**Question 15**

**Production/cash budgeting**

Fabricators Ltd is starting its first year in business. The following estimates have been made for the 6 months January to June:

|  |  |
| --- | --- |
| Production | 80,000 units |
| Materials | 25,000 kgs@ £8 per kg |
| Labour | 40,000 hrs @ £6 per hour |
| Variable Overheads | £1 per labour hour |
| Fixed costs | £20,000 per month (excluding annual depreciation of £80,000) |

1. **Calculate** the:
2. total cost of production
3. unit cost of production
4. selling price per unit to give a margin of 20%
5. material cost per unit
6. labour cost per unit
7. variable overhead cost per unit **7**

The following are the estimated sales for the first 6 months. It is expected that cash sales will be 20% of the monthly total. Opening inventory for each month will be 50% of the cash sales of that month.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sales** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **June** |
| units | 4,000 | 6,000 | 10,000 | 14,000 | 16,000 | 29,000 |

1. **Prepare** the Production Budget in units for the 6 months January to June. Estimated cash sales for July — 10,000 units. **4**

The following are estimates for May and June:

1. Cash sales — payment in full on sale.
2. Credit sales — 5% trade discount, payable one month after sale. Bad debts is estimated  
    at 2% of credit sales.
3. Purchase of equipment £120,000 in January — an initial deposit of 20% is payable in January, followed by 12 equal monthly instalments.
4. Materials costs per unit are paid in the month after production.
5. Labour costs per unit are paid in the month of production.
6. A production bonus of £2 per unit for units in excess of 15,000 is paid in the month following production.
7. 60% of variable overhead costs per unit are paid in the month of production and the remainder in the month following.
8. Fixed costs are paid monthly.
9. **Prepare** the Cash Budget for May and June, given that the cash balance at the start of   
   May is £8,000. **17**

**Total marks (28)**

**Question 15 — solution**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **(a)** |  |  |  |  |  |  |
|  |  | Materials | 25,000 × £8 | £200,000 | **(1)** |  |
|  |  | Labour | 40,000 × £6 | £240,000 |  |  |
|  |  | Variable Overhead | 40,000 × £1 | £40,000 | **(1)** |  |
|  |  | Fixed Overhead (excluding Dep) |  | £160,000 | **(1)** |  |
|  | **(i)** | Total Cost of Production |  | £640,000 |  |  |
|  |  | No. of Units Produced |  | 80,000 |  |
|  | **(ii)** | Unit Cost of Production |  | £8 | **(1)** |  |
|  |  | Margin = 20% |  | £2 | **(1)** |
|  | **(iii)** | Selling Price per unit |  | £10 |  |  |
|  | **(iv)** | Material Cost per unit | £200,000/80,000 | £2·50 | **(2)** |  |
|  | **(v)** | Labour Cost per unit | £240,000/80,000 | £3·00 |  |  |
|  | **(vi)** | Variable Overhead Cost per unit | £40,000/80,000 | £0·50 |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  | **7** |
|  | **(b) Production Budget** | |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |  |
| Cash Sales | 800 | 1,200 | 2,000 | 2,800 | 3,200 | 5,800 | **(1)** |
| Credit Sales | 3,200 | 4,800 | 8,000 | 11,200 | 12,800 | 23,200 | **(1)** |
| Closing Inventory | 600 | 1,000 | 1,400 | 1,600 | 2,900 | 5,000 |  |
|  | 4,600 | 7,000 | 11,400 | 15,600 | 18,900 | 34,000 | **(1)** |
| Opening Inventory | 0 | 600 | 1,000 | 1,400 | 1,600 | 2,900 |  |
| Production | 4,600 | 6,400 | 10,400 | 14,200 | 17,300 | 31,100 | **(1)** |

**4**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **(c)** | **Cash Budget for Fabricators Ltd for 2 months ending June** | | | | | | |
|  |  | **May** |  | **June** |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Opening Balance | £8,000 | **(1)** | £20,842 |  |  |  |
|  | **Receipts** |  |  |  |  |  |  |
|  | Cash Sales | £32,000 |  | £58,000 | **(1) line** |  |  |
|  | Credit Sales | £104,272 | **(1)** | £119,168 | **(1)** |  |  |
|  | TOTAL RECEIPTS | £136,272 |  | £177,168 |  |  |  |
|  |  |  |  |  |  |  |  |
|  | **Payments** |  |  |  |  |  |  |
|  | Equipment | £8,000 | **(1)** | £8,000 | **(1)** |  |  |
|  | Materials | £35,500 | **(1)** | £43,250 | **(1)** |  |  |
|  | Labour | £51,900 | **(1)** | £93,300 | **(1)** |  |  |
|  | Bonus |  |  | £4,600 | **(1)** |  |  |
|  | 60% Variable Overheads | £5,190 | **(1)** | £9,330 | **(1)** |  |  |
|  | 40% Variable Overheads | £2,840 | **(1)** | £3,460 | **(1)** |  |  |
|  | Fixed Costs | £20,000 |  | £20,000 | **(1) line** |  |  |
|  | TOTAL PAYMENTS | £123,430 |  | £181,480 |  |  |  |
|  | Closing Balance | £20,842 |  | £16,070 | **(1)** |  | **17** | |
|  |  |  |  |  |  |  |  | |
|  |  |  |  |  |  |  |  | |

**Total marks (28)**