



Hong Kong Institute of
Accredited Accounting Technicians
香港財務會計協會

Professional Bridging Examination

Paper II PBE Management Accounting and Finance

December 2015 Session (Questions)

Time Allowed	3 hours
Examination Assessment Allocation	
• Section A – All TWO questions are compulsory	40 Marks
• Section B – Answer 3 out of 4 questions	60 Marks

Do not open this question paper until instructed by the supervisor.

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

PAPER II – PBE MANAGEMENT ACCOUNTING AND FINANCE

This examination is divided into TWO sections.

- Section A (40%). This consists of TWO compulsory questions. You should allocate approximately 1 hour 12 minutes in total for Section A.
- Section B (60%). This consists of four questions, of which you must answer THREE questions only. Each of these three questions is worth 20% of the total marks (making Section B worth 60% of the total marks). You should allocate approximately 36 minutes for each question (that is, 1 hour 48 minutes in total for Section B).

Suggested time allocation (by marks):

Marks	Approximate time in minutes
1	2
2	3
3	5
4	7
5	9
6	11
7	12
8	14
9	16
10	18
11	20
12	21
13	23
14	25
15	27
16	29
17	30
18	32
19	34
20	36

SECTION A (COMPULSORY) (Total: 40 marks)

Answer ALL questions in this section. Marks are indicated at the end of each question. Together they are worth 40% of the total marks for this examination.

CASE

Paradise Resort Group ("the Group") is an international property developer. It is considering to invest in a new hotel project in Hong Kong. The construction cost of the hotel is HK\$2 billion (HK\$2,000,000,000) and the land cost is HK\$1 billion (HK\$1,000,000,000). The hotel will consist of 400 rooms and 3 restaurants with 100 seats each. In style, these restaurants are western, Chinese and a bar; and the average amounts spent per customer in these restaurants are HK\$240, HK\$260 and HK\$140 respectively. According to statistics, the average occupancy rate in the restaurants is 80% and the daily average turnover rate is 3 per seat for the western restaurant, 2 per seat for the Chinese restaurant and 1 per seat for the bar.

In year 2014, the annual room revenue of an existing hotel, Sunshine Hotel, in the Group was HK\$200 million and the number of rooms sold was 182,500 and the total number of rooms available in that year was 200,750.

Real estate development is always risky as no one knows what the property market will be when the project is completed. In the case of a hotel project, it is difficult for the management to determine the room rate for the hotel which commences operations in 2017. If the market is very bad at that time, it will take a longer time for the project to break-even.

In recent years, hotel rooms may either be sold by the hotel directly to the customers or through intermediaries like a travel agency or travel website. In the direct sales channel, the hotel does not need to pay any commission but it needs to commit investment in the information system. In the indirect sales channel, the hotel needs to pay commission and the sales burden is with the travel agency.

You are the management accountant who oversees the long term financial planning of the Group's new hotel development project. You are required to conduct the analysis for this hotel project and make recommendations to senior management with regard to the project's feasibility. The new hotel will operate 365 days a year.

Question 1 (20 marks – approximately 36 minutes)

All numerical answers should be rounded to one decimal place if it is not specified in the questions.

- (a) Calculate the average room rate for Sunshine Hotel of the Paradise Resort Group in the year 2014. (2 marks)
- (b) Why would the average room rate not be used as a single parameter in measuring the performance of a hotel? (3 marks)
- (c) If the actual room rate was different from the average room rate that you calculated in part (a), what would be the potential reasons causing the difference? (3 marks)
- (d) What does the management of a hotel room sales department aim at? (2 marks)
- (e) Based on the average room rate of Sunshine Hotel in part (a), what is the estimated total annual room sales revenue generated by the new hotel if 90% of the rooms are occupied? (5 marks)
- (f) Name TWO operational risks faced by the hotel management in its day-to-day operation. (3 marks)
- (g) With regard to the direct sales channel of hotel rooms to the customers, what impact will be observed on the room sales revenue? (2 marks)

Question 2 (20 marks – approximately 36 minutes)

All numerical answers should be rounded to one decimal place if it is not specified in the questions.

Assume that the annual room revenue of the Group's new hotel is HK\$110,000,000 and annual food revenue is HK\$40,000,000. Staff cost is usually 30% of total revenue and food cost is 30% of food revenue. Depreciation is calculated on a straight line basis over 50 years. The tax rate is 16%.

Required:

- (a) What is the profit before tax of the new hotel? (4 marks)
- (b) What is the operating cash flow of the new hotel? (1 mark)
- (c) Using a 30 year horizon, what is the net present value (NPV) of the new hotel project if a discount rate of 10% is used? What is your recommendation for this hotel project investment? (5 marks)
- (d) Besides NPV, name TWO alternative methods in project evaluation and point out their limitations. (4 marks)
- (e) If this hotel project is all financed by equity, what is the return on equity? (2 marks)
- (f) Suppose you are at the senior management level, from employee's perspective, explain why you would be keen to support the hotel development project. (4 marks)

* * * END OF SECTION A * * *

SECTION B (ANSWER THREE QUESTIONS ONLY) (Total: 60 marks)

Answer any **THREE** questions in this section. Each question carries 20 marks. Together they are worth 60% of the total marks for this examination.

All numerical answers should be rounded to whole numbers if it is not specified in the question.

Question 3 (20 marks – approximately 36 minutes)

A private school admits 300 students in its first year of operations and each student pays an annual tuition fee of HK\$100,000. There are 20 teachers in the school with average annual salaries of HK\$600,000. In addition, there are 30 administrative staff with average annual salaries of HK\$180,000 and other operating costs amount to HK\$1,000,000 per year. The initial construction cost of the school is HK\$1 billion (HK\$1,000,000,000) and it is expected that the structure of the school can be used for 50 years.

Required:

- (a) Assume no other running cost is incurred in this school, based on the information given above,
- (i) prepare an income statement for the school; and
 - (ii) calculate the number of students that need to be admitted by the school to make it break-even. (5 marks)
- (b) If the same number of students (i.e. 300 students) is maintained, what should be the tuition fee per student for the school to break-even? (2 marks)
- (c) Point out TWO assumptions in the break-even calculation. (3 marks)
- (d) Suggest TWO ways to improve the net profit of the private school. (4 marks)
- (e) Besides financial performance, companies may make use of Triple Bottom Line in their evaluation. Explain TWO aspects of Triple Bottom Line with respect to this private school case, and provide one example for each aspect. (6 marks)

Question 4 (20 marks – approximately 36 minutes)

An electricity company issues invoices to domestic customers every two months and to corporate customers once a month. In terms of customers, 60% are domestic customers and 40% are corporate customers.

Required:

- (a) What are the benefits for the electricity company to issue invoices to domestic customers every two months and to corporate customers once a month?

(4 marks)

The extract of statement of financial position and the revenue of the electricity company are shown below:

Statement of financial position (Extracted)

<u>Assets</u>	<u>HK\$' million</u>
Fixed asset	184,966
Accounts receivable	17,953
Cash	5,233
	<u>208,152</u>
Revenue	<u>104,530</u>

Required:

- (b) Calculate the accounts receivable collection period in days. (4 marks)
- (c) Why do commercial organisations usually use 30 days as the benchmark period of accounts receivable collection? (3 marks)
- (d) State TWO possible implications if there is no accounts receivable in the statement of financial position. (3 marks)
- (e) Explain why speeding up the collection of accounts receivable is so essential. (3 marks)
- (f) For a trading company, suggest THREE common ways to speed up the collection of accounts receivable. (3 marks)

Question 5 (20 marks – approximately 36 minutes)

Tunnel Company is a tunnel management company which has been running at a loss for many years. Recently, it cannot pay salaries to employees on time. For example, the salary payment for December can only be settled in early February next year. If the situation continues, the license of Tunnel Company may be revoked by the government.

Required:

- (a) Suggest TWO possible ways to tackle the anticipated financial distress problem of Tunnel Company. (4 marks)
- (b) Name FOUR stakeholders involved in this case. (4 marks)
- (c) Based on the answer in part (b), describe the types of returns earned by these FOUR stakeholders. (4 marks)
- (d) What is agency problem relating to a company? (4 marks)
- (e) Give TWO examples of agency costs. (4 marks)

Question 6 (20 marks – approximately 36 minutes)

In capital structure theories, there is a concept of optimal debt level.

Required:

- (a) Explain the proposition made by Modigliani and Miller in their capital structure theory with regards to firm value and debt level. (2 marks)
- (b) Explain why some companies prefer to have more debt. (3 marks)
- (c) Explain why some companies prefer to have a low debt level so that it does not exceed a certain point. (3 marks)
- (d) If the beta of a company stock is 1.2, market premium is 10% and the risk free rate is 2%, what is the cost of equity? (3 marks)
- (e) Do you expect that the cost of debt is higher or lower than the cost of equity you calculated in part (d)? Explain briefly. (3 marks)
- (f) If the debt to equity ratio (D/E) of a company is 1.2, cost of debt is 10% and the tax rate is 16%, based on the result of part (d), what is the weighted average cost of capital for this company?

Answer should be rounded to 2 decimal places.

(6 marks)

* * * END OF EXAMINATION PAPER * * *

Formula Sheet

Effective Annual Rate:

$$EAR = \left(1 + \frac{r}{m}\right)^M - 1 \quad EAR = e^r - 1$$

Present Values:

Ordinary annuity: $PV = C \left(\frac{1 - (1+r)^{-T}}{r} \right)$

Growing annuity: $PV = \left(\frac{C_1}{r-g} \right) \left[1 - \left(\frac{1+g}{1+r} \right)^T \right]$

Constant perpetuity: $PV = \frac{C}{r}$

Growing perpetuity: $PV = \frac{C_1}{r-g}$

IRR:

$$NPV = 0 = -C_0 + \frac{C_1}{(1+IRR)} + \frac{C_2}{(1+IRR)^2} + \frac{C_3}{(1+IRR)^3} + \dots + \frac{C_T}{(1+IRR)^T}$$

Expected Return, Variance, Covariance, and Correlation Coefficient:

$$\bar{R} = \sum_{i=1}^S p_i R_i \quad \sigma^2 = \sum_{i=1}^S p_i (R_i - \bar{R})^2 \quad \sigma_{AB} = \sum_{i=1}^S p_i (R_{Ai} - \bar{R}_A)(R_{Bi} - \bar{R}_B) \quad \rho_{AB} = \frac{\sigma_{AB}}{\sigma_A \sigma_B}$$

$$\bar{R}_p = X_A \bar{R}_A + X_B \bar{R}_B \quad \sigma_p^2 = X_A^2 \sigma_A^2 + X_B^2 \sigma_B^2 + 2 X_A X_B \sigma_{AB}$$

Beta (or β):

$$\beta_i = \frac{Cov(R_i, R_M)}{\sigma_{R_M}^2}$$

Capital Structure - MM II (with corporate taxes):

$$r_s = r_0 + \frac{B}{S} (r_0 - r_B) (1 - T_c)$$

Miller-Orr Model

$$Z = [3 \times TC \times V] / (4 \times R)]^{1/3} + L$$

$$H = 3Z - 2L$$

Present Value of \$1

Period	0.50%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	0.9950	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696
2	0.9901	0.9803	0.9612	0.9426	0.9246	0.9070	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695	0.7561
3	0.9851	0.9706	0.9423	0.9151	0.8890	0.8638	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750	0.6575
4	0.9802	0.9610	0.9238	0.8885	0.8548	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718
5	0.9754	0.9515	0.9057	0.8626	0.8219	0.7835	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194	0.4972
6	0.9705	0.9420	0.8880	0.8375	0.7903	0.7462	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556	0.4323
7	0.9657	0.9327	0.8706	0.8131	0.7599	0.7107	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996	0.3759
8	0.9609	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506	0.3269
9	0.9561	0.9143	0.8368	0.7664	0.7026	0.6446	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075	0.2843
10	0.9513	0.9053	0.8203	0.7441	0.6756	0.6139	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697	0.2472
11	0.9466	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149
12	0.9419	0.8874	0.7885	0.7014	0.6246	0.5568	0.4970	0.4440	0.3971	0.3555	0.3186	0.2858	0.2567	0.2307	0.2076	0.1869
13	0.9372	0.8787	0.7730	0.6810	0.6006	0.5303	0.4688	0.4150	0.3677	0.3262	0.2897	0.2575	0.2292	0.2042	0.1821	0.1625
14	0.9326	0.8700	0.7579	0.6611	0.5775	0.5051	0.4423	0.3878	0.3405	0.2992	0.2633	0.2320	0.2046	0.1807	0.1597	0.1413
15	0.9279	0.8613	0.7430	0.6419	0.5553	0.4810	0.4173	0.3624	0.3152	0.2745	0.2394	0.2090	0.1827	0.1599	0.1401	0.1229
16	0.9233	0.8528	0.7284	0.6232	0.5339	0.4581	0.3936	0.3387	0.2919	0.2519	0.2176	0.1883	0.1631	0.1415	0.1229	0.1069
17	0.9187	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1696	0.1456	0.1252	0.1078	0.0929
18	0.9141	0.8360	0.7002	0.5874	0.4936	0.4155	0.3503	0.2959	0.2502	0.2120	0.1799	0.1528	0.1300	0.1108	0.0946	0.0808
19	0.9096	0.8277	0.6864	0.5703	0.4746	0.3957	0.3305	0.2765	0.2317	0.1945	0.1635	0.1377	0.1161	0.0981	0.0829	0.0703
20	0.9051	0.8195	0.6730	0.5537	0.4564	0.3769	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728	0.0611

Present Value of Annuity of \$1

Period	0.50%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%
1	0.9950	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696
2	1.9851	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467	1.6257
3	2.9702	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216	2.2832
4	3.9505	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137	2.8550
5	4.9259	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331	3.3522
6	5.8964	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845
7	6.8621	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883	4.1604
8	7.8230	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389	4.4873
9	8.7791	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	5.1317	4.9464	4.7716
10	9.7304	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161	5.0188
11	10.6770	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6869	5.4527	5.2337
12	11.6189	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206
13	12.5562	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831
14	13.4887	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245
15	14.4166	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474
16	15.3399	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542
17	16.2586	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472
18	17.1728	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280
19	18.0824	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5504	6.1982
20	18.9874	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593
25	23.4456	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641
30	27.7941	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.6938	8.0552	7.4957	7.0027	6.5660
40	36.1722	32.6347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418
50	51.7256	44.9550	34.7609	27.6756	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	9.0736	8.3240	7.6873	7.1401	6.6651
60	65.8023	54.8882	39.7445	30.2008	23.9154	19.5965	16.5091	14.2220	12.4735	11.0998	9.9951	9.0888	8.3324	7.6919	7.1427	6.6666
80	90.0735	69.7005	45.3554	32.3730	24.7741	19.9427	16.6514	14.2815	12.4988	11.1108	9.9999	9.0909	8.3333	7.6923	7.1429	6.6667
100	139.5808	90.8194	49.5686	33.3057	24.9980	19.9998	16.6667	14.2857	12.5000	11.1111	10.0000	9.0909	8.3333	7.6923	7.1429	6.6667

Future Value of \$1

Period	0.50%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	1.0050	1.0100	1.0200	1.0300	1.0400	1.0500	1.0600	1.0700	1.0800	1.0900	1.1000
2	1.0100	1.0201	1.0404	1.0609	1.0816	1.1025	1.1236	1.1449	1.1664	1.1881	1.2100
3	1.0151	1.0303	1.0612	1.0927	1.1249	1.1576	1.1910	1.2250	1.2597	1.2950	1.3310
4	1.0202	1.0406	1.0824	1.1255	1.1699	1.2155	1.2625	1.3108	1.3605	1.4116	1.4641
5	1.0253	1.0510	1.1041	1.1593	1.2167	1.2763	1.3382	1.4026	1.4693	1.5386	1.6105
6	1.0304	1.0615	1.1262	1.1941	1.2653	1.3401	1.4185	1.5007	1.5869	1.6771	1.7716
7	1.0355	1.0721	1.1487	1.2299	1.3159	1.4071	1.5036	1.6058	1.7138	1.8280	1.9487
8	1.0407	1.0829	1.1717	1.2668	1.3686	1.4775	1.5938	1.7182	1.8509	1.9926	2.1436
9	1.0459	1.0937	1.1951	1.3048	1.4233	1.5513	1.6895	1.8385	1.9990	2.1719	2.3579
10	1.0511	1.1046	1.2190	1.3439	1.4802	1.6289	1.7908	1.9672	2.1589	2.3674	2.5937
11	1.0564	1.1157	1.2434	1.3842	1.5395	1.7103	1.8983	2.1049	2.3316	2.5804	2.8531
12	1.0617	1.1268	1.2682	1.4258	1.6010	1.7959	2.0122	2.2522	2.5182	2.8127	3.1384
13	1.0670	1.1381	1.2936	1.4685	1.6651	1.8856	2.1329	2.4098	2.7196	3.0658	3.4523
14	1.0723	1.1495	1.3195	1.5126	1.7317	1.9799	2.2609	2.5785	2.9372	3.3417	3.7975
15	1.0777	1.1610	1.3459	1.5580	1.8009	2.0789	2.3966	2.7590	3.1722	3.6425	4.1772
16	1.0831	1.1726	1.3728	1.6047	1.8730	2.1829	2.5404	2.9522	3.4259	3.9703	4.5950
17	1.0885	1.1843	1.4002	1.6528	1.9479	2.2920	2.6928	3.1588	3.7000	4.3276	5.0545
18	1.0939	1.1961	1.4282	1.7024	2.0258	2.4066	2.8543	3.3799	3.9960	4.7171	5.5599
19	1.0994	1.2081	1.4568	1.7535	2.1068	2.5270	3.0256	3.6165	4.3157	5.1417	6.1159
20	1.1049	1.2202	1.4859	1.8061	2.1911	2.6533	3.2071	3.8697	4.6610	5.6044	6.7275
25	1.1328	1.2824	1.6406	2.0938	2.6658	3.3864	4.2919	5.4274	6.8485	8.6231	10.8347
30	1.1614	1.3478	1.8114	2.4273	3.2434	4.3219	5.7435	7.6123	10.0627	13.2677	17.4494
40	1.2208	1.4889	2.21	3.26	4.80	7.04	10.29	14.97	21.72	31.41	45.26
60	1.3489	1.8167	3.28	5.89	10.52	18.68	32.99	57.95	101.26	176.03	304.48
80	1.4903	2.2167	4.88	10.64	23.05	49.56	105.80	224.23	471.95	986.55	2048.40
120	1.8194	3.3004	10.77	34.71	110.66	348.91	1088.19	3357.79	10252.99	30987.02	92709.07
240	3.3102	10.8926	115.89	1204.85	12246.20	121739.57	1184152.57	11274742.82	105123864.28	960195145.04	8594971441.07

Period	11%	12%	13%	14%	15%
1	1.1100	1.1200	1.1300	1.1400	1.1500
2	1.2321	1.2544	1.2769	1.2996	1.3225
3	1.3676	1.4049	1.4429	1.4815	1.5209
4	1.5181	1.5735	1.6305	1.6890	1.7490
5	1.6851	1.7623	1.8424	1.9254	2.0114
6	1.8704	1.9738	2.0820	2.1950	2.3131
7	2.0762	2.2107	2.3526	2.5023	2.6600
8	2.3045	2.4760	2.6584	2.8526	3.0590
9	2.5580	2.7731	3.0040	3.2519	3.5179
10	2.8394	3.1058	3.3946	3.7072	4.0456
11	3.1518	3.4785	3.8359	4.2262	4.6524
12	3.4985	3.8960	4.3345	4.8179	5.3503
13	3.8833	4.3635	4.8980	5.4924	6.1528
14	4.3104	4.8871	5.5348	6.2613	7.0757
15	4.7846	5.4736	6.2543	7.1379	8.1371
16	5.3109	6.1304	7.0673	8.1372	9.3576
17	5.8951	6.8660	7.9861	9.2765	10.7613
18	6.5436	7.6900	9.0243	10.5752	12.3755
19	7.2633	8.6128	10.1974	12.0557	14.2318
20	8.0623	9.6463	11.5231	13.7435	16.3665
25	13.5855	17.0001	21.2305	26.4619	32.9190
30	22.8923	29.9599	39.1159	50.9502	66.2118
40	65.00	93.05	132.78	188.88	267.86
60	524.06	897.60	1530.05	2595.92	4384.00
80	4225.11	8658.48	17630.94	35676.98	71750.88
120	274635.99	805680.26	2341063.63	6738793.69	19219445.00
240	75424928785.77	649120673317.10	5480578920960.75	45411340363982.90	369387066182044.00

Future Value of Annuity of \$1

Period	0.50%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.0050	2.0100	2.0200	2.0300	2.0400	2.0500	2.0600	2.0700	2.0800	2.0900	2.1000
3	3.0150	3.0301	3.0604	3.0909	3.1216	3.1525	3.1836	3.2149	3.2464	3.2781	3.3100
4	4.0301	4.0604	4.1216	4.1836	4.2465	4.3101	4.3746	4.4399	4.5061	4.5731	4.6410
5	5.0503	5.1010	5.2040	5.3091	5.4163	5.5256	5.6371	5.7507	5.8666	5.9847	6.1051
6	6.0755	6.1520	6.3081	6.4684	6.6330	6.8019	6.9753	7.1533	7.3359	7.5233	7.7156
7	7.1059	7.2135	7.4343	7.6625	7.8983	8.1420	8.3938	8.6540	8.9228	9.2004	9.4872
8	8.1414	8.2857	8.5830	8.8923	9.2142	9.5491	9.8975	10.2598	10.6366	11.0285	11.4359
9	9.1821	9.3685	9.7546	10.1591	10.5828	11.0266	11.4913	11.9780	12.4876	13.0210	13.5795
10	10.2280	10.4622	10.9497	11.4639	12.0061	12.5779	13.1808	13.8164	14.4866	15.1929	15.9374
11	11.2792	11.5668	12.1687	12.8078	13.4864	14.2068	14.9716	15.7836	16.6455	17.5603	18.5312
12	12.3356	12.6825	13.4121	14.1920	15.0258	15.9171	16.8699	17.8885	18.9771	20.1407	21.3843
13	13.3972	13.8093	14.6803	15.6178	16.6268	17.7130	18.8821	20.1406	21.4953	22.9534	24.5227
14	14.4642	14.9474	15.9739	17.0863	18.2919	19.5986	21.0151	22.5505	24.2149	26.0192	27.9750
15	15.5365	16.0969	17.2934	18.5989	20.0236	21.5786	23.2760	25.1290	27.1521	29.3609	31.7725
16	16.6142	17.2579	18.6393	20.1569	21.8245	23.6575	25.6725	27.8881	30.3243	33.0034	35.9497
17	17.6973	18.4304	20.0121	21.7616	23.6975	25.8404	28.2129	30.8402	33.7502	36.9737	40.5447
18	18.7858	19.6147	21.4123	23.414	25.645	28.132	30.906	33.999	37.450	41.301	45.599
19	19.8797	20.8109	22.8406	25.117	27.671	30.539	33.760	37.379	41.446	46.018	51.159
20	20.9791	22.0190	24.2974	26.870	29.778	33.066	36.786	40.995	45.762	51.160	57.275
25	26.5591	28.2432	32.0303	36.459	41.646	47.727	54.865	63.249	73.106	84.701	98.347
30	32.2800	34.7849	40.5681	47.575	56.085	66.439	79.058	94.461	113.283	136.308	164.494
40	44.1588	48.8864	60.4020	75.401	95.026	120.800	154.762	199.635	259.057	337.882	442.593
60	69.7700	81.6697	114.0515	163.053	237.991	353.584	533.128	813.520	1253.213	1944.792	3034.816
80	98.0677	121.6715	193.7720	321.363	551.245	971.229	1746.800	3189.063	5886.935	10950.574	20474.002
120	163.8793	230.0387	488.3	1123.7	2741.6	6958.2	18119.8	47954.1	128149.9	344289.1	927080.7
240	462.0409	989.2554	5744.4	40128.4	306130.1	2434771.5	19735859.6	161067740.3	1314048291.0	10668834933.8	85949714400.7

Period	11%	12%	13%	14%	15%
1	1.0000	1.0000	1.0000	1.0000	1.0000
2	2.1100	2.1200	2.1300	2.1400	2.1500
3	3.3421	3.3744	3.4069	3.4396	3.4725
4	4.7097	4.7793	4.8498	4.9211	4.9934
5	6.2278	6.3528	6.4803	6.6101	6.7424
6	7.9129	8.1152	8.3227	8.5355	8.7537
7	9.7833	10.0890	10.4047	10.7305	11.0668
8	11.8594	12.2997	12.7573	13.2328	13.7268
9	14.1640	14.7757	15.4157	16.0853	16.7858
10	16.7220	17.5487	18.4197	19.3373	20.3037
11	19.5614	20.6546	21.8143	23.0445	24.3493
12	22.7132	24.1331	25.6502	27.2707	29.0017
13	26.2116	28.0291	29.9847	32.0887	34.3519
14	30.0949	32.3926	34.8827	37.5811	40.5047
15	34.4054	37.2797	40.4175	43.8424	47.5804
16	39.1899	42.7533	46.6717	50.9804	55.7175
17	44.5008	48.8837	53.7391	59.1176	65.0751
18	50.396	55.750	61.725	68.394	75.836
19	56.939	63.440	70.749	78.969	88.212
20	64.203	72.052	80.947	91.025	102.444
25	114.413	133.334	155.620	181.871	212.793
30	199.021	241.333	293.199	356.787	434.745
40	581.826	767.091	1013.704	1342.025	1779.090
60	4755.066	7471.641	11761.950	18535.133	29219.992
80	38401.025	72145.693	135614.927	254828.441	478332.529
120	2496681.8	6713993.8	18008174.1	48134233.5	128129626.7
240	685681170770.6	5409338944300.8	42158299391998.1	324366716885585.0	2462580441213620.0

Answers

Paper II
PBE Management
Accounting and Finance
(December 2015 Session)

SECTION A (COMPULSORY) (Total: 40 marks)

Answer 1(a)

Average room rate for Sunshine Hotel
HK\$200,000,000 / 182,500
= HK\$1,095.9

Answer 1(b)

If the average room rate is high, the occupancy rate may be low. If the average room rate is low, then the occupancy rate may be high. Both average room rate and occupancy rate should be used together in the measurement and not just one parameter as it is an unfair assessment.

Answer 1(c)

If the actual room rate is higher than the calculated one, it may be due to higher demand in that period. If the actual room rate is lower than the calculated one, it may be due to weak demand in that period and discount is offered.

Answer 1(d)

The hotel room sales department aims at maximising both the room rate sold and the occupancy percentage, as such, room revenue can be maximised.

Answer 1(e)

If 90% of rooms are occupied, the estimated total annual room sales revenue generated by the new hotel is $\text{HK\$}1,095.9 \times 400 \times 90\% \times 365 = \text{HK\$}144,001,260$

Answer 1(f)

The operational risks faced by a hotel operation include food poisoning in the restaurants, customer accidents in public areas such as the swimming pool and gym. Fire in the guest rooms is also a common type of operational risk.

Answer 1(g)

Under the direct sales channel, hotel rooms sold to customers will increase the room sales revenue with no commission to be paid to the intermediaries, e.g. travel agency.

Answer 2(a)

	HK\$
Room revenue	110,000,000
Food revenue	<u>40,000,000</u>
Total revenue	<u>150,000,000</u>
<u>Expenses</u>	
Staff cost	45,000,000
Food cost	12,000,000
Depreciation	<u>60,000,000</u>
	<u>117,000,000</u>
Profit before tax	<u>33,000,000</u>

Answer 2(b)

Operating cash flow (OCF)
= EBIT + Dep – Tax
= HK\$33,000,000 + HK\$60,000,000 – HK\$33,000,000 x 0.16
= HK\$87,720,000

Answer 2(c)

PV of OCF for 30 years, 10% discount rate
= 9.4269 x HK\$87,720,000
= HK\$826,927,668

Cost = HK\$3,000,000,000

NPV
= HK\$826,927,668 – HK\$3,000,000,000
= (HK\$2,173,072,332)

Since the NPV is negative, it is recommended not to invest in this project.

Answer 2(d)

Besides the NPV method, we can use the payback period to evaluate a project but it does not take into account the time value of money. Alternatively, the accounting rate of return may be used but it depends on the validity of the projected financial figures.

Answer 2(e)

Profit before tax / Equity
= HK\$33,000,000 / HK\$3,000,000,000
= 1.1%

Answer 2(f)

It is quite common for the employees who will benefit from a project to show support for it. If a team of employees can get the construction of a hotel, more resources will be allocated to the team and it allows for more salary increments and promotion opportunities for the team. Their job positions will be quite secure during the project period.

* * * END OF SECTION A * * *

SECTION B (ANSWER THREE QUESTIONS ONLY) (Total: 60 marks)

Answer 3(a)

(i) Income statement for the private school

	HK\$
Revenue	30,000,000
Teaching staff	(12,000,000)
Administrative staff	(5,400,000)
Other operating costs	(1,000,000)
Depreciation	<u>(20,000,000)</u>
Loss for the year	<u>(8,400,000)</u>

(ii) $\text{HK\$}38,400,000 / \text{HK\$}100,000$
= 384 students

Answer 3(b)

$\text{HK\$}38,400,000 / 300$ students
= $\text{HK\$}128,000$

Answer 3(c)

In calculating the break-even point, it is assumed that the fixed cost is known with certainty and it does not change over a short period of time. In addition, the student number or the tuition fees are achievable.

Answer 3(d)

To improve the profit of the private school, the school may consider to reduce operating expenses or to increase the tuition fee.

Answer 3(e)

Triple Bottom Line includes three dimensions of performance measurement. They are social, environmental and financial. It measures the sustainability of development and is also commonly called people, planet and profits.

For the private school development project, the social aspect can be measured by items such as the employment rate after graduation and the average salaries earned by graduates. Financial performance can be measured through return on equity or profitability or cost saving.

Answer 4(a)

To minimise administrative costs such as meter reading, invoice printing and payment processing for domestic customers, the electricity company issues an invoice to them once every two months. For corporate customers, since the number involved is smaller and the payment amount is higher, a monthly basis is maintained.

Answer 4(b)

Accounts receivable turnover
= HK\$104,530 million / HK\$17,953 million
= 5.82 times

Accounts receivable collection period is 63 days.
 $365/5.82 = 62.7$ days

Answer 4(c)

A benchmark of 30 days is usually used for accounts receivable collection because commercial organisations pay salaries, rent and utilities, etc. on a 30-day basis.

Answer 4(d)

If there is no accounts receivable in the statement of financial position, it indicates that all revenue has been received in the form of cash or has become bad debt.

Answer 4(e)

If the accounts receivable is not collected promptly, it may turn into bad debt as the financial situation of the customers may change. Even it is not a bad debt, it takes time and resources in the collection process. Moreover, speeding up the collection of accounts receivable would also increase the working capital efficiency of the company.

Answer 4(f)

For a trading company, it can speed up the collection of accounts receivable by giving discount to customers, by sending reminders and using factoring.

Answer 5(a)

To tackle the anticipated financial distress problem of Tunnel company, it can borrow money from banks and ask shareholders to inject new capital. In addition, it can sell some of its fixed assets.

Answer 5(b)

The stakeholders include the government which regulates the business, the employees, the shareholders, creditors and suppliers.

Answer 5(c)

The government receives profit tax and licence fee from Tunnel company, employees receive salaries and enjoy various benefits, shareholders can receive dividends as partial return on their investments, creditors earn interest and the repayment of principals and suppliers receive payment for services and goods they sell.

Answer 5(d)

Agency problem refers to the conflict of interests between various stakeholders of a company such as between shareholders and bondholders or between employees and shareholders.

Answer 5(e)

Agency costs include direct and indirect costs. Direct costs include remuneration and audit fees. Indirect costs include the cost of lost opportunity because of agency problems.

Answer 6(a)

Modigliani and Miller (MM) proposed that the value of a firm increases with debt level up to a certain point. After that, a firm's value falls as the debt level increases.

Answer 6(b)

A high debt level allows a company to have more tax deduction because of the interest expense. It also allows a company to have more opportunities for its investment.

Answer 6(c)

Low debt level can reduce bankruptcy costs which include direct costs and indirect costs.

Answer 6(d)

$$\begin{aligned} R_E &= R_f + \beta_E (E(R_m) - R_f) \\ &= 2\% + 1.2 \times 10\% \\ &= 14\% \end{aligned}$$

Answer 6(e)

The cost of debt is usually lower than the cost of equity as creditors demand a lower return than shareholders.

Answer 6(f)

$$\begin{aligned} \text{WACC} &= D/V \times R_D(1 - T) + E/V \times R_E \\ &= 6/11 \times 10\% \times (1 - 16\%) + 5/11 \times 14\% \\ &= 10.95\% \end{aligned}$$

* * * END OF EXAMINATION PAPER * * *

(The main purpose of the following report is to summarise candidates' common weaknesses and make recommendations to help future candidates improve their performance in the examination.)

General comments

Candidates performed very well in this paper. Their performance proved that they were able to master the basic concepts of management accounting but they could improve further in terms of applying their knowledge to solve application problems related to costing and pricing. Improvement was still needed in answering the financial management section as it was found that some candidates tried to avoid questions on financial management.

Specific Comments

Section A – Compulsory Questions

Question 1 – 20 marks

This question tested the candidates' ability to analyse a case concerning profit planning and project evaluation. It was a case about hotel construction and sales. The performance was not that satisfactory. Candidates might not have been able to digest the information presented in the case and so arrived at an incorrect basic result for the room rate and revenue. A few candidates showed their understanding of maximising revenue and occupancy, but, in general, most candidates seemed unable to relate to the case and it showed their weakness when it comes to applying their knowledge in solving real life problems.

Question 2 – 20 marks

This question tested candidates' knowledge with regard to performing project evaluation and in calculating important ratios such as return on equity. The performance was quite satisfactory. In part (f), most candidates provided the correct justification for supporting such a project.

Section B – Optional Questions

Question 3 – 20 marks

This was a well-answered question. It assessed candidates' ability to handle costing and break-even issues in relation to a private school. Most candidates handled it well. In part (d), candidates were asked to detail ways to improve the net profit. Some candidates' answers were disappointing, such as reducing the salaries of the teachers or even to fire them. While accountants need to address cost issues, they should be able to look at it from a broader perspective such as taking account of the social impact.

Question 4 – 20 marks

This question was quite popular and was well-answered. It tested candidates' understanding of the handling of accounts receivable from a real-life example of a local electricity company. Most candidates answered correctly except for the part as to why a 30 day period is usually used as the benchmark period for accounts receivable collection.

Question 5 – 20 marks

This was the least popular elective question and the performance was average. It asked candidates how to handle financial distress and tested their basic knowledge with regard to an agency problem. If candidates possessed the basic knowledge of these topics, it was not too difficult to gain good marks from this question.

Question 6 – 20 marks

This question was a question on the Modigliani and Miller model of capital structure and the related calculation of WACC. The questions were straightforward, but still some candidates failed to provide the correct answer when it came to explaining why the cost of debt is usually lower than the cost of equity.

* * * END OF EXAMINATION PANELIST'S REPORT * * *