

UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF MANAGEMENT AND FINANCE

Bachelor of Business Administration (Semester - III) Examination - July, 2022

FIN - 2311 Financial Management

Instructions.

- This paper includes Part I on Learning Management System (LMS) with Fifty (50) Multiple Choice Questions (MCQ) and Part II with 02 structured questions on 04 pages as online and open book examination.
- Time Allowed for **Part I** is **one hour and fifteen minutes** and **Part II** is **one hour and forty-five minutes**.
- Answer all the questions in Part II which has four (04) pages.
- Use of Calculators is allowed.

Part I

Includes Fifty (50) Multiple Choice Questions (MCQs) to be attempted in the Learning Management System (LMS).

(Total 40 marks)

Part II

01.

- i. “Financial Management plays a significant role in both personal and business contexts”. Discuss the above statement highlighting relevant contextual applications.

(03 marks)

- ii. “Validity of capital asset pricing model is challenged by other theories”. Comment on this statement in the context of arbitrage pricing theory.

(03 marks)

- iii. Each stock of ABC Ltd has just received a dividend of Rs. 2.50 per share. The stock has an expected growth of 10% for the first 4 years and 8% thereafter. If the required rate of return is 12%, determine the value of the share.

(04 marks)

- iv. As a newly recruited security analyst of an investment advisory firm, you are tasked with identifying best investment options for the clients. You have gathered the following information regarding two shares traded under different economic conditions.

Economic Condition	Probability	Stock 01	Stock 02
Depression	0.2	2%	-5%
Normal	0.5	10%	12%
Boom	0.3	18%	20%

- Calculate the expected return of each stock.
- Calculate the standard deviation of return on each stock.
- Calculate the coefficient of variation of each stock.
- Based on your opinion, which stock would you recommend to buy? Comment.

(10 marks)

- v. A bottle manufacturing firm produces 300,000 bottles per year. Each bottle is sold at Rs. 5. The variable cost of producing a bottle is Rs. 2.50. Fixed cost of the operation is Rs. 100, 000. The company pays Rs. 8,000 interest and Rs. 2,500 preference shares dividend. The corporate tax is 30%.

- Calculate the Degree of operating leverage (DOL), Degree of Financial Leverage (DFL) and the Degree of Total Leverage (DTL).
- If the expected sales level is 50,000 bottles per year, calculate the DOL, DTL and DFL.
- Comment on your answers in part (a) and (b) considering the Break Even Point (BEP).

(04 marks)

(04 marks)

(02 marks)

(Total 30 marks)

02.

- i. Discuss whether profitability or liquidity is the primary objective of working capital management.

(04 marks)

- ii. Mickey limited is considering relaxing its present credit policy and is in the process of evaluating two proposed policies. Currently, the firm has annual credit sales of Rs. 22.5 million and accounts receivable turnover ratio of 5 times a year. The firm is required to give a return of 20% on the investment in new accounts receivables. The company's variable costs are 60% of the selling price.

	Present policy	Policy option I	Policy option II
Annual credit sale (in million Rs.)	22.5	27.5	35.0
Credit period (assume 360 days in a year)	72 days	90 days	120 days
Bad debt losses (% of credit sales)	1%	1.5%	3%

Given the above information, which is a better option for the company? Justify your answer.

(07 marks)

- iii. As a new intern in Finance at the Access Toy Company, your manager has asked you to do some preliminary analysis on a potential investment project. The project under consideration is a replacement of a machine currently used in the company.

If the old machine is replaced, the company will sell the existing machine for Rs. 300,000. Its current book value (purchase price – accumulated depreciation) is Rs. 200,000. The machine has a balance of 4 years of life, and it is being depreciated on a simple straight-line basis to a zero-salvage value.

Access Toy Company is offered a replacement machine that costs Rs. 1,200,000 with an estimated useful life of 6 years, and an estimated salvage value of Rs.100,000. This amount includes all installation costs. This machine falls into the Modified Accelerated Cost Recovery System (MACRS) 5-year class, so the applicable depreciation rates are 20%, 32%, 19%, 12%, 11%, and 6%. The replacement machine would permit an output expansion, and the sales would rise by Rs. 210,000 per year. In addition, the new machine's greater efficiency would cause operating expenses to decline by Rs. 250,000 per year.

The new machine would require that inventories be increased by Rs.20, 000; but accounts payable would simultaneously increase by Rs. 5, 000. The firm estimates that its weighted average cost of capital for this project is 12%. Its marginal tax rate is 25%. The manager has requested the following.

- a. Estimate the relevant cash flows of the replacement project.
- b. Find the NPV of the project and provide your recommendation to the company.

(11 marks)

- iv. There are two firm's 'V' and 'W' which are exactly identical except that 'W' does not use any debt in its financing.

Details	Company 'V'	Company 'W'
Number of ordinary shares	75,000	1,25,000
7% debentures	40,000	-
Market price per shares	Rs.1.25	Rs.1.00
Profit before interest	Rs.25,000	Rs.25,000

Assume that all profits after paying debenture interest are distributed as dividends. You are required to explain how under Modigliani and Miller's approach, an investor holding 10% of shares in company 'V' will be better off in switching his holding to company 'W'.

(08 marks)

(Total 30 Marks)

Present value interest factor of Rs.1 per period at i% for n periods, PVIF(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Present value interest factor of an (ordinary) annuity of Rs.1 per period at i% for n periods, PVIFA(i,n).

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870