

Certified Accounting Technician Examination
Advanced Level

Managing Finances

Wednesday 12 December 2007

Time allowed

Reading and planning: 15 minutes

Writing: 3 hours

ALL FOUR questions are compulsory and MUST be attempted.

Do NOT open this paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

This question paper must not be removed from the examination hall.

The Association of Chartered Certified Accountants



Paper T10

ALL FOUR questions are compulsory and MUST be attempted

1 Robo Clean Co is a recently established innovation company. It currently has one product on the market, the 'Robovac', a robotic floor cleaner. This has been extremely successful. The company is currently developing a new robotic cleaner called 'Robomum' that vacuums, dusts and presses.

To date \$120,000 has been spent on developing the product. The company has also incurred \$250,000 of market research costs, although the invoice for these costs has only just been received and will be paid in January.

Since the set-up costs are substantial, a final decision now needs to be made as to whether it is viable to manufacture and sell 'Robomum'. The following revenues and costs have been estimated:

1. A new factory, to be used solely for the production of 'Robomum', will need to be built. This will take nearly a year to build and is expected to cost \$11.75 million in total, payable in two instalments. The first instalment of \$6m will be paid at the start of the building work and the second instalment for the remaining balance will be paid when the building work has been completed at the end of the year.
2. Robo Clean Co will immediately enter into a one-year contract with a project management company, who will oversee the building of the factory. The total cost of this during the year will be \$250,000.

Two production lines will need to be installed in the factory at a further cost of \$1,500,000 payable at the end of the build in one year's time.

3. The machinery for the production of 'Robomum' also needs to be built-to-order and is expected to cost \$2.5m, payable in one year's time. Its terminal value is nil. Depreciation will be charged as soon as production commences (as soon as the build finishes in one year's time) at 10% per annum on a straight-line basis. Maintenance costs for the machinery are estimated at \$250,000 per annum.
4. Production and Sales will commence in the year following the build. Sales quantities and prices for 'Robomum' are expected to be as follows:

Years	1	2	3 & 4 (each year)	5 to 9 (each year)
Sales volume ('000 units)	5	10	30	50
Sales price (\$)	1,000	800	700	500

It is anticipated that by the beginning of year 10, a new robotic helper will have replaced 'Robomum', hence there will be no further sales.

5. Material costs for 'Robomum' are estimated at \$125 per unit.
6. Labour costs are estimated at \$100 per unit.
7. Fixed production overheads on the new factory are estimated at \$240,000 per annum. Variable production overheads are expected to be \$50 per unit.
8. Head office costs of \$4.5m per annum will be allocated to 'Robomum' when production commences. Of these costs, only \$3.7m is incremental.
9. The introduction of 'Robomum' is expected to adversely affect sales of 'Robovac'. It is thought that, for every two units of 'Robomum' sold, one unit of 'Robovac' will be lost. 'Robovac' is currently sold for \$150 per unit and generates a net cash flow of \$50 per unit.
10. The company's cost of capital is 5%.
11. Assume that all cash flows occur at the end of the year, unless stated otherwise.
12. All workings should be in \$'000, to the nearest \$'000.

Required:

- (a) Using the discount tables provided, calculate the net present value (NPV) of the project at the company's cost of capital. Conclude as to whether Robo Clean Co should proceed with the project. (22 marks)
- (b) Explain the main principles to differentiate between relevant and irrelevant costs for investment appraisal. Wherever possible, use the costs of 'Robomum' to illustrate your answer. (6 marks)
- (c) Define and distinguish between capital and revenue expenditure. Explain whether the \$250,000 per annum costs of maintaining the machinery for 'Robomum' are capital or revenue in nature. (6 marks)
- (d) Robo Clean Co is considering alternative ways of funding the project. The machinery is one of the largest costs. The company has heard of hire purchase agreements, finance leases and operating leases, but is not sure whether any of these will be suitable, given that the machinery has to be built-to-order.

Briefly describe each of the following

- (i) Hire purchase agreements; (2 marks)
- (ii) Finance leases; (2 marks)
- (iii) Operating leases. (2 marks)

Present value table (extract)

Periods (n)	Discount rate (r)
	5%
1	0.952
2	0.907
3	0.864
4	0.823
5	0.784
6	0.746
7	0.711
8	0.677
9	0.645
10	0.614

Annuity factor table (extract)

Periods (n)	Discount rate (r)
	5%
1	0.952
2	1.859
3	2.723
4	3.546
5	4.329
6	5.076
7	5.786
8	6.463
9	7.108
10	7.722

(40 marks)

2 All Weather Windows Co manufactures and fits windows for domestic customers. The company needs to forecast its working capital requirements for the year ahead. The following figures are available:

Sales revenue \$7,600,000

Costs as percentage of sales revenue

Raw materials	22%
Direct labour	18%
Variable production overheads	7%
Apportioned fixed production overheads	12%
Other costs	5%

Working capital statistics

Average raw material holding period	6 weeks
Average work-in-progress (WIP) holding period	3 weeks
Average finished goods holding period	5 weeks
Average trade receivables' collection period	2.5 weeks
Average trade payables' payment period on:	
Raw materials	8 weeks
Direct labour	2 weeks
Variable production overheads	4 weeks
Fixed production overheads	6 weeks
Other costs	3 weeks

Other relevant information

1. All finished goods inventory and WIP values include raw materials, direct labour, variable production overheads and apportioned fixed production overhead costs.
2. Assume WIP is 80% complete as to materials; 75% complete as to direct labour; 50% complete as to variable production overheads and fixed production overheads.
3. Assume there are 52 weeks in one year.
4. Assume that production and sales volumes are the same.
5. All workings should be in \$'000, to the nearest \$'000.

Required:

- (a) Calculate the estimated average working capital required by All Weather Windows Co for the year, showing all necessary workings. (14 marks)

- (b) All Weather Windows Co approaches its bank to ask for a loan to assist with a new machinery purchase. The bank refuses the loan on the basis that the company is too highly geared and its interest cover is too low. The industry averages for gearing and interest cover are as follows:

	Industry average
Gearing $\left(\frac{\text{Prior-charge capital}}{\text{Shareholders' funds}} \times 100\% \right)$	100%
Interest cover	3 times

The following figures are extracts from All Weather Windows Co's accounts:

Long-term loans	\$6million
Ordinary share capital	\$3 million
Reserves	\$1 million
Profit before interest	\$1.2million
Interest	\$500,000

- (i) Calculate the company's level of gearing (also known as leverage) using the same ratio as above, and explain what it means when All Weather Windows Co is said to be 'highly geared'. (3 marks)
- (ii) Calculate the company's interest cover and explain what it means when All Weather Windows Co is said to have low interest cover. (3 marks)

(20 marks)

- 3 Cool Ski Co is a skiwear retailer operating through its website shop. It is run by its three directors/shareholders who started the business three years ago. Its busiest months of the year are December, January, February and March, with sales for the rest of the year being relatively insignificant.

In December the company prepares a cash budget for January, February and March. The following figures from its profit forecast for December 2007 through to March 2008 are currently available. However, they may need to be revised and should be read together with the notes below.

	Dec \$'000	Jan \$'000	Feb \$'000	Mar \$000
Sales revenue (1)	450	650	750	350
Purchases	See notes 2 and 3			
Staff costs (4)	45	60	70	30
Packaging costs (5)	7	10	12	6
Distribution costs (6)	35	50	58	28
Other costs (7)	50	75	85	55

Notes:

- The company does not provide any credit to customers. However, customers who join the company's members' club are given a 5% discount on all of their purchases. Half of customers are club members. The sales revenue forecasts above have been calculated before any discounts have been taken into account.
- Purchases represent 40% of gross sales revenue. Sales revenue in November was \$95,000.
- Suppliers allow two months' credit.
- All staff are paid at the beginning of the month for the previous month's work.
- Packaging costs are paid one month after they are incurred.
- Distribution costs are paid in the month in which they are incurred.
- Other costs include depreciation of \$12,000 per month. They also include rental costs of \$30,000 per month, which are paid quarterly in December, March, June and September. The remainder of 'other costs' are paid in the month in which they are incurred.
- The bank charges interest of 0.5% per month for the overdraft, calculated on the closing bank balance each month, and payable in the following month.
- The overdraft on Cool Ski Co's bank account at 31 December 2007 is expected to be \$500,000.
- All workings should be in \$'000, to the nearest \$'000.

Required:

- (a) **Prepare a monthly cash budget for each of the three months to 31 March 2008, showing the cash balance at the end of each month.** (10 marks)
- (b) Cool Ski Co is considering expanding its business. It wants to branch out into the manufacture of its own brand of skiwear, and then expand its customer base to include wholesale customers, such as high street retailers. The three directors/shareholders have produced a business plan and are now considering approaching a venture capital organisation for finance.

Identify and discuss five factors that a venture capital organisation would take into account when deciding whether or not to invest in Cool Ski Co. (10 marks)

(20 marks)

- 4 Waste Co is a waste management company, with one sole shareholder/director, Mr Trusty. It collects two types of waste from businesses – recyclable waste and confidential waste. Since companies have increasingly become aware of both the need for recycling and the need to protect confidential information, Waste Co's client base has expanded rapidly over the last two years.

As the business has expanded Mr Trusty has had less time available to focus on credit control. This has resulted in a steady deterioration in accounts receivable collection and a rapid increase in Mr Trusty's overdraft, despite high profits. Mr Trusty's bank has now refused to extend his overdraft any further and has suggested that he either employ a credit controller or factor his accounts receivable.

The following information is available:

1. Credit sales for the year ending 30 November 2007 were \$2,550,000 and average accounts receivable days were 60. Sales are expected to increase by 25% over the next year.
2. If Mr Trusty employs a good credit controller, the cost to the business will be \$47,000. It is anticipated that the accounts receivable days can then be reduced to 40 days.
3. A local factoring organisation has offered to factor the company's accounts receivable on the following terms:
 - (i) An advance of 80% of the value sales invoices (which Mr Trusty would fully utilise).
 - (ii) An estimated reduction in accounts receivable days to 35 days.
 - (iii) An annual administration fee of 1.3% of turnover.
 - (iv) Interest charge on advances of 12% per annum.
4. Current overdraft rates are 10% per annum.
5. Assume there are 365 days in a year.

Required:

- (a) Explain the meaning of 'debt factoring' (accounts receivable factoring) to Mr Trusty, distinguishing between 'with recourse' and 'without recourse' agreements. (4 marks)
- (b) Explain how debt factoring is different from 'invoice discounting'. (2 marks)
- (c) Calculate whether it is financially beneficial for Waste Co to factor its accounts receivables for the next year, as compared to employing a credit controller. (10 marks)
- (d) State four roles that a credit controller may play. (4 marks)

(20 marks)

End of Question Paper