{€}{unit}\right) * V - 50{,}000\ € - 10{,}000\ €\right] * (1 - 25\%) = 60{,}000\ €$$

$$V = 11{,}667\ units$$

15. Operating budgets are developed:
    - ☐ Before Cash Budgets and Capital Expenditure Budgets;
    - ☐ Co-temporally with Cash Budgets and Capital Expenditure Budgets;
    - ☐ Co-temporally with Cash Budgets and before Capital Expenditure Budgets;
    - ☐ None of the previous answers.

16. Which one of the following activities is NOT accounted for in the Capital Expenditures Budget?
    - ☐ Selling an equipment;
    - ☐ Building a new factory store;
    - ☐ Issuing a new debt;
    - ☐ Purchasing a materials handling system.

17. The goal of Financial Budgets is:

- ☐ To assess the financial sustainability of operational and investments plans;
- ☐ To assess Net Working Capital;
- ☐ To select the right financial instrument for a company;
- ☐ To prepare Operating Budgets.