
Cash Budgets

Houghton LTD

2020

Step By Step Approach

PART A

Part A is asking you to calculate a production budget for four months. This is how many units need to be made each month. The layout will be the following

A. Sales in units	These figures are usually taken from the question
B. Add Closing stock	<ol style="list-style-type: none"> 1. There will be a certain percentage of stock to be produced for the next month 2. It will be calculated by using the sales units sold for the next month by the percentage given in the question 3. It is added back on because it is the company's policy to product some units for the next period (Month)
C.	Add the figure for A and B together
D. Less Opening Stock	<ol style="list-style-type: none"> 1. Remember the closing figure for one month is the opening figure for the next month 2. We take this figure away because the units have been produced in the previous month as per the question
E. Required for Production	<ol style="list-style-type: none"> 1. Take the figure for D away from the figure calculate for C 2. This figure will be used later on in part B

Sales

Take these figures from the question

1. These figures are taken straight from the question

	July	August	September	October	November	December
Sales	11,400	11,600	11,800	11,900	12,200	12,400

Taken from the question

Closing Stock

An adjustment is needed here

1. See part (i) from the question - it says
'Stock of finished goods are maintained at 60% of the following month's sales requirement.'
2. This means that at the end of July we should have 60% of August sales in closing Stock.
3. The following workings show you how to calculate the closing stock figure for each month

Workings**July**

11,600 (August sales in units) * 60%
= €6,960

August

11,800 (September sales in units) * 60%
= €7,080

September

11,800 (October sales in units) * 60%
= €7,140

October

11,900 (November sales in units) * 60%
= €7,320

Even though it says for 4 months in the question, we need to calculate the closing stock for November as well. This will be needed for part B

November

12,400 units (December sales in units) * 60%
= €7,440

Tip - each of the unit's figure for the month is taken from the question

	July	August	September	October	November
Sales	11,400	11,600	11,800	11,900	12,200
+ Closing stock	(+) 6,960	(+) 7,080	(+) 7,140	(+) 7,320	(+) 7,440
	18,360	18,680	18,940	19,220	19,640

NOTE - Remember to add the sales figure and closing stock figure together to see what the total units that will be produced each month.

The next step will take the opening stock away for each month

Opening Stock

Take these figures from closing stock

- Remember the closing stock figure for one month is the opening stock figure for the next month.
- We take away the opening stock figure because it is already included in the previous months figure. In this question we don't know the closing stock figure for June so we will put is 0 (Zero) for the opening figure for July.

3. The Opening stock figure for August will be the closing stock figure for July and this will continue for the other months

	July	August	September	October	November
Sales	11,400	11,600	11,800	11,900	12,200
+ Closing stock	(+) 6,960	(+) 7,080	(+) 7,140	(+) 7,320	(+) 7,440
	18,360	18,680	18,940	19,220	19,640
- Opening Stock	0	(-) 6,960	(-) 7,080	(-) 7,140	(-) 7,320

Required for Production

Take these figures from previous figures (workings)

1. The formula to calculate the units needed for production is

$$\text{Sales} + \text{Closing stock} - \text{Opening Stock} = \text{Required for production}$$

2. These figures will be used for Part B to help calculate the raw materials purchases budget

Production budget for Houghton Ltd for the four months					
	July	August	September	October	November
Sales	11,400	11,600	11,800	11,900	12,200
+ Closing stock	(+) 6,960	(+) 7,080	(+) 7,140	(+) 7,320	(+) 7,440
	18,360	18,680	18,940	19,220	19,640
- Opening Stock	0	(-) 6,960	(-) 7,080	(-) 7,140	(-) 7,320
Required for Production	18,360	11,720	11,860	12,080	12,320

NOTE - Remember to include the heading - Production budget for Houghton Ltd for the four months

PART B

Part B is asking you to calculate the raw materials purchases budget for four months. This is how much of a certain material is needed each month to produce the units that have to be made each month (calculated in part A). The layout is similar to Part A and look like this

A. Units of Production	Calculated in Part A - Required for Production
B. Materials Per Unit	<ol style="list-style-type: none"> 1. This figure is usually given in the question (see part (ii)) 2. Multiply this figure by the Units of production figure (A)
C. Required for production	Add the figure for A and B together
D. Add Closing stock	<ol style="list-style-type: none"> 1. There will be a certain percentage of stock of raw material to be held at the end of each month (see part (iii)) 2. It will be calculated by using the required for production for the next month and multiply it by the percentage given in the question 3. It is added back on because it is the company's policy to keep some raw materials from next month as part of this months (as per the question)
E. Less Opening Stock	<ol style="list-style-type: none"> 1. Remember the closing figure for one moth is the opening figure for the next month 2. We take this figure away because the units have been produced in the previous month as per the question
F. Required for Production	<ol style="list-style-type: none"> 1. Take the figure for D away from the figure calculate for C 2. This figure will be used late on in Part

Units of Production

Take these from Part A

1. Take these figures from part A
2. The unit for production figures are the figures that were calculate at the end of Part A
- Required for Production

	July	August	September	October	November
A. Required for Production	18,360	11,720	11,860	12,080	12,320

Taken from part A

Materials Per Unit

Use the figure that is given in the question

1. See part (ii) from the question - it says

'Each product unit requires 4 kgs of material X which costs €3 per Kg'

	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4

Required for Production

An adjustment is needed here

1. This is where we multiply the figure in A (Units of Production) by B (Materials per Unit)

	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820

Closing Stock

An adjustment is needed here

1. See part (iii) from the question - it says

'Stocks of raw materials sufficient for 20% of the following month's requirement in kgs are held at the end of each month'

2. This means that at the end of July we should have 20% of August kgs in closing Stock

Workings**July**

46,8800 (August Requirements) * 20%
= €9,376

August

47,4400 (September Requirements) * 20%
= €9,488

September

48,320 (October Requirements) * 20%
= €9,664

October

49,280 (November Requirements) * 620%
= €9,856

Note - This is the reason we have a column for November to help calculate the closing stock for October

	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820
D. + Closing Stock	(+) 9,376	(+) 9,488	(+) 9,664	(+) 9,856	
	82,816	56,368	57,104	58,176	

NOTE - Remember to add the figures for required for production and closing stock together
The next step will take the opening stock away for each month

Opening Stock

Take these figures from closing stock

1. Remember the closing stock figure for one month is the opening stock figure for the next month.
2. We take away the opening stock figure because it is already included in the previous months figure.

In this question we don't know the closing stock figure for June so we will put is 0 (Zero) for the opening figure for July. The Opening stock figure for August will be the closing stock figure for July and this will continue for the other months

	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820
D. + Closing Stock	(+) 9,376	(+) 9,488	(+) 9,664	(+) 9,856	
	82,816	56,368	57,104	58,176	
E. - Opening Stock	0	(-) 9,376	(-) 9,488	(-) 9,664	

Required for Purchases

Take these figures from previous figures (workings)

- This is when you take away opening stock away from the figure above it.
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	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820
D. + Closing Stock	(+) 9,376	(+) 9,488	(+) 9,664	(+) 9,856	
	82,816	56,368	57,104	58,176	
E. - Opening Stock	0	(-) 9,376	(-) 9,488	(-) 9,664	
G. Required For Purchase	82,816	€46,992	€47,616	€48,512	

Price Per KG

Use the figure that is given in the question

- See part (ii) from the question - it says

'Each product unit requires 4 kgs of material X which costs €3 per Kg'

	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820
D. + Closing Stock	(+) 9,376	(+) 9,488	(+) 9,664	(+) 9,856	
	82,816	56,368	57,104	58,176	

F. - Opening Stock	0	(-) 9,376	(-) 9,488	(-) 9,664	
H. Required For Purchase	82,816	€46,992	€47,616	€48,512	
I. Price Per KG	€3	€3	€3	€3	

Cost of Raw Material

An adjustment is needed here

1. This is where we multiply the figure in I (Required for Purchase) by J (Price per KG)

4 months raw materials purchases budget (in units and €) for Houghton Ltd					
	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820
D. + Closing Stock	(+) 9,376	(+) 9,488	(+) 9,664	(+) 9,856	
	82,816	56,368	57,104	58,176	
E. - Opening Stock	0	(-) 9,376	(-) 9,488	(-) 9,664	
J. Required For Purchase	82,816	€46,992	€47,616	€48,512	
K. Price Per KG	€3	€3	€3	€3	
L. Cost of Raw Material	248,448	140,976	142,848	145,536	

NOTE - Remember to include the heading - 4 months raw material purchases budget (in units and €) for Houghton Ltd

PART C

Part C is asking you to Prepare a cash budget for four months. The budget will look like the following

Cash budget for Houghton Ltd for the four months July to October 2020.					
Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
1. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410
2. Total Payments	423,520	487,768	382,966	387,968	1,682,222
Net Cash	(206,920)	74,632	189,234	192,132	249,078
Opening Cash		(+) (110,920)	(+) (36,288)	152,946	
Bank Loan	(+) 96,000				(+) 96,000
Closing Cash	(110,920)	(36,288)	152,946	345,078	345,078

NOTE - You don't have to complete the total column but the closing cash for October and the closing cash for the Total Column must be the same - this can be a way to check if the question has been completed correctly - TIMING MAY BE AN ISSUE HERE

Important totals are as follows. These will be needed for part D when you will have to prepare a budgeted profit and loss account.

Wages	Variable Overheads
Fixed Costs	Loan Interest

Remember to include - Discount, interest and depreciation as well for part D

RECEIPTS

An adjustment is needed here

This is the income for the business over a four-month period. In the question under part (iv) It gives you cash customer and credit customers

Cash and Credit Receipts

1. Cash customer says that 40% of sale revenue will be for immediate cash and a cash discount of 5% will be allowed. Here you will have to
 - a. Calculate the revenue for each month (Sales x by selling price)
 - b. Calculate the 40% of revenue (what you calculated in part a) and take it away from the sale revenue figure. This will give you credit sales
 - c. Using the 40% figure (€228,000) calculate the 5% discount (used in part D) and take it away from the 40% (calculated in part b) this will be the cash receipts for this month
2. Credit customer says 60% of sales revenue will be from credit customer These debtors will pay their bills in the month after sale.

Workings**July**

Sales	€11,400	Taken from the question
Selling Price	<u>(x) €50</u>	Taken from the question
Sales Revenue	€570,000	Sale revenue

Cash Receipts

€570,000 * 40%

(-) €228,000 Cash Sales (40%)

€342,000 Credit Sales (60%) (August - Credit Sales)

Discount

€228,000 * 5%

(-) €11,400 5% Discount

€216,600 (July - Cash Sales)

August

Sales	€11,600	Taken from the question
Selling Price	<u>(x) €50</u>	Taken from the question
Sales Revenue	€580,000	Sale revenue

Cash Receipts

€580,000 * 40%

(-) €232,000 Cash Sales (40%)

€348,000 Credit Sales (60%) (Sept - Credit Sales)

Discount

€232,000 * 5%

(-) €11,600 5% Discount

€220,400 (Aug - Cash Sales)

September

Sales €11,800 Taken from the question

Selling Price (x) €50 Taken from the question

Sales Revenue €590,000 Sale revenue

Cash Receipts

€590,000 * 40%

(-) €236,000 Cash Sales (40%)

€354,000 Credit Sales (60%) (Oct - Credit Sales)

Discount

€354,000 * 5%

(-) €11,800 5% Discount

€224,200 (Sept - Cash Sales)

October

Sales €11,900 Taken from the question

Selling Price (x) €50 Taken from the question

Sales Revenue €595,000 Sale revenue

Cash Receipts

€5905,000 * 40%

(-) €238,000 Cash Sales (40%)

€357,000 Credit Sales (60%) (Nov - Debtors)

Discount

€357,000 * 5%

(-) €11,900 5% Discount

€226,100 (Oct - Cash Sales)

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000

Debtors Figure

NOTE - The November figure of €357,000 is not included in the cash budget as the budget is only for 4 months. But this €357,000 would be the debtors figure if you were asked to complete a balance sheet

Total Receipts

An adjustment is needed here

- To calculate the Total Receipts, we add up the figures cash sale and credit sales for each month

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
1. Total Receipts	216,660	562,400	572,220	580,100	1,931,300

PAYMENTS

We keep working down through the question. The next Adjustment (v), relates to purchases
'One month's credit is received from suppliers.'

Purchases

An adjustment is needed here

- The purchases figures have already been calculated as part of Part B.

	July	August	September	October	November
L. Cost of Raw Material	248,448	140,976	142,848	145,536	

- See part (v) from the question - it says
'one month's credit is receive from suppliers'
- This means that July is not due until August, August is not due until Sept and so forth.

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
1. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272

Creditors Figure

NOTE - The October figure of €145,536 is not included in the cash budget as the budget is only for 4 months. But this €145,536 would be the creditors figure if you were asked to complete a balance sheet

EXPENSES

NOTE -

1. Adjustment (vi) will give you the list of the rest of the expenses that will go in the payments section of the cash budget. These include

(a) Wages	(b) Variable Overheads
(c) Fixed Overheads	(d) Equipment (Just the figure from the question)
(e) Loan Repayment	(f) Loan Interest
2. Work down through these expenses, complete the working (if needed) and enter the figures into the Cash Budget

Remember not to include depreciation as this is not cash and only cash items are entered into the cash budget but the depreciation for will be included in part D - prepare a budgets trading and profit and loss account for Houghton Ltd

Wages

An adjustment is needed here

1. It tells us under expected costs that
'wages are €20,000 plus 10% of sales revenue per month , payable as incurred'
2. To complete this working, we need to take the sales revenue (calculate as part of the receipts - cash and credit sales) and find 10% then add this figure to the wages figure of €20,000

July

Sales Revenue		€570,000	See working for Receipts (Cash and Credit Sales)
€570,000 * 10%	=	€57,000	
Wages	=	<u>(+) €20,000</u>	Taken from the question - Expected Costs Wages
	=	€77,000	

August

Sales Revenue	€580,000	See working for Receipts (Cash and Credit Sales)
€580,000 * 10%	= €58,000	
Wages	= <u>(+) €20,000</u>	Taken form the question - Expected Costs Wages
	= €78,000	

September

Sales Revenue	€590,000	See working for Receipts (Cash and Credit Sales)
€590,000 * 10%	= €59,000	
Wages	= <u>(+) €20,000</u>	Taken form the question - Expected Costs Wages
	= €79,000	

October

Sales Revenue	€595,000	See working for Receipts (Cash and Credit Sales)
€595,000 * 10%	= €59,500	
Wages	= <u>(+) €20,000</u>	Taken form the question - Expected Costs Wages
	= €79,500	

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
3. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500

Variable Overheads

An adjustment is needed here

- It tells us under expected costs that

'Variable overheads €12 per unit, payable as incurred'
- Variable overhead are overheads that increase when more units are produced (For example Light and heat - the more you use the more you pay, raw materials the more you use the more you pay).
- To calculate the variable overheads for this question we take the units that need to be produced for that month (see Part A) and multiple it by the variable overhead per unit (from the question)

Units that need to be produced

	July	August	September	October	November
Required for Production	18,360	11,720	11,860	12,080	12,320

Taken form part A

July

Units to be produced	18,360	Taken form Part A - Required for Production
Variable OH PU	<u>(x) €12</u>	Taken from the Question
	€220,320	

August

Units to be produced	11,720	Taken form Part A - Required for Production
Variable OH PU	<u>(x) €12</u>	Taken from the Question
	€140,640	

September

Units to be produced	11,860	Taken form Part A - Required for Production
Variable OH PU	<u>(x) €12</u>	Taken from the Question
	€142,320	

October

Units to be produced	12,080	Taken form Part A - Required for Production
Variable OH PU	<u>(x) €12</u>	Taken from the Question
	€144,960	

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
4. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240

Fixed Overheads

An adjustment is needed here

1. It tells us under expected costs that

'Fixed overheads (including depreciation) €20,000 per month, payable as incurred.'

2. The fixed cost in the question includes depreciation. As we are doing a cash budget, we only include cash items.
3. This means we need to calculate the depreciation on the equipment and take it out of the fixed costs figure.
4. This new figure for fixed costs will go in the cash budget and the depreciation figure will go in the Profit and Loss Account (Part D)
5. As part of Capital Cost is says

'equipment will be purchased on 1 July 2020 costing €108,000 which will have a useful life of 5 years'

To calculate the depreciation, we do the following

$$€108,000 / 5$$

$$€21,600 \quad \text{Depreciation per year}$$

We are doing the cash budget per month, so we need to find the monthly depreciation figure

$$€21,600 / 12$$

$$€1,800 \quad \text{Depreciation per year}$$

Fixed Costs	€20,000	Taken from the question
Depreciation	<u>€1,800</u>	See above working (Depreciation per month)
	€18,200	Fixed Cost Cash Budget

NOTE

As the €18,200 figure is the fixed cost figure it will be the same for each month in the cash budget

The depreciation for the budget trading and profit and loss account would be

$$€1,800 * 4 \text{ Months} = €7,200$$

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
5. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800

Equipment

Use the figure that is given in the question

1. It tells us under capital costs that

'Equipment will be purchased on 1 July 2020 costing €108,000 which will have a useful life of 5 years.'

2. This means that in July you put €108,000

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
6. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000

Loan Repayments

An adjustment is needed here

1. It tells us under capital costs that

'To finance this purchase, a loan of €96,000 will be secured at 6% per annum'

and

'The capital sum is to be repaid in 48 equal monthly instalments'

2. To find out how much the instalments are we take the loan figure from the question and divide it by 48

$$\text{€96,000} / 24 = \text{€2,000 per month}$$

NOTE -

1. This means that each month you will reduce the loan by €2,000 (because €2,000 has been paid off the principal €96,000). This is very important, and you will always do this if the following phrase is in the question

'The interest for each month is to be paid on the last day of the month based on the amount of the loan outstanding at that date.'

2. Remember that the repayment for the loan doesn't start until August as per the question

Both capital repayments and interest payments commence on 31 August.

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
7. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000

Loan Interest

An adjustment is needed here

1. It tells us under capital costs that

'To finance this purchase, a loan of €96,000 will be secured at 6% per annum'

and

'The interest for each month is to be paid on the last day of the month based on the amount of the loan outstanding at that date'

NOTE -

'based on the amount of the loan outstanding at that date'

This is very important because before you calculate the loan interest, we need to reduce in by €2,000 after July because the €2,000 will reduce the principal each month

August

NOTE - The interest will start in August as per the Question

Principal * Rate	Remember the budget is per month, so
€96,000 * 6% Taken form the Question	€5,760 / 12
€5,760 Yearly amount	€480 Monthly amount

September

NOTE - Remember we have paid €2,000 of the principal. So

€96,000 - €2,000

= €94,000

Principal * Rate	Remember the budget is per month, so
€94,000 * 6% Taken form the Question	€5,640 / 12
€5,640 Yearly amount	€470 Monthly amount

October

NOTE - Remember we have paid €2,000 of the principal. So

*€94,000 - €2,000

*See September

= €92,000

Principal * Rate

Remember the budget is per month, so

€92,000 * 6% Taken form the Question

€5,520 / 12

€5,520 Yearly amount

€460 Monthly amount

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
8. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410

Total Payments

An adjustment is needed here

- To calculate the Total Payment, we add up the figures in the payment section for each column for each month
- This will include - purchases + wages + variable overheads + fixed costs + equipment + loan repayment + loan interest

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
1. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800

Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410
2. Total Payments	423,520	487,768	382,966	387,968	1,682,222

Net Cash

An adjustment is needed here

- To calculate the Net Cash, we take the Total Receipts (A) and take away the Total Payments (B)

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
1. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410
2. Total Payments	423,520	487,768	382,966	387,968	1,682,222
Net Cash	(206,920)	74,632	189,234	192,132	249,078

Opening Cash

An adjustment is needed here

1. Remember the closing cash for one month is the opening cash for the next month
For example July's Closing Cash will be August's Opening Cash, August Closing Cash will be September Opening Cash and so forth.

2. There may not be any opening cash for the first month, so we leave it blank or put in Zero (0). If there was any opening cash, it would tell you in the question

NOTE - This part of the question will have to be complete column by column (month by month), this is because you will have to calculate the closing cash for the month so you have the opening cash for the next month

Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
3. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410
4. Total Payments	423,520	487,768	382,966	387,968	1,682,222
Net Cash	(206,920)	74,632	189,234	192,132	249,078
Opening Cash		(+) (110,920)	(+) (36,288)	152,946	
Bank Loan	(+) 96,000				(+) 96,000
Closing Cash	(110,920)	(36,288)	152,946	345,078	345,078

Bank Loan

Use the figure that is given in the question

1. It tells us under capital costs that
 'To finance this purchase, a loan of €96,000 will be secured at 6% per annum.'
2. The loan figure will be taken from the question and will be the loan figure that was used to purchase the equipment (€96,000)

Cash budget for Houghton Ltd for the four months July to October 2020.					
Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
5. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410
6. Total Payments	423,520	487,768	382,966	387,968	1,682,222
Net Cash	(206,920)	74,632	189,234	192,132	249,078
Opening Cash		(+ (110,920)	(+ (36,288)	152,946	
Bank Loan	(+ 96,000				(+ 96,000
Closing Cash	(110,920)	(36,288)	152,946	345,078	345,078

Closing Cash

An adjustment is needed here

1. The closing cash is calculated by adding Net Cash, opening cash and bank loan (if any) together

NOTE - Remember the closing cash for one month is the opening cash for the next month

Cash budget for Houghton Ltd for the four months July to October 2020.					
Receipts	July	August	September	October	Total
Cash Sales	216,660	220,440	224,200	226,100	887,300
Credit Sales	0	342,000	348,000	354,000	1,044,000
7. Total Receipts	216,660	562,400	572,220	580,100	1,931,300
Payments					
Purchases		248,448	140,076	142,848	532,272
Wages	77,000	78,000	79,000	79,500	313,500
Variable Overheads	220,320	140,640	142,320	144,960	648,240
Fixed Costs	18,200	18,200	18,200	18,200	72,800
Equipment	108,000				108,000
Loan Repayments		2,000	2,000	2,000	6,000
Loan interest		480	470	460	1410
8. Total Payments	423,520	487,768	382,966	387,968	1,682,222
Net Cash	(206,920)	74,632	189,234	192,132	249,078
Opening Cash		(+) (110,920)	(+) (36,288)	152,946	
Bank Loan	(+) 96,000				(+) 96,000
Closing Cash	(110,920)	(36,288)	152,946	345,078	345,078

NOTE - You don't have to complete the Total Column but the closing cash for October and the closing cash for the Total Column must be the same - this can be a way to check if the question has been completed correctly - TIMING MAY BE AN ISSUE HERE

NOTE - Remember to include the heading - 4 months raw material purchases budget (in units and €) for Houghton Ltd

PART D

Part D is asking you to prepare a budget trading, profit and loss for four months. This will have the same layout as Question one. The budget will look like the following

Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020			
Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+ 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+ 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640
Gross Profit			1,906,360
<u>Less Expenses</u>			
Discount		46,700	
Wages		(+ 313,500	
Variable Overheads		(+ 648,240	
Fixed Overheads		(+ 72,800	
Depreciation		(+ 7,200	(-) 1,088,440
Operating Profit			817,920
Less Interest			(-) 1,410
Net Profit			816,510

Sales

A calculation is needed here

- The figure for sales is calculate by taking the sales revenue for July, August, September and October and adding them together (See Working for Part C - Receipts - Cash and Credit Sales)

July	€570,000	(Part C - Receipts - Cash and Credit Sales working)
August	€580,000	(Part C - Receipts - Cash and Credit Sales working)
September	€590,000	(Part C - Receipts - Cash and Credit Sales working)
October	<u>€595,000</u>	(Part C - Receipts - Cash and Credit Sales working)
	€2,335,000	

Sales			2,335,000
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Opening Stock

There is no opening stock given to use in this question so we can leave it blank or put in zero (0)

Purchases

Use the figures from part B

- The Purchases figure is got by taking the total for cost of raw material for each month from part B and adding them together
- You can have a total when completing part B as well

	July	August	September	October	November
L. Cost of Raw Material	248,448	140,976	142,848	145,536	

Taken from part B

July	€248,448	(July Total from part B)
August	€140,976	(August Total from part B)
September	€142,848	(September Total from part B)
October	<u>€145,536</u>	(October Total from part B)
	€677,808	

Sales			2,335,000
Less Cost of Sales			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	

Closing Stock

An adjustment is needed here

NOTE - in the question it tells us that closing stock should be valued at

1. €30 for finished goods (as per part d of the question). The closing stock figure for finished goods will be taken from Part A (see table below)
2. €3 per kg for unfinished goods (as per part (ii)). The Closing stock for unfinished goods will be taken from Part B (see Table below)

Remember we are doing the Trading Profit and Loss account for 4 months so we will use the October column and not the November column

Production budget for Houghton Ltd for the four months					
	July	August	September	October	November
Sales	11,400	11,600	11,800	11,900	12,200
+ Closing stock	(+) 6,960	(+) 7,080	(+) 7,140	(+) 7,320	(+) 7,440
	18,360	18,680	18,940	19,220	19,640
- Opening Stock	0	(-) 6,960	(-) 7,080	(-) 7,140	(-) 7,320
Required for Production	18,360	11,720	11,860	12,080	12,320

Taken from Part A

4 months raw materials purchases budget (in units and €) for Houghton Ltd					
	July	August	September	October	November
A. Units of Production	18,360	11,720	11,860	12,080	12,320
B. Materials Per Unit	(x) 4	(x) 4	(x) 4	(x) 4	(x) 4
C. Required for Production	73,440	46,880	47,440	48,320	49,820
D. + Closing Stock	(+) 9,376	(+) 9,488	(+) 9,664	(+) 9,856	
	82,816	56,368	57,104	58,176	
E. - Opening Stock	0	(-) 9,376	(-) 9,488	(-) 9,664	
F. Required For Purchase	82,816	€46,992	€47,616	€48,512	
G. Price Per KG	€3	€3	€3	€3	
H. Cost of Raw Material	248,448	140,976	142,848	145,536	

Taken form Part B

Working

Finished Goods Closing stock 7,320 * €30 = 219,600

Raw material Closing stock 9,856 * €3 = 29,568

Sales			2,335,000
Less Cost of Sales			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+) 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640

Cost of Goods Sold

A calculation is needed here

- To calculate the cost of sales - take the closing stock figure away from the purchases figure (Opening stock + purchases)

Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+) 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640

Gross Profit

A calculation is needed here

- Gross profit is calculated by taking the figure of cost of sales away from the sales figure $€2,335,000 - €428,640 = €1,906,360$

Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+) 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640
Gross Profit			1,906,360

Expenses

A calculation is needed here

For the Expenses we work down through the payment's items from the cash budget

- Purchases This item will go in the trading section of the profit and loss account

2. Wages add up all the figures for each month to get the total figure.
(€77,000 + €78,000 + €79,000 + €79,500 = €313,500)
3. Variable Overheads add up all the figures for each month to get the total
(€220,320 + €140,640 + €142,320 + €144,960 = €648,240)
4. Fixed Costs add up all the figures for each month to get the total figure.
(€18,200 + €18,200 + €18,200 + €18,200 = €72,800)
5. Depreciation Also include the depreciation for equipment
(€1,800 * 4 months = €7,200)
6. Discount Don't forget to include the discount figure that we worked out in Part C as part of the Sales receipts (Cash and credit receipts)
(€11,400 + €11,600 + €11,800 + €11,900 = €46,700)

Remember to add up all the expense figure to get a total

Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+) 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640
Gross Profit			1,906,360
<u>Less Expenses</u>			
Discount		46,700	
Wages		(+) 313,500	
Variable Overheads		(+) 648,240	
Fixed Overheads		(+) 72,800	
Depreciation		(+) 7,200	(-) 1,088,440

Operating Profit

A calculation is needed here

- Using the Gross Profit figure, we take away the total expense figure away from it to get the operating profit figure - €1,906,360 - €1,088,440 = €€817,920

Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+) 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640
Gross Profit			1,906,360
<u>Less Expenses</u>			
Discount		46,700	
Wages		(+) 313,500	
Variable Overheads		(+) 648,240	
Fixed Overheads		(+) 72,800	
Depreciation		(+) 7,200	(-) 1,088,440
Operating Profit			817,920

Less Interest

A calculation is needed here

- The interest figures are already calculated in Part C as part of the cash budget. Add up all the figures for each month to get the total.

Receipts	July	August	September	October	Total
Loan interest		480	470	460	1410

Taken from Part C working - Interest

Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+) 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+) 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640
Gross Profit			1,906,360
<u>Less Expenses</u>			
Discount		46,700	
Wages		(+) 313,500	
Variable Overheads		(+) 648,240	
Fixed Overheads		(+) 72,800	
Depreciation		(+) 7,200	(-) 1,088,440
Operating Profit			817,920
Less Interest			(-) 1,410
Net Profit			816,510

Net Profit

A calculation is needed here

- The Net profit figure is calculated by using the Operating profit figure and taking away the interest paid ($€817,920 - €1,410 = €816,510$)

NOTE - Remember to include the heading - Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020

Budgeted Trading and Profit and Loss Account for the 4 months ended 31/10/2020			
Sales			2,335,000
<u>Less Cost of Sales</u>			
Opening stock		0	
Add Purchases		(+ 677,808	
		677,808	
Less Closing Stock			
Finished Goods	219,600		
Raw Material	(+ 29,568	(-) 249,168	
Cost of Goods Sold			(-) 428,640
Gross Profit			1,906,360
<u>Less Expenses</u>			
Discount		46,700	
Wages		(+ 313,500	
Variable Overheads		(+ 648,240	
Fixed Overheads		(+ 72,800	
Depreciation		(+ 7,200	(-) 1,088,440
Operating Profit			817,920
Less Interest			(-) 1,410
Net Profit			816,510

PART E

This is the theory part of the question and includes the following

(i) What useful information is available to Houghton Ltd from the cash budget?

1. It can identify periods of when the company is in a deficit - In July and August, the company has a maximum cash deficit of €110,920.
2. It can identify when the company will have a surplus - This shortfall is eliminated in September and October with a cash surplus at the end of October of €345,078.
3. It can identify if the company will need to get a loan or arrange a bank overdraft - The company needs to arrange a bank overdraft of €110,920 or else take corrective action by leasing the equipment, or extending the period of credit received from one month to two months.
4. The company could also try and get customers to buy more goods for cash rather than credit.
5. This could be used to purchase new fixed assets increasing the productive capacity of the firm or purchase investments which increase investment income and profit.

(ii) Explain what is meant by a master budget.

Master Budget is a planning tool that gives an overview of a business's finances, outlining cash flow forecasts, financial statements, and the financial plan.

It is a financial planning document that includes all budgets, cash flow forecasts, budgeted financial statements, and financial plans of an organisation. It usually has different elements, including the budgets for sales, production, administration, direct materials, and overhead.

The master budget allows the company to forecast what will need to be done to meet their goals.

Example of a Master budget

Often, a company's other budgets will roll up into the master budget. For instance, a company may incorporate its sales budget, the cost of goods sold, selling and administrative expenses, cash budget, capital expenditures, inventory, total assets, to construct a master budget that gives a in-depth picture of its financials.