Professional Level – Options Module

Advanced Performance Management

Thursday 5 June 2014

Paper P5

Time allowed
Reading and planning: 15 minutes
Writing: 3 hours

This paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 12 and 13.

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.

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ACCA

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The question paper begins on page 3.

Section A – This ONE question is compulsory and MUST be attempted

1 Cantor Group (Cantor) is a listed company with two subsidiaries, both involved in food and drink retailing in the small country of Deeland. Its mission is 'to maximise shareholder value through supplying good value food and drink in appealing environments for our customers'.

Cantor Cafes (Cafes) is the original operating company for the group and is a chain of 115 cafes specialising in different coffee drinks but also serving some simple food dishes. Cafes has been running successfully for 15 years and has reached the limit of its expansion as the cafe market is now considered to be saturated with competition. Further growth will occur only as the opportunity to obtain profitable, new sites is presented, although such opportunities are not expected to be significant over the next few years.

Cantor Juicey (Juicey) was started by the Cantor Group two years ago. Now, it is made up of 15 juice bars which serve a variety of blended fruit juice drinks and health snacks. The products served by Juicey have benefited from an increased awareness in Deeland of the need to eat and drink healthily. Cantor Group expects to increase the rate of property acquisition in order to feed the rapid growth of this business, intending to open 25 outlets per year for the next four years.

Cantor Group organises its two subsidiaries in a similar way, as they are involved in similar areas of business. There is one exception to this, namely in the arrangements over the properties from which the subsidiaries operate. Cafes rent their properties on the open market on standard commercial terms with a five-year lease at a fixed rental payable quarterly in advance. Juicey, on the other hand, has made a single arrangement with a large commercial landlord for all of its properties. Juicey has agreed that the rent for its sites is a percentage of the revenue generated at each site. Juicey believes that it can continue its expansion by obtaining more sites from this landlord under the same terms.

The board of Cantor is reviewing their performance reporting systems and would like your evaluation of the current report given in Appendix 1. This report contains information for both of the subsidiaries and the group and is used by all three boards. The CEO has advised you that the board does not require an evaluation of Cantor's performance. However, the CEO does want you to consider the cost structures at Cantor and advise on the implications of the mix of fixed and variable elements in the key cost areas of staff and property for performance management.

At a recent shareholder meeting of Cantor, one of the large shareholders expressed concern that the group lacks focus and suggested the introduction of value-based management (VBM) using economic value added (EVA^{TM}) as the measure of value. Cantor's CEO has asked you, their strategic management accountant, to give the board more information on the implications of this suggestion. She has asked you to do an example calculation of the EVA^{TM} for the Group using the current data (Appendices 1 and 2) and explain how the shareholders might view the result. Next, the board needs to have the VBM system explained and evaluated to be able to make a decision about its use at Cantor.

Finally, the board is considering amending the mission statement to include more information on the ethical values of the company. The area being considered for inclusion in the overall mission is on the treatment of employees as it is felt that they should share in the progress and profitability of Cantor since a happy working environment will help them to better serve the customers.

The proposed new mission statement would read:

'to maximise shareholder value and to provide a fair deal to our employees by supplying good value food and drink in appealing environments for our customers.'

The CEO has asked you to consider how the Group's performance in the area regarding employees could be measured using the current management information at Cantor. You have obtained additional information from the management information system to assist with this task, given in Appendix 3.

Appendix 1

Cantor Group	Year to 31 March Cafes	Cafes	Juicey	Juicey	Group	Group	Costs and profit as a % of revenue	
	Budget 2014 $	Actual 2014 $	Budget 2014 $	Actual 2014 $	Budget 2014 $	Actual 2014 $	Group	Industry average
Revenue								
Drink	47,437,500	46,521,000	5,130,000	5,398,000	52,567,500	51,919,000		
Food	15,812,500	15,913,000	570,000	582,000	16,382,500	16,495,000		
Total	**63,250,000**	**62,434,000**	**5,700,000**	**5,980,000**	**68,950,000**	**68,414,000**		
Cost of sales								
Drink	12,808,125	12,560,670	1,385,100	1,457,460	14,193,225	14,018,130		
Food	3,478,750	3,500,860	125,400	128,040	3,604,150	3,628,900		
Total	**16,286,875**	**16,061,530**	**1,510,500**	**1,585,500**	**17,797,375**	**17,647,030**	25·8%	
Gross profit	**46,963,125**	**46,372,470**	**4,189,500**	**4,394,500**	**51,152,625**	**50,766,970**	74·2%	72·8%
Staff costs	**16,128,750**	**15,920,670**	**1,453,500**	**1,524,900**	**20,082,250**	**21,345,000**	31·2%	30·9%
Other operating costs								
Rent	2,875,000	2,875,000	342,000	358,800	3,929,000	3,945,800		
Local property tax	920,000	920,000	60,000	60,000	980,000	980,000		
Insurance	276,000	282,000	18,000	18,400	294,000	300,400		
Utilities	874,000	861,000	61,500	62,900	935,500	923,900		
Marketing	6,957,500	6,888,000	627,000	750,000	7,584,500	7,638,000	11·2%	10·0%
Depreciation	4,427,500	4,427,500	353,400	353,400	4,780,900	4,780,900		
Total	**16,330,000**	**16,253,500**	**1,461,900**	**1,603,500**	**18,503,900**	**18,569,000**	27·1%	
Operating profit	**14,504,375**	**14,198,300**	**1,274,100**	**1,266,100**	**12,566,475**	**10,852,970**	15·9%	15·3%
Finance costs					798,000	801,000		
Group profit before tax					**11,768,475**	**10,051,970**	14·7%	
Tax					2,942,119	2,512,993		
Group profit after tax					**8,826,356**	**7,538,977**	11·0%	

Appendix 2

Additionally, you have discovered the following data about the group for the financial year:

1 Debt/Equity 30·0%
2 Cost of equity 15·7%
3 Tax rate 25·0%
4 Group ROCE 19·0%
5 Group capital employed: $53,400,000 at period start and $58,500,000 at period end.
6 Pre-tax cost of debt 6·5%
7 There has been $2·1m of tax paid in the year.
8 It is estimated that half of the marketing spend of $7·638m is building the Cantor brand long term.
9 It is further estimated that there has been the same level of annual spending on long-term brand building in the years leading up to 2014.

Appendix 3

Additional management information

	Cafes	Juicey	Group
No of employees			
At year start	1,495	96	1,611
Leavers	146	15	161
Joiners	152	35	187
At year end	1,501	116	1,637

Note:
1. Group numbers include Cafes, Juicey and head office numbers

Required:

Write a report to the CEO of Cantor to:

(i) Evaluate the current performance report in Appendix 1. (15 marks)

(ii) Assess the balance of fixed and variable elements of the CEO's two key costs in each of the two subsidiaries and the impact which this may have on performance management of these costs.

Note: Detailed calculations are not required. (6 marks)

(iii) Evaluate the economic value added (EVA^{TM}) of Cantor Group, justifying any assumptions made. (9 marks)

(iv) Explain how value-based management (VBM) could be implemented at Cantor and evaluate its potential impact on the group. (10 marks)

(v) Using the information in the appendices, provide justified recommendations for suitable performance measures to reflect the proposed change in the company's mission statement. (6 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer.
(4 marks)

(50 marks)

Section B – TWO questions ONLY to be attempted

2 Booxe is a furniture manufacturing company based in the large, developed country of Teeland. Booxe is the largest furniture manufacturer in Teeland supplying many of the major retail chains with their own-brand furniture and also, making furniture under its own brand (Meson). In a highly competitive market such as Teeland, Booxe has chosen a strategy of cost leadership.

Booxe has been in business for more than 70 years and there is a strong sense of tradition and appreciation of craft skills in the workforce. The average time which an employee has worked for the firm is 18 years. This has led to a bureaucratic culture; for example, the company's information systems are heavily paper based. In addition and in line with this traditional culture, the organisation is divided into a set of functional departments, such as production, warehousing, human resources and finance.

In order to drive down costs, the chief executive officer (CEO) decided to re-engineer the processes at Booxe. She decided that there should be a small pilot project to demonstrate the potential of business process re-engineering (BPR) to benefit Booxe and she selected the goods receiving activity in the company's warehousing operations for this.

The CEO has asked you as a performance management expert to complete the post-implementation review of the pilot project by assessing what it has delivered in financial terms. The project identified that 10 of the warehouse staff spend about half of their time matching goods delivered documents to purchase orders and dealing with subsequent problems. It was noted that 25% of all such matches failed and the staff then had to identify the issue and liaise with the purchasing department in order to get the goods returned to the supplier and a suitable credit note issued. The project introduced a new information system to replace the existing paper-based system. The new system allowed purchase orders to be entered by the purchasing department and then checked online to the goods delivered as they arrived at the warehouse. This allowed warehouse staff to reject incorrect deliveries immediately.

The following are further details provided in relation to the project:

Notes relating to old system:

1 Average staff wage in warehouse $25,000 p.a.
2 Purchasing staff time in handling delivery queries 8·5 days per week
3 Average staff wage in purchasing is $32,000 p.a. for working a 5-day week

Notes relating to new system:

New IT system costs:

		$
4	Hardware for warehouse and purchasing depts	220,000
5	Software total cost	275,000
6	On-going servicing cost (p.a.)	22,500
7	It is expected that the new system will last for eight years.	

The CEO now plans to apply BPR across Booxe and as well as completing the post-implementation review, she also needs to know how BPR will change the accounting information systems and the culture at Booxe. Booxe's current accounting system is a traditional one of overhead absorption based on labour hours with variances to budget used as control indicators. She has heard that an activity-based approach using enterprise resource planning (ERP) systems is fairly common and wants to know how these ideas might link to BPR at Booxe.

The CEO is concerned that middle management unrest may be a problem at Booxe. For example, the warehouse manager was uncomfortable with the cultural change required in the BPR project and decided to take early retirement before the project began. As a result, a temporary manager was put in place to run the warehouse during the project.

The CEO has also begun to reconsider the human resources system at Booxe and she wants your advice on how the staff appraisal process can improve performance in the company. The existing system of manager appraisal is for the staff member to have an annual meeting with their line superior to review the previous year's work and discuss generally how to improve their efforts. Over the years, it has become common for these meetings to be informal and held over lunch at the company's expense. The CEO wants to understand the purpose of a staff appraisal system and how the process can improve the performance of the company. She also wants comments on the appropriate balance between control and staff development as this impacts on staff appraisal at Booxe.

Required:

(a) Assess the financial impact of the pilot business process re-engineering (BPR) project in the warehousing operations. (6 marks)

(b) Assess the impact of BPR on the culture and management information systems at Booxe. (11 marks)

(c) Advise on the appraisal process at Booxe as instructed by the CEO. (8 marks)

(25 marks)

3 Turing Aerodynamics (Turing) has formed a joint venture (JV) with Riemann Generators (Riemann) in order to design and manufacture high-performance wind turbines which generate electricity. The joint venture is called TandR with each party owning 50%. Turing will design and build the pylons, housing and turbine blades while Riemann will supply the generators to be fitted inside the housing.

Turing is a medium sized firm known for its blade design skills. It is owned by three venture capital firms (VCs) (each holding 30% of the shares), with the remaining 10% being given to management to motivate them. The VCs each have a large portfolio of business investments and accept that some of these investments may fail provided that some of their investments show large gains. Management is an ambitious group who enjoys the business and technical challenges of introducing new products.

On the other hand, Riemann is a large, family-owned company working in the highly competitive electricity generator sector. The shareholders of Riemann see the business as mature and want it to offer a stable, long-term return on capital. However, recently, Riemann had to seek emergency refinancing (debt and equity) due to its thin profit margins and tough competition, both of which are forecast to continue. As a result, Riemann's shareholders and management are concerned for the survival of the business and see TandR as a way to generate some additional cash flow. Unlike at Turing, the management of Riemann does not own significant shareholdings in the company which has preferred to pay fixed salaries.

TandR is run by a group of managers made up from each of the JV partners. They are currently faced with a decision about the design of the product. There are three design choices depending on the power which the wind turbines can generate (measured in megawatts [MW]):

Design type	Description
8 MW	a large 8 MW unit
3 MW	a 3 MW unit
1 MW	a basic 1 MW unit

The engineering for the 1 MW and 3 MW units is well understood and so design is much simpler than for the 8 MW unit which would be world leading if completed.

The demand for the different types of units will depend on government subsidies of the electricity price charged by the electricity generating companies who will buy the wind turbines and the planning regulations for building such large structures. It is believed that there will be orders for either 1,000 or 1,500 or 2,000 units but there is no clear picture yet of which demand level is more likely than the others.

The estimated costs and prices for the units are:

Type	Variable cost per unit	Fixed costs	Price per unit
	$m	$m	$m
8 MW	10·4	7,500·0	20·8
3 MW	4·8	820·0	9·6
1 MW	1·15	360·0	4·6

Notes:
1. The fixed costs cover the initial design, development and testing of the units.
2. The costs and prices are in real terms with the 8 MW unit likely to take two more years to develop than the others.

Required:

(a) Assess the risk appetites of the two firms in the joint venture and provide a justified recommendation for each firm of an appropriate method of decision-making under uncertainty to assess the different types of wind turbines. (9 marks)

(b) Evaluate the choice of turbine design types using your recommended methods from part (a) above. (8 marks)

(c) Discuss the problems encountered in managing performance in a joint venture such as TandR. (8 marks)

(25 marks)

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Question 4 begins on page 10.

4 Godel Goodies (Godel) manufactures a variety of own-label sweets for the two largest supermarket chains in Seeland. The business makes several different flavours of the same basic product. The strategy of the business has been to be a cost leader in order to win the supermarkets' business. The sales of Godel vary up and down from quarter to quarter depending on the state of the general economy and competitive forces. Most of the sweet manufacturers have been in business for decades and so the business is mature with little scope to be innovative in new product development. The supermarkets prefer to sign suppliers to long-term contracts and so it is difficult for new entrants to gain a foothold in this market. The management style at Godel is very much command-and-control which fits with the strategy and type of business. Indeed, most employees have been at Godel for many years and have expressed their liking for the straightforward nature of their work.

The chief executive officer (CEO) of Godel has asked your firm of accountants to advise him as his finance director (FD) will be absent for several months due to a recently diagnosed illness. As the CEO is preparing for the next board meeting, he has obtained the operating statement and detailed variance analysis from one of the junior accountants (Appendix 1).

The CEO is happy with the operating statement but wants to understand the detailed operational and planning variances, given in Appendix 1, for the board meeting. He needs to know what action should be taken as a result of these specific variances.

The FD had been looking at the budgeting process before she fell ill. The CEO has decided that you should help him by answering some questions on budgeting at Godel.

Currently, the budget at Godel is set at the start of the year and performance is measured against this. The company uses standard costs for each product and attributes overheads using absorption costing based on machine hours. No variations are allowed to the standard costs during the year. The standard costs and all budget assumptions are discussed with the relevant operational manager before being set. However, these managers grumble that the budget process is very time-consuming and that the results are ultimately of limited value from their perspective. Some of them also complain that they must frequently explain that the variances are not their fault. The CEO wants to know your views on whether this way of budgeting is appropriate and whether the managers' complaints are justified. He is satisfied that there is no dysfunctional behaviour at Godel which may lead to budget slack or excessive spending and that all managers are working in the best interests of the company.

Finally, in the last few months, the FD had been reading business articles and books and had mentioned that there were a number of organisations which were trying to go beyond budgeting. The CEO is concerned that he does not understand what budgeting does for the business and this is why he wants you to explain what are the benefits and problems of budgeting at Godel before considering replacing it.

Required:

(a) Advise the CEO on the implications for performance management at Godel of analysing variances into the planning and operational elements as shown in Appendix 1. (6 marks)

(b) Evaluate the budgeting system at Godel. (11 marks)

(c) Evaluate the proposal to move to a beyond budgeting method of control at Godel, giving a recommendation on whether to proceed. (8 marks)

(25 marks)

Appendix 1

Note: you may assume that all figures in this appendix are correct.

Operating statement for Godel

Period: May 2014

				$	$	
Budgeted profit					214,200	
Budget fixed production costs					264,180	
Budgeted contribution					478,380	
Sales variances	volume			20,100		Adverse
	price			8,960		Adverse
					29,060	Adverse
Actual sales minus standard cost of sales					449,320	
		Favourable $	**Adverse** $			
Variable cost variance						
Material	price		4,200			
	usage	3,500				
Labour	rate	1,100				
	efficiency	24,480				
	idle time		5,600			
Variable overhead	expenditure		1,080			
	efficiency	3,060				
		32,140	10,880			
					21,260	Favourable
Actual contribution					470,580	
Budgeted fixed production overhead				271,728		
Expenditure variance				18,696		Adverse
Actual fixed production overhead					290,424	
Actual profit					180,156	

Detailed variances

		$	
Total variable cost variances			
	Planning	20,680	Favourable
	Operational	580	Favourable
Sales price variances			
	Planning	15,600	Adverse
	Operational	6,640	Favourable

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper