IHRA
UNIVERSITY OF COLOMBO

Institute of Human Resource Advancement
University of Colombo, Sri Lanka

Bachelor of Labour Management - 2021/2022 (English Medium)

Third Year – 1st Semester Examination

(Held in October 2023)

BLM 3131 – Organizational Leadership

Instructions to the Candidates

(1) Answer only five (05) questions

(2) Time allocated for the examination is three (03) hours.

(3) This paper consists of eight (08) questions and three (03) pages.

(4) Write your index Number on all pages of answer scripts.

(5) If a page or a part of this question paper is not printed properly, please inform the Supervisor immediately.

01. Discuss the five practices of exemplary leadership outlined in "The Leadership Challenge" (The Leadership Challenge by Barry Posner and James Kouzes). Provide real-world examples of leaders who have successfully demonstrated these practices.

(Marks 20)

02. According to Posner and Kouzes, what role does shared vision play in effective leadership? How can leaders create a shared vision among their team members? What challenges might they face in doing so?

(Marks 20)

03. "Challenge the Process" is one of the five practices of exemplary leadership. Briefly explain this and provide examples of leaders who have effectively challenged the status quo to drive innovation and change within organizations.

(Marks 20)

04. Explain the main characteristics of democratic leadership style and discuss how it affects group dynamics and decision making?

(Marks 20)

05. In the context of organizations, how is a leader distinguished from a manager? Why is it important to have both the roles of a manager and a leader?

(Marks 20)

06. i) What is Organizational Leadership?

(ii) Describe the principles of effective leadership.

(Marks 10x2=20)

07. (i) What are the essential leadership skills

(ii) Explain "Three Skill Approach" (Katz, 1955)

(Marks 10x2=20)

08. Answer two of the following,

(i) Importance of understanding organizational politics

(ii) Organizational politics

(iii) Role of the leader in identification of the problems

(Marks 10x2=20)

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Third Year – 1st Semester Examination

(Held in October 2023)

BLM 3132 – Marketing Management

Instructions to the Candidates

(1) Answer only for three questions including question number one .

(2) Time allocated for the examination is three (03) hours.

(3) This paper consists of four (04) questions and three (03) pages.

(4) Write your index Number on all pages of answer scripts.

(5) If a page or a part of this question paper is not printed properly, please inform the Supervisor immediately.

01.

I. Create a case study centered around customer dissatisfaction during the purchase or sale of a product or service. Formulate two questions based on the resulting case study.

II. Describe the attributes of a customer-centric organizational culture within your company. Are you satisfied with the current customer-centric culture in your organization? Please elaborate.

III. Explain the strategies you've recommended for cultivating a customer-centric organizational culture, with the goal of providing efficient customer service.

IV. What potential obstacles or difficulties do you anticipate when implementing the strategies mentioned above in question Part III within your organization?

V. Elaborate on the significance of customer relationship management from the perspective of customers.

(Marks 10x5=50)

02.

I.. "Introducing new products has become a crucial factor in the modern competitive business environment." Explain the above statement.

(10 Marks)

II. Describe the process of developing new products using a suitable example.

(15 Marks)

(Total Marks 25)

03.

I. Elaborate on the significance of a distribution channel for a business entity. Detail the factors that should be taken into account when choosing a distribution channel for a beverage like a soft drink.

(10 Marks)

II. Specify the criteria for segmentation that could be applied to the Sri Lankan soft drink market, and discuss the significance of choosing the most suitable market segment(s) for the business organization.

(15 Marks)

(Total Marks 25)

04. Write short notes on the following concepts

I. Porters five forces

II. Component of CRM

III. Marketing concepts

IV Product life cycle

V. Marketing mix

(Marks 05 x 05 = 25)

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Third Year – 1st Semester Examination

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BLM 3133 – Trade Unionism and Trade Union Movement in Sri Lanka

Instructions to the Candidates

(1) Answer only four (04) questions

(2) Time allocated for the examination is three (03) hours.

(3) This paper consists of eight (08) questions and two (02) pages.

(4) Write your index Number on all pages of answer scripts.

(5) If a page or a part of this question paper is not printed properly, please inform the Supervisor immediately.

01. Describe the concepts of Trade Unions and Trade Unionism and their relationship.

(25 Marks)

02. Examine the factors influence the workers to join a Trade Union.

(25 Marks)

03.

i. Identify the classification of trade unions and their objectives.

ii. Name three approaches to trade unionism and analyse them.

(25 Marks)

04. "The trade union movement, as we see it today, is a result of the Industrial Revolution in Great Britain." Explain this statement.

(25 Marks)

05. **Either**

i. Investigate how the Gunasinghe's period was crucial in the history of labour struggles in Sri Lanka.

Or

ii. The rise of the labour movement in the period between 1931 and 1956 was central to the articulation of class politics of trade unions in Sri Lanka. Explain.

(25 Marks)

06. **Either**

i. Investigate the 'left-wing phase' of Trade Union Movement in Sri Lanka.

Or

ii. Write notes on the following with reference to Sri Lanka:

a. Estate Trade Unions
b. Export-oriented industrialization and Free Trade Zones (FTZs)

(25 Marks)

07. Analyze the following points regarding the current trade unions in Sri Lanka:

a. Internal strengths and weaknesses

b. External opportunities and threats

(25 Marks)

08. Investigate prominent strikes in Sri Lanka's history of labour struggles.

(25 Marks)

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Third Year – 1st Semester Examination

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BLM 3134 – Industrial Relations

Instructions to the Candidates

(1) This paper consists of seven (07) questions printed in three (03) pages.

(2) **Part I – Answer only two (02) questions.**

Part II – Answer only three (03) questions.

(3) Use Separate answer books for **Part I & Part II**. Write on the top of the answer book whether it is **Part I or Part II**. Tie up Part I & Part II separately.

(4) Candidates should refer to relevant statutes and case law where applicable.

(5) Time allocated for the examination is three (03) hours.

(6) Write your Index Number on all pages of answer scripts.

(7) Tie up all answer sheets at the end of the examination.

(8) If a page or a part of this question paper is not printed, please inform the Supervisor Immediately.

Part I

01. "Unlike in other countries, the right to strike in Sri Lanka is not given as a positive right. Instead, the right to strike is only given as a negative right where one is protected from civil and delictual prosecutions, subject to certain conditions."

Do you agree with the above statement? Substantiate your answer with relevant statutory provisions and decided case law.

(20 Marks)

02. Answer the following questions referring to the relevant provisions of the Industrial Dispute Act. No. 43 at 1950.

a. What is 'Industrial Dispute?'

(05 Marks)

b. The powers and functions of the Labour Commissioner in the settlement of Industrial disputes.

(10 Marks)

c. What are the methods of resolving an industrial dispute?

(05 Marks)

d. Difference between voluntary arbitration and compulsory arbitration

(05 Marks)

(Total 20 Marks)

03. a. Discuss the importance of labour welfare in a society.

(05 Marks)

b. Labour welfare plays a significant part in any society. Ever since the independence, Sri Lanka has introduced many welfare schemes for those who retire after work. Discuss a minimum of two such welfare schemes and the benefits which the members can obtain both before retirement and after retirement.

Discuss at least.

(15 Marks)

(Total 20 Marks)

Part II

04.

i. Discuss the difference between "Employee Relation" and "Industrial Relations" with appropriate examples.

(10 Marks)

ii. Elaborate possible actions to be taken in relation to enhance employee relations at work.

(10 Marks)

(Total 20 Marks)

05.

i. Explain the difference between grievance and discipline at work. Provide appropriate examples.

(10 Marks)

ii. Develop a disciplinary procedure for a selected organisation indicating necessary steps in such process.

(10 Marks)
(Total 20 Marks)

06.

i. Elaborate the difference between harassments and sexual harassments with a brief example.

(10 Marks)

ii. What are the possible actions to mitigate the occurancey harassments and sexual harassments at work?

(10 Marks)
(Total 20 Marks)

07. Write short notes on followings:

i. Industrial peace
ii. Clinical and punitive approach to discipline
iii. Employee health and safety
iv. Employee happiness at work
v. Employee voice

(4 x 5 = 20 Marks)

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Third Year – 1st Semester Examination

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BLM 3135 – Financial Management

Instructions to the Candidates

(1) This paper consists of six (06) questions and eleven (11) pages.

(2) Answer only five (05) questions including Question 01.

(3) Time allocated for the examination is three (03) hours.

(4) Only non-programmable calculators are allowed.

(5) You may use appropriate graphs, diagrams, equation/s to prove or justify the answers.

(6) If you have any doubt as to the interpretation of the wording of a question, make your own assumption, but clearly state it on the scripts.

(7) Write your index Number on all pages of answer scripts.

(8) If a page or a part of this question paper is not printed properly, please inform the Supervisor immediately.

Question 01

Background

Country Tansia is a small landlocked European country which is outside the Euro zone. Unlike many other countries, Country Tansia has a nationalized railway system known as Tansia Railways. As the transport infrastructure developed, diesel trains gradually replaced steam trains and electric powered trains are now replacing the diesel trains as Tansia Railways carries out electrification of its network. Tansia Railways, via its division TPTS, operates cafes in approximately 50% of its 200 stations. The cafes sell hot and cold drinks and light refreshments to take away or consume on the premises. The Board of Tansia Railways is keen to outsource the operation of some or all of the cafes since they have never made large profits. Indeed, some of the cafes in smaller stations have been making losses after having been allocated a share of the station overheads.

The Board has been approached by Mr. Z who is interested in operating the station cafes in five railway stations (which are situated within a 20 mile radius of each other) within a newly formed company, Cantina. Cantina would pay rent in return for the use of the premises and permission to take over the cafe business and all associated revenues and costs.

The cafe project

The contract to operate the five cafes would be for an initial period of three years starting on 1st January 2024. Cantina would be given the option to extend its operations to twenty additional railway stations at the end of the fourth year, subject to high customer satisfaction scores in relation to the quality of food and drink, standard of décor and level of service provided.

Investment appraisal

Mr. C has drawn up estimates of forecast operating cash inflows for a single cafe in the first three years of the project. These are shown below:

Year to 31 December	2024	2025	2026
Number of passengers per station per day	3,000	3,500	4,000
Proportion of passengers using the café	9%	12%	15%
Average spend per customer	$ 5.0	$ 5.4	$ 5.6

The railway operates 360 days a year.

Additional information collated by Mr. C:

1. Operating cash outflows can be divided into:
    a. Variable costs per cafe, estimated to be 60% of cash inflows.
    b. Fixed costs per cafe, including rent and advertising costs, forecast to be, on average, $ 80,000 in 2024 and then increase by 5% a year thereafter.
    c. need to employ a manager to run this for him at a salary of $ 60,000 a year in 2024, increasing by 5% a year thereafter.
    d. An investment of $ 300,000 per cafe in fixtures and fittings would be required on 1 January 2024, with an estimated residual value of $ 50,000 per cafe on 31 December 2026.
2. All revenues and costs should be assumed to be cash flows and arise at the end of the year unless otherwise stated.

3. The risk-free rate is 2% and the market premium is 5%.
4. A national chain of cafes that is 100% equity financed has a published beta of 1.30.
5. Mr. Z intends to use this information to calculate a cost of equity to evaluate the project.

Requirement,

I. To Advise Tansia Railways of making investment decision:
Calculate the following measures in respect of the proposed investment by Cantina in five cafes:

A Net Present Value (NPV) (15 Marks)
B Internal Rate of Return (IRR) (10 Marks)
C Payback (10 Marks)

II. Would you recommend this project based on the above techniques (05 Marks)

(Total 40 Marks)

Question 02

I. Discuss the importance of cost of capital in a business **(04 marks)**

II. ABC Company has 2.0 million shares outstanding. The stock currently sells for Rs. 30 per share. The firm's debt is publicly traded and was recently quoted at 95% of face value. It has a total face value of Rs. 5 million, and it is currently priced to yield 10%. Risk free rate of return is 10% and the market risk premium is 7%. You have estimated that ABC has beta of 0.60. If the corporate tax rate is 30%, what is the Weighted Average Cost of Capital of ABC company?

(08 Marks)

III. Alps Company wishes to raise additional capital by the issue of 500,000 new shares. The present dividend is USD 5 per share and dividend growth is expected to 1%. The stock currently sells for USD 60 per share. Calculate the Cost of equity.

(03 Marks)

(Total 15 Marks)

Question 03

Stock Alps and Beps have the following historical returns:

year	Stock Alps returns	Stock Beps returns
2019	-10%	-20%
2020	40%	34%
2021	-15%	-15%
2022	32%	5%
2023	40%	30%

I. Calculate the average rate of return for each stock during the 5 year period.

(04 Marks)

II. Assume that someone held a portfolio consisting of 50 percent of stock Alps and 50 percent of stock Beps. what would have been the average return on the portfolio during the period.

(03 Marks)

III. Calculate the standard deviation of returns for stock Alps

(04 Marks)

IV. Calculate the standard deviation of returns for stock Beps

(04 Marks)

(Total 15 Marks)

Question 04

I. Edward Ltd is to invest Rs. 200,000 immediately to earn a total of Rs. 450,000 in the future at a cost of capital of 5%. What should be duration of investment?

(03 Marks)

II. Discuss the following with examples.

A. Pecking order theory Versus Trade off theory

B. Non-systematic Risk Versus Systematic Risk

C. Stakeholder Theory Versus Agency Theory

(09 Marks)

III. An executive is about to retire at the age of 60. His employer has offered him two post-retirement options:

A. Rs 3000, 000 lump sum

B. Rs 350, 000 for 10 years.

Assuming 8 percent interest in the economy, which is a better option?

(03 Marks)

(Total 15 Marks)

Question 05

I. Calculate the future value of Rs. 30,000 in 5 years times, if the cost of capital is 10%

(02 Marks)

II. Calculate the present value of a constant cash flow of 50000 spread over a 5 year period, if the cost of capital is 10%

(03 Marks)

III. On a constant cash flow of 800,000 is expected to spread over an indefinite time period. If the cost of capital is 5%, identify the present value of this cash flow.

(04 Marks)

IV. A Company has a target return on capital employed of 25% and is now considering the following project.

Capital cost of asset	Rs. 80000
Estimated life	5 years

Estimated Profit Before Depreciation/	Rs.
Year 1	20000
Year 2	25000
Year 3	35000
Year 4	25000
Year 5	20000

The capital asset will have no residual value. You are required to calculate the accounting rate of return and assess whether the project should be undertaken.

(07 Marks)

(15 Total Marks)

Question 6

ABC (Pvt) Ltd is one of the leading logistics company in UK. Followings are the financial details available with "ABC (Pvt) Ltd" for the financial year 2022/2023.

	2022 (GBP)	2023 (GBP)
Finished Goods	200,000	285,000
Sales	7,000,000	8,500,000
Gross profit	4,500,000	5,025,000
Operating Profit/ EBIT	2,025,000	2,400,000
Net Profit after Taxation	1,050,000	1,900,000
Trade Receivables	700,000	800,000
Trade Creditors	500,000	700,000
Purchases	3,950,000	4,950,000
Accrued Liabilities	586,000	405,000
Stated Capital (GBP10 each)	5,000,000	5,000,000
Debentures Issued	1,400,000	1,200,000
Long term bank loan	1,750,000	1,600,000
Debenture Interest expenses	465,000	450,000
Loan Interest Expense	285,000	350,000
Reserves	1045,000	1,400,000
Fixed Assets	9,000,000	9,500,000
Ordinary share dividends	355,000	400,000
Market Price per Share	5.75	7.25

I. By using the above information calculate the followings for **2022 & 2023 financial year.**

A. Profitability ratios

i. Gross Profit

ii. Operating profit

iii. Net Profit

B. Working capital ratios

i. Inventory Days

ii. Receivable Days

iii. Payable Days

iv. Asset Turnover

(Assume that out of sales 80% in on credit basis & out of purchases 75 % is on credit Basis)

C. Investor's Ratio

i. Earnings per share

ii. Dividends per share

iii. Price earnings ratio

D. Leverage Ratios/ Solvency Ratios

i. Debt- Equity ratio

ii. Interest Cover ratio

(1 Mark for each)

II. Comment on the performance of the company for financial year 2022 & 2023.

(03Marks)

(15 Total Marks)

----------END OF THE QUESTION PAPER----------

MATHS TABLES AND FORMULAE

Present value table

Present value of 1.00 unit of currency, that is $(1 + r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods (n)	Interest rates (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
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods (n)	Interest rates (r)									
	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
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of 1.00 unit of currency per annum

Receivable or Payable at the end of each year for n years $\left[\frac{1-(1+r)^{-n}}{r}\right]$

Periods (n)	Interest rates (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
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods (n)	Interest rates (r)									
	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
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	7.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

FORMULAE

Valuation models

(i) Irredeemable preference shares, paying a constant annual dividend, d, in perpetuity, where P_0 is the ex-div value:

$$P_0 = \frac{d}{k_{pref}}$$

(ii) Ordinary (equity) shares, paying a constant annual dividend, d, in perpetuity, where P_0 is the ex-div value:

$$P_0 = \frac{d}{k_e}$$

(iii) Ordinary (equity) shares, paying an annual dividend, d, growing in perpetuity at a constant rate, g, where P_0 is the ex-div value:

$$P_0 = \frac{d_1}{k_e - g} \quad \text{or} \quad P_0 = \frac{d_0[1+g]}{k_e - g}$$

(iv) Irredeemable bonds, paying annual after-tax interest, $i\,[1-t]$, in perpetuity, where P_0 is the ex-interest value:

$$P_0 = \frac{i[1-t]}{k_{dnet}}$$

or, without tax:

$$P_0 = \frac{I}{k_d}$$

(v) Total value of the geared entity, V_g (based on MM):

$$V_g = V_u + TB$$

(vi) Future value of S, of a sum X, invested for n periods, compounded at r% interest:

$$S = X[1+r]^n$$

(vii) Present value of 1·00 payable or receivable in n years, discounted at r% per annum:

$$PV = \frac{1}{[1+r]^n}$$

(viii) Present value of an annuity of 1·00 per annum, receivable or payable for n years, commencing in one year, discounted at r% per annum:

$$PV = \frac{1}{r}\left[1 - \frac{1}{[1+r]^n}\right]$$

(ix) Present value of 1·00 per annum, payable or receivable in perpetuity, commencing in one year, discounted at r% per annum:

$$PV = \frac{1}{r}$$

(x) Present value of 1·00 per annum, receivable or payable, commencing in one year, growing in perpetuity at a constant rate of g% per annum, discounted at r% per annum:

$$PV = \frac{1}{r-g}$$

Cost of capital

(i) Cost of irredeemable preference shares, paying an annual dividend, d, in perpetuity, and having a current ex-div price P_0:

$$k_{pref} = \frac{d}{P_0}$$

(ii) Cost of irredeemable bonds, paying annual net interest, $i[1 - t]$, and having a current ex-interest price P_0:

$$k_{d\,net} = \frac{i[1-t]}{P_0}$$

(iii) Cost of ordinary (equity) shares, paying an annual dividend, d, in perpetuity, and having a current ex-div price P_0:

$$k_e = \frac{d}{P_0}$$

(iv) Cost of ordinary (equity) shares, having a current ex-div price, P_0, having just paid a dividend, d_0, with the dividend growing in perpetuity by a constant g% per annum:

$$k_e = \frac{d_1}{P_0} + g \quad \text{or} \quad k_e = \frac{d_0[1+g]}{P_0} + g$$

(v) Cost of ordinary (equity) shares, using the CAPM:

$$k_e = R_f + [R_m - R_f]\beta$$