Professional Level – Options Module

Advanced Performance Management

Thursday 14 June 2012

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Paper P5

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

This paper is divided into two sections:

Section A – BOTH questions are compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 11 and 12.

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.

ACCA

The Association of Chartered Certified Accountants

Section A – BOTH questions are compulsory and MUST be attempted

1   Metis is a restaurant business in the city of Urbanton. Metis was started three years ago by three friends who met at university while doing courses in business and catering management. Initially, their aim was simply to 'make money' although they had talked about building a chain of restaurants if the first site was successful.

The three friends pooled their own capital and took out a loan from the Grand Bank in order to fit out a rented site in the city. They designed the restaurant to be light and open with a menu that reflected the most popular dishes in Urbanton regardless of any particular culinary style. The dishes were designed to be priced in the middle of the range that was common for restaurants in the city. The choice of food and drinks to offer to customers is still a group decision amongst the owners.

Other elements of the business were allocated according to each owner's qualifications and preferences. Bert Fish takes charge of all aspects of the kitchen operations while another, Sheila Plate, manages the activities in the public area such as taking reservations, serving tables and maintaining the appearance of the restaurant. The third founder, John Sum, deals with the overall business issues such as procurement, accounting and legal matters.

Competition in the restaurant business is fierce as it is easy to open a restaurant in Urbanton and there are many competitors in the city both small, single-site operations and large national chains. The current national economic environment is one of steady but unspectacular growth.

The restaurant has been running for three years and the founders have reached the point where the business seems to be profitable and self-sustaining. The restaurant is now in need of refurbishment in order to maintain its atmosphere and this has prompted the founders to consider the future of their business. John Sum has come to you as their accountant looking for advice on aspects of performance management in the business. He has supplied you with figures outlining the recent performance of the business and the forecasts for the next year (see the performance report below). This table represents the quantitative data that is available to the founders when they meet each quarter to plan any short-term projects or initiatives and also, to consider the longer-term future. Bert and Sheila have often indicated to John that they find the information daunting and difficult to understand fully.

John Sum has come to you to advise him on the performance reporting at Metis and how it could be improved. He feels that the current report is, in some ways, too complex and, in other ways, too simple. He wants to look at different methods of measuring and presenting performance to the ownership group. As a starting point, he has suggested to you that you consider measures such as NPV, EVA™, MIRR as well as the more common profit measures. John is naïve and wants the NPV and MIRR to be appraised as if the business was a three-year project up to 2012 so he knows the performance of the business to date. He has requested that other calculations in your performance review should be annual based on the 2012 figures although he is aware that this may be omitting in his words 'some important detail'.

At recent meetings, Sheila has been complaining that her waiters and waitresses are not responding well to her attempts to encourage them to smile at customers although her recent drive to save electricity by getting staff to turn off unnecessary lights seems to be working. Bert stated that he was not convinced by either of Sheila's initiatives and he wants her to make sure that food is collected from the kitchen swiftly and so delivered at the right temperature to the customer's table. Also, Bert has said that he feels that too much food is becoming rotten and having to be thrown out. However, he is not sure what to do about it except make the kitchen staff go through lengthy inventory checks where they review the food held in store. John is worried about these complaints as there is now an air of tension in the owners' meetings. He has been reading various books about performance management and has come across the quote, 'What gets measured, gets done.' He believes this is true but wants to know how it might apply in the case of his business.

Metis Performance Report

Metis Restaurant	Year to 31 March				Latest quarter to 31 March 2012 (Q4 2012)	Previous quarter (Q3 2012)
	Actual 2010 $	Actual 2011 $	Actual 2012 $	Forecast 2013 $	$	$
Revenue						
Food	617,198	878,220	974,610	1,062,180	185,176	321,621
Wine	127,358	181,220	201,110	219,180	38,211	66,366
Spirits	83,273	118,490	131,495	143,310	24,984	43,394
Beer	117,562	167,280	185,640	202,320	35,272	61,261
Other beverages	24,492	34,850	38,675	42,150	7,348	12,763
Outside catering	9,797	13,940	15,470	16,860	2,939	5,105
Total	979,680	1,394,000	1,547,000	1,686,000	293,930	510,510
Cost of sales						
Food	200,589	285,422	316,748	345,209	60,182	104,527
Wine	58,585	83,361	92,511	100,821	17,577	30,528
Spirits	21,651	30,807	34,189	37,261	6,496	11,283
Beer	44,673	63,566	70,543	76,882	13,403	23,279
Other beverages	3,674	5,228	5,801	6,323	1,102	1,914
Outside catering	3,135	4,461	4,950	5,395	941	1,634
Total	332,307	472,845	524,742	571,891	99,701	173,165
Gross profit	647,373	921,155	1,022,258	1,114,109	194,229	337,345
Staff costs	220,428	313,650	348,075	379,350	66,134	114,865
Other operating costs						
Marketing	25,000	10,000	12,000	20,000	3,000	3,000
Rent/mortgage	150,800	175,800	175,800	193,400	43,950	43,950
Local property tax	37,500	37,500	37,500	37,500	9,375	9,375
Insurance	5,345	5,585	5,837	6,100	1,459	1,459
Utilities	12,600	12,978	13,043	13,173	3,261	3,261
Waste removal	6,000	6,180	6,365	6,556	1,591	1,591
Equipment repairs	3,500	3,658	3,822	3,994	956	956
Depreciation	120,000	120,000	120,000	120,000	30,000	30,000
Building upgrades				150,000		
Total	360,745	371,701	374,367	550,723	93,592	93,592
Manager salary	35,000	36,225	37,494	38,806	9,373	9,373
Net profit/loss before interest and corporate taxes	31,200	199,579	262,322	145,230	25,130	119,515
Net margin	3·2%	14·3%	17·0%	8·6%	8·5%	23·4%

Additional notes:
1. The business was founded with $600,000 which comprised $250,000 of equity from the founders and the remainder in a loan from Grand Bank. Under the terms of the loan, all principal is repayable in 10 years' time and interest is charged at a fixed rate of 8·4% per year.
2. John has estimated the overall cost of capital to be 12·5%.
3. The company earns 4·5% on any returns in its deposit account.
4. John wishes you to use the $600,000 original investment as the capital employed figure for analysis purposes as no new capital has been input and the owners have taken out all residual earnings so far as dividends.
5. The corporation tax rate for Metis is 30%, paid in the same year as profits are generated. Accounting depreciation is a tax allowable cost.
6. Marketing spending is for the short-term promotion of offers only.

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Required:

Prepare a report to Mr John Sum addressing the following issues:

(i) Critically assess the existing performance report and suggest improvements to its content and presentation;

(12 marks)

(ii) Calculate and briefly evaluate

    (a) the use of John's suggested performance measures and
    (b) other profit-based measures, using the most recent year's actual figures where appropriate as examples;

(14 marks)

(iii) Assess how the quote 'What gets measured, gets done' could apply to Metis.   (10 marks)

Professional marks will be awarded in question 1 for format, style, structure and clarity of the discussion.

(4 marks)

(40 marks)

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Question 2 begins on page 6.

2 Amal Airline (Amal) is the national airline of Jayland. It was originally owned by the government but was listed on the local stock exchange when sold to private investors more than 20 years ago. The airline's objective is to be the best premium global airline.

Amal provides long- and short-haul services all over the world and is based at its hub at Jaycity airport. Amal has been hit by a worldwide reduction in air travel due to poor economic conditions. The most recent financial results show a loss and this has caused the board to reconsider its position and take action to address the changed environment.

Amal has cut its dividend in order to conserve cash and it is trying to rebuild profitability by reducing costs by 14%. The airline is capital intensive as it requires to maintain a large fleet of modern aircraft. The two major costs for the airline are staff and fuel. In trying to renegotiate working conditions and pay, the management have angered the unionised workforce. There has already been some strike action by the unions representing the aircraft crew and ground staff and more is threatened. They are upset about changes to pension provisions which will require them to make larger contributions and also, a reduction in the number of crew on each aircraft which they believe will require them to work harder and so they want a compensating pay-rise.

Additionally, the board are pushing forward a large project to improve the design of the company website in order to increase the number of passengers who check-in on-line and so would not require as much assistance at the airport. The new design is also aiming to increase the number of passengers who book their tickets through the company's website rather than other resellers' websites or at booking agents. The project is currently two months behind schedule due to one of the main software suppliers becoming insolvent.

Finally, the board has been considering taking advantage of new technology in aircraft engines by making a large investment ($450m) in new low-noise, fuel-efficient aircraft in an effort to reduce the environmental complaints surrounding air travel and also cut costs.

Given all of the issues and projects affecting Amal, the CEO has tried to find a unifying view that will explain the airline's performance. She has heard that the performance prism may provide such a framework.

As further background, the CEO has supplied the data below on Amal and two of its main competitors. Kayland Air is a government owned and run airline in the neighbouring country of Kayland. It has a similar mix of business to Amal and targets a similar market. Cheapo Air is currently one of the most successful of the new privately-owned airlines that have gained significant market share over the last 15 years by offering a cheap but basic short-haul service to customers in and around Jayland. Cheapo Air subcontracts many of their activities in order to remain flexible. The CEO wants you to calculate some suitable performance measures and explain the results.

Data provided by the CEO:

Data for the most recent calendar year

		Amal	Kayland Air	Cheapo Air
Passengers ('000s)		23,649	38,272	35,624
Passenger kilometres (millions)		79,618	82,554	40,973
Revenue	$m	5,430	7,350	2,170
Costs				
Fuel	$m	1,480	1,823	535
Staff	$m	1,560	2,998	238
Staff numbers		32,501	56,065	5,372
Operating profit	$m	630	54	127
Number of aircraft		182	361	143
Average aircraft size (seats)		195	163	125
Seat kilometres (millions)		100,654	105,974	46,934

Note: A seat kilometre is generated for every one kilometre flown by an *available* seat on the company's aircraft.

Required:

(a) **Using the data provided, analyse the three airlines using appropriate performance indicators and comment on your results.** (12 marks)

(b) **Apply the performance prism model to Amal and suggest improvements to performance management including possible methods of performance improvement and also relevant performance measures.**
(14 marks)

(26 marks)

Section B – TWO questions ONLY to be attempted

3   Thebe Telecom is a large national telephone business in Fayland. Thebe provides telephone service to more than 11 million customers through its fixed line and mobile services. Thebe has three strategic business units: mobile; fixed line telephone (incorporating broadband); and corporate services (serving other businesses' telephone needs). It has become the largest mobile operator in Fayland through a series of acquisitions of competitors and operating licences.

Thebe's CEO has won many awards for being an innovative businessman who recognises the rapid changes in technology, regulation and competitor action that occur in the sector. Thebe's major competitor in Fayland is the original nationalised telephone company, FayTel, which was privatised 20 years ago but which retains many of the features of a monopoly supplier including a massive infrastructure. As a result, Thebe's CEO realised long ago that competition on the basis of price and volume would not work against such a large competitor and so he has focused on customer service as the key to growing the business.

In order to improve the company's competitive position, the CEO decided that the company should consider a Six Sigma initiative to give an immediate step change improvement to the service quality at Thebe. The initiative involved a number of projects including one to improve the quality of customers' bills. FayTel was publicly criticised by the government's consumer advocate who pointed to occasional misallocations of call minutes to the wrong numbers and also, more frequently, the application of incorrect tariffs in calculating the costs of calls. Thebe's CEO is aware that all telephone businesses (including Thebe) have these problems but this is an area in which Thebe can gain a competitive advantage and has taken a special interest in this project by championing it himself.

The project is focused on improving the accuracy of customers' bills and the handling of complaints. Within the billing department, the company divided activities into normal money collection, credit control on overdue payments and managing complaints. Process diagrams were created for each of these areas and then data was sourced from customer feedback at the various points of interaction with Thebe employees (such as complaint handling) and internal measurables created. The project team was formed from line managers from all three strategic business units and the billing department.

Required:

(a) Explain how the general way in which Six Sigma is implemented helps improve the quality of performance illustrating your answer with reference to Thebe.   (8 marks)

(b) Explain and illustrate how the DMAIC method for the implementation of Six Sigma could be applied at Thebe.
(9 marks)

(17 marks)

4 Ganymede University (GU) is one of the three largest universities in Teeland, which has eight universities in total. All of the universities are in the public sector. GU obtains the vast majority of its revenue through government contracts for academic research and payments per head for teaching students. The economy of Teeland has been in recession in the last year and this has caused the government to cut funding for all the universities in the country.

In order to try to improve efficiency, the chancellor of the university, who leads its executive board, has asked the head administrator to undertake an exercise to benchmark GU's administration departments against the other two large universities in the country, AU and BU. The government education ministry has supported this initiative and has required all three universities to cooperate by supplying information.

The following information has been collected regarding administrative costs for the most recent academic year:

		GU $'000	AU $'000	BU $'000
Research				
	contract management	14,430	14,574	14,719
	laboratory management	41,810	42,897	42,646
Teaching facilities management		26,993	27,263	26,723
Student support services		2,002	2,022	2,132
Teachers' support services		4,005	4,100	4,441
Accounting		1,614	1,571	1,611
Human resources		1,236	1,203	1,559
IT management		6,471	6,187	6,013
General services		17,049	16,095	18,644
Total		115,610	115,912	118,488
Drivers:				
Student numbers		28,394	22,783	29,061
Staff numbers		7,920	7,709	8,157
Research contract value	$m	185	167	152

The key drivers of costs and revenues have been assumed to be research contract values supported, student numbers and total staff numbers. The head administrator wants you to complete the benchmarking and make some preliminary comment on your results.

Required:

(a) Assess the progress of the benchmarking exercise to date, explaining the actions that have been undertaken and those that are still required. (8 marks)

(b) Evaluate, as far as possible, Ganymede University's benchmarked position. (9 marks)

(17 marks)

5 Callisto Retail (Callisto) is an on-line reseller of local craft products related to the historic culture of the country of Callistan. The business started ten years ago as a hobby of two brothers, Jeff and George. The brothers produced humorous, short video clips about Callistan which were posted on their website and became highly popular. They decided to use the website to try to sell Callistan merchandise and good initial sales made them believe that they had a viable business idea.

Callisto has gone from strength to strength and now boasts sales of $120m per annum, selling anything related to Callistan. Callisto is still very much the brothers' family business. They have gathered around themselves a number of strategic partners into what Jeff describes as a virtual company. Callisto has the core functions of video clip production, finance and supplier relationship management. The rest of the functions of the organisation (warehousing, delivery and website development) are outsourced to strategic partners.

The brothers work from their family home in the rural North of Callistan while other Callisto employees work from their homes in the surrounding villages and towns. These employees are involved in video editing, system maintenance, handling customer complaints and communication with suppliers and outsourcers regarding inventory. The employees log in to Callisto's systems via the national internet infrastructure. The outsourced functions are handled by multinational companies of good reputation who are based around the world. The brothers have always been fascinated by information technology and so they depend on email and electronic data interchange to communicate with their product suppliers and outsourcing partners.

Recently, there have been emails from regular customers of the Callisto website complaining about slow or non-delivery of orders that they have placed. George has commented that this represents a major threat to Callisto as the company operates on small profit margins, relying on volume to drive the business. He believes that sales growth will drive the profitability of the business due to its cost structure.

Jeff handles the management of outsourcing and has been reviewing the contracts that exist between Callisto and its strategic partner for warehousing and delivery, RLR Logistics. The current contract for warehousing and delivery is due for renewal in two months and currently, has the following service level agreements (SLAs):

1. RLR agree to receive and hold inventory from Callisto's product suppliers.
2. RLR agree to hold 14 days inventory of Callisto's products.
3. RLR agree to despatch from their warehouse any order passed from Callisto within three working days, inventory allowing.
4. RLR agree to deliver to customers anywhere in Callistan within two days of despatch.

Breaches in these SLAs incur financial penalties on a sliding scale depending on the number and severity of the problems. Each party to the contract collects their own data on performance and this has led to disagreements in the past over whether service levels have been achieved although no penalties have been triggered to date. The most common disagreement arises over inventory levels held by RLR with RLR claiming that it cannot be expected to deliver products that are late in arriving to inventory due to the product suppliers' production and delivery issues.

Required:

Assess the difficulties of performance measurement and performance management in complex business structures such as Callisto, especially in respect of the performance of their employees and strategic partners.

(17 marks)

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

[P.T.O.

Annuity Table

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

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