

Strategic Professional – Options

# Advanced Performance Management (APM)

**Time allowed:** 3 hours 15 minutes

This question paper is divided into two sections:

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

Section B – BOTH questions are compulsory and MUST be attempted

**Do NOT open this question paper until instructed by the supervisor.**

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

# APM

**Present Value Table**

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

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

Periods (n)	Discount rate (r)										
	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

Periods (n)	Discount rate (r)										
	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

## QUESTION 1

Sports complex is publicly owned popular company which provides wide range of community services like gym swimming etc. sports complex stated mission is to strengthen brand loyalty by investing in employees, providing new services and delighting customers. The subsidiary aims of the company are to maximize shareholder value, create a culture of pride in the brand and strengthen the brand loyalty of all stakeholders. Initially sports complex started his business with two identical leisure centres but in 20X0 one of Centre was sold to a private company, Tushan, which is running that division successfully. The public governing body of sports complex is concern about financial performance of company and financial subsidy it has provided to sports complex. Ravi Patel has won a contract act as management accountant of sports complex. Ravi first assignment is to prepare a report on the operating efficiency and financial performance of Sports complex. Tushan have kindly provided its operating and financial performance for the purpose of benchmarking. Both company provides same type of four services gym, swimming, squash and badminton.

Following information is available for sports complex and Tushan:

Data categorised by leisure activity for 20X6

	Squash		Swimming		Gym		Badminton	
	*S	*T	*S	*T	*S	*T	*S	*T
Number of hours per day that the facility is open	12	13	10	15	12	15	6	8
% utilisation of facility +								
- daytime	50	20	70	40	15	25	50	40
- evening	80	85	70	80	50	85	50	60
The average number of people attending per hour who pay	6	n/a	29	n/a	20	n/a	6	n/a
Price per person per hour	\$4	n/a	\$2	n/a	\$3	n/a	\$4	n/a
Annual cost savings if activity is discontinued (\$000)	21	25	120	105	51	60	60	52

- \*S = Sports complex
- \*T = Tushan
- + = Includes free access customers

	Cost data (\$000)					
	20X5		Actual 20X6		20X6	
	*S	*T	*S	*T	*S	*T
Salaries	450	350	500	400	550	350
Maintenance contract	150	75	200	100	200	90
Depreciation	25	50	25	50	25	50
Other costs	125	100	75	25	125	150
Loan interest	None	200	None	125	None	200

- \*S = Sports complex
- \*T = Tushan

Additional information:

- (1) You should assume that there are 350 working days for both companies.
- (2) Tushan's basic source of income is membership fee of 500 per member. Tushan do not charge any extra fee for facilities. Membership fee was not changed in 20X5 and 20X6.
- (3) Tushan has witnessed increase in members from 1700 to 2000 between 20X5 and 20X6. The budgeted increase was from 1700 to 1900 only. This budget was prepared by top level management of Tushan.
- (4) Sports complex wants to encourage sports activities in youth and promote healthy life style for those who are above 60 years of age and for this reason company has special free access to its Centre for schools children's and old citizens. 30% of Total users of sports complex comprises of those who do not pay anything and have free access to Centres. A recent research has been conducted by management of has sports complex established the fact that if company charges fee to current free customers then 60% of free customers will continue to use companies facilities. The remaining 40% would not use the facilities if free access were to be withdrawn.
- (5) Both centres have same capacity and both centres provides same range of services with same quality but sports complex building is 5 years older than Tushan building. The realizable value of both building is equal to current market value and is as follows :

	20X5	20X6
Sport complex	\$400,000	\$375,000
Tushan	\$800,000	\$750,000

- (6) Financial subsidy received by sports complex is equal to its financial loss of the year.
- (7) There was no change in sports complex chargeable hours and opening hours during 20X5 and 20X6. The average hourly attendance during 20X5 and budgeted attendance for 20X6 for the Sports complex Centre was as follows:

		Budgeted
Squash	9	8
Swimming	31	37
Gym	23	25
Badminton	5	10

- (8) With the exception of the avoidable costs identified i.e. the annual cost savings if an activity is discontinued, all costs are generally fixed overheads.

- (9) The Sports complex Centre had all its long-term debt repaid in full by the local authority in 19W8. It has no outstanding debts.

Required:

Write a report to board of director of company to:

- (a) Compare the operational and financial performance of the Sports complex Centre and Tushan  
(20 marks)
- (b) Assess the validity of appraising their relative performance from the data made available to you.  
(5 marks)
- (c) Make any necessary adjustments to the data used to appraise performance above in section (a) to develop an alternative and more appropriate comparison of their financial performance.  
(6 marks)
- (d) What additional information would you require to provide a more appropriate and comprehensive comparison of the financial performance of the two centres?  
(5 marks)
- (e) Traditional financial measures of performance have been criticised for not providing a broad enough basis for the assessment of organisational performance.

Identify a range of appropriate Non-Financial Performance Indicators for the leisure centres which, when taken in conjunction with traditional financial indicators, would provide a comprehensive assessment of performance.

(10 marks)

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

(4 marks)

(Total: 50 marks)

## QUESTION 2

M Group (M) has developed internationally over the last 30 years and now trades in many diverse areas. Fifteen years ago, the company launched M Airlines, which has proved to be one of its most successful business ventures. Five years ago, the company established M Rail and obtained franchises for running rail services in its home country. However, M Rail has not achieved the success that M had intended and is frequently publicly criticised for providing services which do not run on time.

The majority of the citizens in M's home country have heard of the brand and the Chairman believes the reputation of the brand name places a heavy burden of responsibility on M not to disappoint its customers. The Chairman himself has impressed his own personality on M by pursuing personal publicity in business ventures and becoming involved in high-profile and sometimes dangerous 'leisure' activities.

M has achieved a reputation for entering markets which are dominated by major companies, and has been successful in taking business from some major competitors by exposing their consistently poor service and complacency.

The principal business approach which has been adopted is that of 'brand stretching' across different products and services. Each company within the group runs its own affairs but they are all encouraged to help each other resolve their particular problems in a kind of family spirit.

### Key strategic factors

The Chairman has stated that M is in business 'to be different' and that the M brand name should be clearly associated with this.

It is considered essential by the Directors that any products or services incorporated within the brand must help to build its good reputation, provide an opportunity to add value, and yield an appropriate trade-off between risk and rewards.

The Chairman considers that there are a number of key factors which have contributed to the success of M. The brand name is associated with being the consumer's champion, and has been very successful in delivering what the Chairman refers to as a 'sense of excitement' in most ventures to which it has been applied. In addition, the business contacts which have been established are important and he recognises that his own personality attracts customers and venture partners. M also encourages talented staff within the group to interact with each other in order to solve problems. The management style of M is therefore seen as a major contributory factor in its corporate success. Much weight is placed on its corporate image. The Chairman explains that the quality of a customer's experience when coming into contact with M is the most important item in determining its success.

### Management style

The Directors agree that the first priority in being able to achieve success is for M to ensure that the Group employs personnel of the best quality and calibre. Their simple philosophy is that motivated staff lead to satisfied customers which results in repeat and new business and provides benefit to the shareholders.

M has a flat management structure with few authority levels within the hierarchy. The Chairman himself is committed to providing good communication channels within and outside the group. He believes very

firmly that managers within the organization must be prepared to listen both to the customers and also the staff.

#### Financial performance

The business approach which has been developed is that the brand name is provided by M with a cash injection from a joint venture partner. This has generally proved to be a very successful formula although this has not been the case with the latest venture into the domestic railway market. The Directors consider that the performance of M Rail will improve following a programme to upgrade the infrastructure inherited from the previous nationalised rail network.

Comparative financial information relating to M Airlines and M Rail for the last two years at 31 December is as follows:

	2012	2013
	\$m	\$m
Turnover		
Airlines	570	678
Rail	410	423
Pre-tax profit		
Airlines	60	80
Rail	30	32
Capital employed		
Airlines	750	790
Rail	530	640

#### Other performance indicators

The following information is provided relating to M's airline and rail businesses:

Airline	2012	2013
Number of passengers carried	1.2 million	1.4 million
Passenger miles travelled	3,000 million	3,300 million
Ratio of cabin staff to passengers (excluding aircrew, i.e. pilots and navigators):		
Economy class	1 to 10	1 to 12
Business and first class	1 to 4	1 to 5
Number of airline routes flown	40	44

M Airlines sells economy, business and first-class seats to passengers. The prices reflect the level of comfort and service. For example, first-class seats cost double the price of business class seats and ten times the price of economy seats.

- Airline passenger numbers are expected to increase by 3% in the next two years in the long-distance economy-class market from which M attracts most of its customers.
- There is an increasing level of partnerships emerging among airlines whereby each carries the other's passengers as well as its own on designated routes. M is engaged in such partnerships for two of its routes.
- A general survey of satisfaction among airline passengers carried out by independent



representatives from the travel industry in M's home country ranks M as being within the top three for most services.

Rail	2012	2013
Number of passengers carried	4.5 million	4.3 million
Passenger miles travelled	160 million	150 million
Ratio of customer attendants to passengers:		
Standard class	1 to 100	1 to 120
First class	1 to 20	1 to 25
Number of routes travelled	25	25

- M Rail sells standard and first-class seats to its passengers. The first-class seat is priced at about double that of a standard priced seat.
- An increase of 5% in total rail passengers is expected over the next four years.
- M operates the railway services under a franchise agreement, which is due for renewal in five years' time.
- The government has established a Railway Regulatory Authority to monitor the quality of the services provided by the M Group and other railway franchisees, and is constantly increasing pressure on the franchisees to improve their services.
- A general survey of passenger satisfaction carried out by the Railway Regulatory Authority was highly critical of P's services with regard to its record relating to punctuality and service on its trains.

#### Future development

M has enjoyed considerable success in its ventures within its domestic market. However, the Directors believe there is much opportunity to develop the brand name within the emerging highly populated retail markets elsewhere in the world where currently it is relatively unknown.

#### Required:

- (a) Discuss the importance of the external forces which M faces in its worldwide business development. What Key performance indicators could they use to monitor the impact of these forces.

(13 marks)

- (b) With reference to the comparative financial and other performance indicators, evaluate the performance of the M Airlines and M Rail companies. Recommend ways in which they may increase their individual contribution to the future development of the Group.

(Maximum of 5 marks for calculations) (12 marks)

(25 marks)

### QUESTION 3

Solar Panel Limited (SPL) manufactures a range of solar panel heating. They have recently developed the new EF solar panel. The directors of SPL recently spent \$20,000 on market research, the findings of which led them to believe that a market exists for the EF panels

The finance director of SPL has gathered relevant information and prepared the following evaluation relating to the proposed manufacture and sale of the EF solar panels.

- Sales are expected to be 2,700 units per annum at a selling price of \$3,000 per unit.
- Variable material, labour, and overhead costs are estimated at \$1,580 per unit.
- In addition, a royalty of \$250 per unit would be payable to EF (Environmental Friends), for the use of their brand name.
- Fixed overheads are estimated at \$500,000 per annum. These overheads cannot be avoided until the end of the year in which the EF solar panels is withdrawn from the market.
- An initial investment of \$7 million would be required. A government grant equal to
- 50% of the initial investment would be received on the date the investment is made. No tax allowances would be available on this initial investment. The estimated life cycle of the EF solar panels is six years.
- Corporation tax at the rate of 30% per annum is payable in the year in which profit occurs.
- All cash flows are stated in nominal terms and, with the exception of the initial investment and the government grant, will occur at the end of each year.
- The nominal cost of capital is 12%.

Required:

(a) Calculate the net present value (NPV) of the EF solar panels proposal and recommend whether it should be undertaken by the directors of SPL.

(9 marks)

(b) Comment on three factors other than NPV that the directors of SPL should consider when deciding whether to manufacture the EF solar panels.

(3 marks)

(c) Explain the term 'benchmarking' and briefly discuss the process and potential benefits that can be obtained as a result of undertaking a successful programme of benchmarking.

(8 marks)

(d) Briefly evaluate circumstances in which a government can act as an aid to business performance.

(5 marks)

(25 marks)