

JANIS

$$EOQ = \sqrt{\frac{2 C_o D}{C_H}}$$

$$= \sqrt{\frac{2 \times 20 \times 40000}{2.50}}$$

$$= \underline{\underline{800 \text{ UNITS}}}$$

$$\text{No of Orders} = \frac{40000}{800} = 50$$

$$\text{Average Stock Level} = 800/2 = 400$$

$$\text{Reorder Cost} = 50 \times \$20 = \$1000$$

$$\text{Stockholding Cost} = 10\% \times 400 \times \$25 = \$1000$$

Per Annum

$$\therefore \text{Total Inventory Costs} = \underline{\underline{\$2000}}$$

(a). The business is probably concerned with its working capital position because:

It has a substantial overdraft, which together with its non-current borrowings means that it has borrowed an amount roughly equal to its equity (according to the Balance Sheet values);

It has increased its investment in inventories during the past year (as shown in the P&L from 125 to 143); and

It has a low current ratio (current assets to current liabilities).

$$\text{Current ratio} = 306/285 = 1.07$$

(b). The operating cash cycle can be calculated as follows:

No. of days

Average inventories holding period:

$$\frac{((\text{Opening inventories} + \text{Closing inventories})/2) \times 365}{\text{Cost of sales}} = \frac{((125 + 143)/2) \times 365}{323} = 151$$

Add average settlement period for receivables:

$$\frac{\text{Trade receivables} \times 365}{\text{Credit sales revenue}} = \frac{163 \times 365}{452} = 132$$

Less average settlement period for payables:

$$\frac{\text{Trade payables} \times 365}{\text{Credit purchases}} = \frac{145 \times 365}{341} = 155$$

$$\text{Operating cash cycle} = 128$$

(c). The business can reduce the operating cash cycle in a number of ways. The average inventories holding period seems quite long. At present average inventories held represent about five months' inventories usage. Reducing the level of inventories can help reduce this period.

Similarly, the average settlement period for receivables seems long at more than four months' sales revenue. Imposing tighter credit control, offering discounts, charging interest on overdue accounts and so on may reduce this. However any policy decisions concerning inventories and receivables must take account of current trading conditions.

Extending the period of credit taken to pay suppliers would also reduce the operating cash cycle. However this must be considered carefully in view of the implications of gaining a reputation as a slow payer.