

1 PH plc is to start producing acid at its chemical factory on 1 July 2024.

The following information is available for the production of acid at the chemical factory for the period 1 July to 30 September 2024.

- To produce the acid requires two chemicals (X and Y) and water.
- The acid is produced using the three inputs X, Y and water, in the ratio 1 : 2 : 7
- The costs of the inputs are:
  - Chemical X is £4.76 per litre for the three months
  - Chemical Y is £2.75 per litre but rising by 4% on 1 September
  - Water is £1.05 per litre but rising by 5% on 1 August
  - The cost of water for September will be the same as August.
- The credit terms given by the three suppliers are:
  - Xerxes plc sells only for cash and supplies Chemical X
  - Yolanda plc gives one month's credit and supplies Chemical Y
  - Zephyr Water plc gives two months' credit and supplies the water required.
- Full advantage is taken of credit terms offered by suppliers.
- PH plc has budgeted to produce 44 000 litres of acid per month.

You are the Cost Accountant for PH plc and have to prepare budgets.

**Required**

(a) Prepare the following budgets for **each** of the three months from July to September 2024 for PH plc.

(i) Purchases budget, in litres.

(3)

(ii) Purchases budget, in pounds (£).

(6)

(b) Prepare the Trade Payables budget, in pounds (£), showing the amount owed to suppliers at the end of **each** of the three months July to September 2024.

(4)

Acid sells for £19.50 per litre.

PH plc only has four customers that have a contract to receive a fixed amount of acid each month.

The following sales information is available.

	Sales per month – litres	Credit terms for payment	Credit limit
<b>Alpha plc</b>	10 000	1 month	£200 000
<b>Beta plc</b>	12 000	1 month	£200 000
<b>Gamma plc</b>	9 000	2 months	£200 000
<b>Delta plc</b>	11 000	2 months	£200 000

### Required

- (c) Prepare the Sales budget, in litres, showing the amount sold for **each** of the three months July to September 2024. (2)
- (d) Prepare the Inventory budget, in litres, for **each** of the three months July to September 2024. (4)
- (e) Prepare the Trade Receivables budget, in pounds (£), showing the amount owed by customers at the end of **each** of the three months July to September 2024. (10)
- (f) Prepare an extract from the Cash budget showing the amounts received from customers for **each** of the three months July to September 2024. (14)
- (g) Evaluate the role of budgeting as a management tool for planning, forecasting and control. (12)

- 2 Soyara plc, a major car producer based in Asia, is to start selling a new model of car, the Zencar, on 1 October 2017, which it will export worldwide. Soyara plc is preparing budgets for the next trading period, July to December 2017.

The budgeted sales for Zencars for the period July to December 2017 are:

- Sales in Asia are forecast to be constant at 12 000 cars per month.
- Sales in Europe are expected to start at 2 000 cars for October.
  - Every month sales are then forecast to rise by 10% on the previous month.
- Sales in America are expected to be 6 000 cars in October.
  - After October, in every month, sales are then forecast to fall by 15% on the previous month.
- Sales in Australia are expected to be 4 000 cars in October.
  - Sales in November are then expected to be only 30% of the October figure.
  - Sales are then expected to rise by 20% each month on the previous month.

**Required**

- (a) Prepare the Sales Budget showing the number of cars sold for the three-month period October to December 2017. The budget must show the forecast number of cars sold for Asia, Europe, America and Australia for **each** month, and a total forecast sales figure for **each** month using the columns provided in the Question Paper.

(5)

The Zencar is delivered to its export markets using sea transport. The delivery time for America and Australia is one month. The delivery time for Europe is two months. Production for Asia is delivered in the same month as sales.

Soyara plc wishes to increase the inventory of Zencars by 500 cars per month, starting in October 2017.

**Required**

- (b) Prepare, using the columns provided in the Question Paper, the:

- (i) Production Budget for Zencars for the five-month period August to December 2017. The budget must show the forecast production for Asia, Europe, America and Australia for **each** month, and a total production figure for **each** month.

(7)

- (ii) Inventory Budget for Zencars for the three-month period October to December 2017. The budget should show the number of cars going into inventory **each** month, and the total number of cars in inventory **each** month.

(3)

It is expected that 5% of all cars on the production line will need to be “reworked” to correct small errors. On average, this should take two workers one hour per car to rework. Workers are paid £9.50 per hour.

**Required**

- (c) Prepare, using the columns provided in the Question Paper, a budget to show the cost of “reworking” cars for **each** of the five months August to December 2017.

(5)

90% of the parts for the cars are purchased and delivered for production in the same month. Purchases for the remaining 10% of parts are purchased one month in advance.

Each car will require parts to the value of £2 150.

**Required**

- (d) Prepare, using the columns provided in the Question Paper, a Purchases Budget for **each** of the five months July to November 2017.

(10)

The Zencar will sell for £9 900 per car.

Payment in **Australia** is expected to be made using one of the following three options.

**Option 1** – 40% of customers are expected to pay for their new car with cash on the day of purchase.

**Option 2** – 35% of customers are expected to buy their new car on the terms “£100 to pay when the car is purchased, then nothing to pay for 18 months”. Payment is then made in full 18 months after the date of the sale.

**Option 3** – The remaining customers are expected to buy their new car on the terms “10% deposit in the month of sale, then 36 monthly payments of £300, starting one month after the sale”.

**Required**

- (e) Prepare, using the columns provided in the Question Paper, an extract from the Cash Received Budget to show the amount of cash received from customers for **each** of the three months, October to December 2017, from sales of Zencar in Australia. The budget must show the amount received **each** month from **each** of the options, and a total for **each** month.

(13)

- (f) Evaluate, from the point of view of Soyara plc, **each** of the three payment options, and recommend the most appropriate option.

(12)

**(Total for Question 2 = 55 marks)**

---

**TOTAL FOR SECTION A = 110 MARKS**