



**MASINDE MULIRO UNIVERSITY OF SCIENCE AND
TECHNOLOGY**

**UNIVERSITY EXAMINATIONS
2021 / 2022 ACADEMIC YEAR**

**TRIMESTER
EXAMINATION**

**FOR THE DEGREE OF MASTERS IN BUSINESS
ADMINISTRATION**

COURSE CODE: MBA 832

COURSE TITLE: CORPORATE FINANCE

DATE: WEDNESDAY, 27TH JULY 2022 TIME: 2-5 PM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE AND ANY OTHER THREE (3) QUESTIONS

TIME: 3 HOURS

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.

QUESTION ONE COMPULSORY-

40 Marks

- a) Compute the annual lease payment that a lessor will require if payments are in advance if the purchase price of an asset is shs. 1000000, interest rate of 10 percent, five year lease period and no residual value. **(3marks)**
- b) Describe features that characterize financial lease. When is leasing considered a financing option for corporate organizations. **(6 marks)**
- c) Make brief notes on the following asset classes based on their risk –return profile and advice a risk tolerant investor on the right portfolio of investments to pick. **(12 marks)**
 - i. Mutual funds
 - ii. Private Equity Funds
 - iii. Hedge Funds
 - iv. Real estate Investment funds
- d) What does covariance measure? If two assets are said to have positive covariance, what does it mean? **(3marks)**
- e) Explain, why doesn't an estimated absolute covariance number tell the investor much about the relationship between the returns on the two assets? **(3 marks)**
- f) If the risk-free rate of return is 6% and the return on the market portfolio is 8%, what is the expected return on an asset having a Beta of 0.8, according to the CAPM? **(3marks)**
- g) How does a Capital Market Line, Security Market Line and Characteristic Line help an investor make his/her decisions in the financial market? **(10 marks)**

QUESTION TWO

(20 marks)

- a) Refer to the following information on joint stock returns for stock 1, 2, and 3 in the table

Probability	Return for stock		
	Stock 1	Stock 2	Stock 3
0.20	0.20	0.25	0.10
0.30	-0.05	0.10	0.05
0.25	0.10	0.05	0
0.25	0	-0.10	-0.05

- If you must choose only two stocks to your investment portfolio, what would be your choice? Present your arguments and calculations, to explain your decision. **(5marks)**
- b) In terms of the Markowitz portfolio model, explain how an investor identifies his / her optimal portfolio. What specific information does an investor need to identify optimal portfolio? **(5marks)**

- c) Many of underlying assumptions of the CAPM are violated in some degree in “real world”. Does that fact invalidate model’s calculations? Explain. **(5marks)**
- d) What does efficient market hypothesis explain **(5marks)**

QUESTION THREE **(20 marks)**

Refer to the following observations for stock A and the market portfolio in the table:

Month	Rate of return	
	Stock A	Market portfolio
1	0.30	0.12
2	0.24	0.08
3	-0.04	-0.10
4	0.10	-0.02
5	0.06	0.08
6	0.10	0.07

- a) Calculate the main statistic measures to explain the relationship between stock A and the market portfolio:
- i. The sample covariance between rate of return for the stock A and the market. **(4 marks)**
 - ii. The sample Beta factor of stock A. **(3 marks)**
 - iii. The sample correlation coefficient between the rates of return of the stock A and the market. **(5 marks)**
 - iv. The sample coefficient of determination associated with the stock A and the market. **(3marks)**
- b) Draw in the characteristic line of the stock A and give the interpretation – what does it show for the investor? **(5marks)**

QUESTION FOUR **20 marks**

A company has decided to acquire a piece of equipment costing shs. 300000 for four years. The equipment is expected to have no salvage value at the end and the company uses straight line depreciation method on all its fixed assets. The company has two financing alternatives available, leasing or borrowing. The loan has an interest rate of 15% requiring end of year installments to be paid. The lease would be set at a level that will amortize the cost of equipment over the lease period and would provide the lessor with 14% return on capital. The company’s tax rate is 30%.

- i) Compute the annual lease payments **(3marks)**
- ii) Compute the present value of the cash flows under lease financing **(6marks)**
- iii) Calculate annual installment payments **(3marks)**

- iv) Calculate the present value of the after tax cash flow under the loan Alternative. (6marks)

Which alternative is recommended and why? (2marks)

QUESTION FIVE (20 MARKS)

- a) How similar and different is long term debt from preferred stock from a corporate financing perspective (8marks)
- b) A company is considering to raise debt capital amounting to Kshs. 100 million with a floatation cost of shs. 300000 over the next 4 years. If the interest paid on long term debt is 14 percent while that paid on short term debt is 10 percent per annum,
- i) Determine the optimum issue size of debt for the company. (3marks)
- ii) How many issues will be made for the total debt to be raised for a duration of debt. (3marks)
- iii) Calculate the total cost of raising debt for this company and show on a graph. (3marks)
- iv) What will be the total cost of raising debt if the issue size is below the optimal size? Use a hypothetical issue size to illustrate. (3marks)

TABLE C.2

Present Value of an Annuity of \$1 Per Period for n Periods:

$$PVIFA = \sum_{i=1}^n \frac{1}{(1+k)^i} = \frac{1 - \frac{1}{(1+k)^n}}{k}$$

Number of Payments	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9259	0.9174	0.9091	0.8929	0.8772	0.8656	0.8521	0.8475	0.8333	0.8065	0.7813	0.7576
2	1.9704	1.9416	1.9135	1.8861	1.8594	1.8334	1.8080	1.7833	1.7591	1.7355	1.6901	1.6467	1.6257	1.6052	1.5656	1.5278	1.4568	1.3916	1.3315
3	2.9410	2.8839	2.8286	2.7751	2.7232	2.6730	2.6243	2.5771	2.5313	2.4869	2.4018	2.3216	2.2832	2.2459	2.1743	2.1065	1.9813	1.8684	1.7663
4	3.9020	3.8077	3.7171	3.6299	3.5460	3.4651	3.3872	3.3121	3.2397	3.1699	3.0373	2.9137	2.8550	2.7982	2.6901	2.5887	2.4043	2.2410	2.0957
5	4.8534	4.7135	4.5797	4.4518	4.3295	4.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454	2.5320	2.3452
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4859	4.3553	4.1114	3.8887	3.7845	3.6847	3.4976	3.3255	3.0205	2.7594	2.5342
7	6.7282	6.4720	6.2303	6.0021	5.7864	5.5824	5.3893	5.2064	5.0330	4.8684	4.5638	4.2883	4.1604	4.0386	3.8115	3.6046	3.2423	2.9370	2.6775
8	7.6517	7.3255	7.0197	6.7327	6.4632	6.2098	5.9713	5.7466	5.5348	5.3349	4.9676	4.6389	4.4873	4.3426	4.0776	3.8372	3.4212	3.0758	2.7860
9	8.5660	8.1622	7.7861	7.4353	7.1078	6.8017	6.5152	6.2469	5.9952	5.7590	5.3282	4.9464	4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	2.8681
10	9.4713	8.9826	8.5302	8.1109	7.7217	7.3601	7.0236	6.7101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	2.9204
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	5.9377	5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
12	11.2551	10.5753	9.9540	9.3851	8.8633	8.3838	7.9427	7.5361	7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
13	12.1337	11.3484	10.6350	9.9856	9.3936	8.8527	8.3577	7.9038	7.4809	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
14	13.0037	12.1062	11.2961	10.5631	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	3.0609
15	13.8651	12.8493	11.9379	11.1184	10.3797	9.7122	9.1079	8.5595	8.0607	7.6661	6.8109	6.1422	5.8474	5.5755	5.0916	4.6735	4.0013	3.4834	3.0764
16	14.7179	13.5777	12.5611	11.6523	10.8378	10.1059	9.4466	8.8514	8.3126	7.8237	6.9740	6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3.5026	3.0882
17	15.5623	14.2919	13.1661	12.1657	11.2741	10.4773	9.7632	9.1216	8.5436	8.0216	7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
18	16.3983	14.9920	13.7535	12.6593	11.6896	10.8276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3.1039
19	17.2260	15.6785	14.3238	13.1339	12.0853	11.1581	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3.1090
20	18.0456	16.3514	14.8775	13.5903	12.4622	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696	4.1103	3.5458	3.1129
25	22.0232	19.5235	17.4131	15.6221	14.0939	12.7834	11.6536	10.6748	9.8226	9.0770	7.8431	6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
30	25.8077	22.3965	19.6004	17.2920	15.3725	13.7648	12.4090	11.2578	10.2737	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	3.5693	3.1242
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9316	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.3559	15.7619	13.8007	12.2335	10.9617	9.9143	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
60	44.9550	34.7609	27.6786	22.6235	18.9293	16.1614	14.0392	12.3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5.5553	4.9999	4.1667	3.5714	3.1250