

**THE OPEN UNIVERSITY OF SRI LANKA**  
**BACHELOR OF MANAGEMENT STUDIES (BMS) DEGREE PROGRAMME**  
**LEVEL - 05**  
**FINAL EXAMINATION – 2013**  
**FINANCIAL MANAGEMENT AND MANAGERIAL ACCOUNTING – MCU3208**  
**DURATION: THREE (03) HOURS**



**DATE: 07<sup>th</sup> July 2013**

**TIME: 9.30 am – 12.30 pm**

**INSTRUCTIONS**

- (i) *Answer only five (05) Questions selecting any TWO (02) from Part A and any THREE (03) from Part B.*
- (ii) *Use of a non-programmable calculator is allowed.*

**PART - A**

- (1) (i) Describe the role of a Management Accountant in a manufacturing organization. (10 Marks)
- (ii) Why is it necessary to classify costs, by their behaviour? Explain. (10 Marks)
- (2) (i) Using examples, explain how *cost-volume profit (CVP) analysis* can be used for business decision making. (06 Marks)
- (ii) Summarized profit and loss statement for ABC Ltd., for the last year, given below.

	Rs. (000')	
Sales (25000 units)		500
Direct material	175	
Direct labour	100	
Variable overhead	25	
Fixed production overhead	100	
Administration overhead	90	
Selling and distribution overhead	60	(550)
Profit		<u>(50)</u>

Board of directors have discussed the last year results and suggested the following proposals to improve the situation.

- Proposal 1 : Pay salesman a commission of 10% on sales and thus increase sales to achieve the break-even point.
- Proposal 2 : Reduce selling price by 10% to increase sales volume by 30%.
- Proposal 3 : Increase direct wage rates from Rs.4/= to Rs.5/= per hour with a view to increase productivity. This would increase production by 20%. However, as a result advertising cost too will increase by Rs. 50,000/=.

You are required to evaluate above alternative proposals and comment on each.

(14 Marks)

- (3) (i) Mr. Silva has taken a shop on lease for a down payment of Rs.5000/=. Additionally, the rent under the lease, amounts to Rs.5000/= per annum. If the lease is cancelled, Mr. Silva will not be able to reclaim the initial down payment of Rs. 5000/=. He plans to use the shop for the sale of clothing and has estimated the cost of operations for the next twelve months.

	Rs. (000')	
Sale	115	
Less: VAT	<u>(15)</u>	
		100
Cost of goods sold	50	
Wages	12	
Rent including down payment	10	
Rate, heating and insurance	13	
Audit fee	<u>2</u>	<u>(87)</u>
Profit		<u><u>13</u></u>

In the above figures no provision has been made for the cost of Mr. Silva but, it is estimated that the half of his time will be devoted to this business. He is undecided whether to continue with his plans, because he knows that he can sublet the shop to a friend for a monthly rent of Rs. 550/=. if he does not use the shop himself.

You are required to

- (a) Explain and identify the "Sunk Cost" and "Opportunity Cost" in the situation depicted above. (04 Marks)
- (b) State what decision Mr. Silva should make according to the information given. Support your conclusions with necessary calculations. (04 Marks)
- (ii) A toy factory produces 12,000 units for the last year at the following costs.

	<u>Cost (per unit) Rs.</u>
Direct Material	10/-
Direct Labour	20/-
Variable overhead	5/-

Fixed cost : Rs.120,000/=

Selling price : Rs.50/- per unit.

The factory has capacity to produce 20,000 units per year. The firm has an offer for the purchase of 5000 additional units at a price of Rs.40/- per unit. It is expected that accepting this offer there will be a saving of Re.1/- per unit in material costs on all units manufactured. But, fixed costs will increase by Rs. 35,000/= and direct labour and variable overhead cost will increase by 2%.

You are required to prepare a report (presenting necessary calculations) to the management giving your recommendation as to whether this offer can be accepted.

(12 Marks)

**PART - B**

- (4) (i) What is the difference between stock price maximization and profit maximization? Explain. (10 Marks)
- (ii) Explain how finance relates to some of the non-finance areas in a business organization. (10 Marks)
- (5) (i) Why don't the rational individuals value the opportunity to receive a specific amount of money today with the opportunity to have the same amount at some future date? Explain. (06 Marks)
- (ii) A firm borrows Rs. 250,000/- from a bank at 12% interest compounded annually to purchase some new machinery. This loan is to be repaid in equal annual installments at the end of each year over the next five years. How much will each annual payment be? (04 Marks)
- (iii) The ordinary shares of NCP Ltd., paid Rs.3.50 dividend per share last year. Dividends are expected to grow at an annual rate of 5%. However, the company is expecting significant technical improvement and cost reduction in its operations which would increase growth rate to 12%. Company's capitalization rate is 15%. You are required to calculate,
- (a) The value of the share, assuming the current growth rate. (05 marks)
- (b) The value of the share, if the company achieves technical improvement and cost reduction. (05 Marks)
- (6) You have been called upon to advice a client with regard to an investment of Rs.100,000/= on share in CSE. You have done your research into the market and have assigned probabilities to expected returns of two companies of interest, under three possible market conditions.

The data in relation to expected returns for the two companies, Alfa Ltd., and Beta Ltd., is summarized in the following table.

Market Condition	Probability	Alfa	Beta
Strong	0.5	-2%	20%
Moderate	0.1	10%	12%
Weak	0.4	15%	2%

- (i) Calculate the expected return for both Alfa Ltd. and Beta Ltd. (03 Marks)
- (ii) Calculate the standard deviation for the expected returns for both Alfa Ltd. And Beta Ltd. (03 Marks)
- (iii) Calculate the covariance between the expected returns of Alfa Ltd., and Beta Ltd. (04 Marks)

- (iv) Calculate the portfolio expected return for portfolio where Rs.20,000/= is invested in Alfa Ltd., and Rs.80,000/= is invested in Beta Ltd. (05 Marks)
- (v) Calculate the portfolio standard deviation for a portfolio where Rs.20,000/= is invested in Alfa Ltd., and Rs.80,000/= is invested in Beta Ltd. (05 Marks)

- (7) (i) What is 'cost of capital'? (03 Marks)
- (ii) Explain how the cost of capital is used to make financial decisions. (05 Marks)
- (iii) The following figures have been extracted from the most recent accounts of XYZ Ltd.

**Balance Sheet for the last year.**

	Rs. (000')	Rs. (000')
Non current assets		4000
Current assets		2000
<b>Equity and Liabilities</b>		
Ordinary shares	2500	
Preference shares	500	
10% debt	2000	
Current liabilities	1000	
<b>Total</b>	<b>6000</b>	<b>6000</b>

A preference share of the company is sold for Rs.9.50. The company pays a dividend of Rs.1.10 per share. For ordinary shareholders, management expects to pay a fully dividend at the end of the year, Rs.1.65 per share, and dividend will increase at an annual rate of 9% thereafter. The current price of the ordinary share is Rs.30/=. The marginal tax rate of the company is 30%.

Using above information you are required to estimate firm's weighted average cost of capital (WCC). (12 Marks)

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**STATISTICAL FORMULAE**

Expected return

$$E(R) = \sum R_i P_i$$

Risk of Expected return

$$E = \sum [R_i - E(R)]^2 P_i$$

Expected return of Portfolio

$$\sigma(RP) = \sum W_1 E(R_1) + W_2 E(R_2)$$

Covariance of Return

$$Cov_{xy} = \sum [R_x - E(R_x)] [R_y - E(R_y)] P_i$$

Risk of Portfolio

$$\sigma p = \sqrt{W_x^2 \sigma_x^2 + W_y^2 \sigma_y^2 + 2W_x W_y Cov_{xy}}$$

Table A-3 Present Value Interest Factors for One Dollar Discounted at  $k$  Percent for  $n$  Periods:  $PV/F_{k,n} = 1 / (1 + k)^n$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	18%	20%	24%	25%	30%
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.9346	0.9269	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772	0.8696	0.8621	0.8333	0.8065	0.8000	0.7692	
2	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	0.7432	0.6944	0.6504	0.6400	0.5917	
3	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	0.6407	0.5787	0.5245	0.5120	0.4552	
4	0.9610	0.9238	0.8885	0.8648	0.8227	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921	0.5718	0.5523	0.4823	0.4230	0.4096	0.3501	
5	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	0.4761	0.4019	0.3411	0.3277	0.2693	
6	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	0.4104	0.3349	0.2751	0.2621	0.2072	
7	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	0.3538	0.2791	0.2218	0.2097	0.1594	
8	0.9235	0.8535	0.7894	0.7307	0.6768	0.6274	0.5820	0.5403	0.5019	0.4666	0.4339	0.4039	0.3762	0.3506	0.3269	0.3050	0.2326	0.1789	0.1678	0.1226	
9	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	0.2630	0.1938	0.1443	0.1342	0.0943	
10	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	0.2267	0.1615	0.1164	0.1074	0.0725	
11	0.8963	0.8043	0.7224	0.6496	0.5847	0.5268	0.4751	0.4289	0.3875	0.3506	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346	0.0938	0.0859	0.0558	
12	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	0.1685	0.1122	0.0767	0.0687	0.0429	
13	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	0.1452	0.0935	0.0610	0.0550	0.0330	
14	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	0.1252	0.0779	0.0492	0.0440	0.0264	
15	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	0.1079	0.0649	0.0397	0.0352	0.0195	
16	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	0.0930	0.0541	0.0320	0.0281	0.0150	
17	0.8444	0.7142	0.6050	0.5134	0.4363	0.3714	0.3166	0.2703	0.2311	0.1978	0.1686	0.1456	0.1252	0.1078	0.0929	0.0802	0.0451	0.0258	0.0225	0.0116	
18	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	0.0691	0.0376	0.0208	0.0180	0.0089	
19	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	0.0596	0.0313	0.0168	0.0144	0.0068	
20	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	0.0514	0.0261	0.0135	0.0115	0.0053	
21	0.8114	0.6598	0.5375	0.4388	0.3589	0.2942	0.2415	0.1987	0.1637	0.1361	0.1117	0.0926	0.0768	0.0638	0.0531	0.0443	0.0217	0.0109	0.0092	0.0040	
22	0.8034	0.6468	0.5219	0.4220	0.3418	0.2775	0.2257	0.1839	0.1502	0.1228	0.1007	0.0826	0.0680	0.0560	0.0462	0.0382	0.0181	0.0088	0.0074	0.0031	
23	0.7954	0.6342	0.5067	0.4057	0.3256	0.2618	0.2109	0.1703	0.1378	0.1117	0.0907	0.0738	0.0601	0.0491	0.0402	0.0329	0.0161	0.0071	0.0059	0.0024	
24	0.7876	0.6217	0.4919	0.3901	0.3101	0.2470	0.1971	0.1577	0.1264	0.1016	0.0817	0.0659	0.0532	0.0431	0.0349	0.0284	0.0126	0.0057	0.0047	0.0018	
25	0.7798	0.6095	0.4776	0.3751	0.2953	0.2330	0.1842	0.1460	0.1160	0.0923	0.0736	0.0588	0.0471	0.0378	0.0304	0.0245	0.0105	0.0046	0.0038	0.0014	
30	0.7419	0.5521	0.4120	0.3083	0.2314	0.1741	0.1314	0.0994	0.0754	0.0573	0.0437	0.0334	0.0256	0.0196	0.0151	0.0116	0.0042	0.0016	0.0012	*	
35	0.7059	0.5000	0.3564	0.2534	0.1813	0.1301	0.0837	0.0676	0.0490	0.0356	0.0259	0.0189	0.0139	0.0102	0.0075	0.0055	0.0017	0.0005	*	*	
36	0.6989	0.4902	0.3450	0.2437	0.1727	0.1227	0.0875	0.0626	0.0448	0.0323	0.0224	0.0169	0.0123	0.0089	0.0065	0.0048	0.0014	*	*	*	
40	0.6717	0.4529	0.3066	0.2083	0.1420	0.0972	0.0668	0.0460	0.0318	0.0221	0.0154	0.0107	0.0075	0.0053	0.0037	0.0026	0.0007	*	*	*	
50	0.6080	0.3715	0.2281	0.1407	0.0872	0.0543	0.0339	0.0213	0.0134	0.0085	0.0054	0.0035	0.0022	0.0014	0.0009	0.0006	*	*	*	*	

Table A-4 Present Value Interest Factors for a One-Dollar Annuity Discounted at k Percent for n Periods:  $PVIFA = [1 - 1/(1 + k)^n] / k$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	26%	30%
1	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	0.8621	0.8333	0.8065	0.8000	0.7692
2	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	1.6052	1.5278	1.4568	1.4400	1.3609
3	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	2.2459	2.1065	1.9813	1.9520	1.8161
4	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	2.7982	2.5987	2.4043	2.3616	2.1662
5	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	3.2743	2.9906	2.7454	2.6893	2.4356
6	5.7955	5.6014	5.4172	5.2421	5.0757	4.9173	4.7665	4.6229	4.4869	4.3553	4.2305	4.1114	3.9975	3.8887	3.7845	3.6847	3.3255	3.0205	2.9514	2.6427
7	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	4.0386	3.6046	3.2423	3.1611	2.8021
8	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	4.3436	3.8372	3.4212	3.3289	2.9247
9	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	4.6065	4.0310	3.5655	3.4631	3.0190
10	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	4.8332	4.1925	3.6819	3.5705	3.0915
11	10.368	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7.1390	6.8052	6.4951	6.2065	5.9377	5.6859	5.4527	5.2337	5.0286	4.3271	3.7757	3.6564	3.1473
12	11.255	10.575	9.9540	9.3851	8.8633	8.3838	7.9427	7.5351	7.1607	6.8137	6.4924	6.1944	5.9176	5.6603	5.4206	5.1971	4.4392	3.8514	3.7251	3.1903
13	12.134	11.348	10.635	9.9856	9.3936	8.8527	8.3577	7.9038	7.4869	7.1034	6.7499	6.4235	6.1218	5.8424	5.5831	5.3423	4.5327	3.9124	3.7801	3.2233
14	13.004	12.106	11.295	10.563	9.8986	9.2950	8.7455	8.2442	7.7862	7.3667	6.9819	6.6282	6.3025	6.0021	5.7245	5.4675	4.6106	3.9816	3.8241	3.2487
15	13.865	12.849	11.938	11.118	10.380	9.7122	9.1079	8.5595	8.0507	7.6061	7.1909	6.8109	6.4624	6.1422	5.8474	5.5755	4.6755	4.0013	3.8593	3.2682
16	14.718	13.578	12.561	11.652	10.838	10.106	9.4466	8.8514	8.3126	7.8237	7.3792	6.9740	6.6039	6.2651	5.9542	5.6685	4.7296	4.0333	3.8874	3.2832
17	15.562	14.292	13.166	12.166	11.274	10.477	9.7632	9.1216	8.5436	8.0216	7.5488	7.1196	6.7291	6.3729	6.0472	5.7487	4.7746	4.0591	3.9099	3.2948
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.3719	8.7556	8.2014	7.7016	7.2497	6.8399	6.4674	6.1280	5.8178	4.8122	4.0799	3.9279	3.3037
19	17.226	15.678	14.324	13.134	12.086	11.158	10.336	9.6036	8.9501	8.3649	7.8393	7.3658	6.9380	6.5604	6.1982	5.8775	4.8435	4.0967	3.9424	3.3105
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231	6.2593	5.9288	4.8596	4.1103	3.9539	3.3158
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.2922	8.6487	8.0751	7.5620	7.1016	6.6870	6.3125	5.9731	4.8913	4.1212	3.9631	3.3198
22	19.660	17.658	15.937	14.451	13.163	12.042	11.051	10.201	9.4424	8.7715	8.1757	7.6446	7.1695	6.7429	6.3587	6.0113	4.9094	4.1300	3.9705	3.3230
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.5802	8.8832	8.2664	7.7184	7.2297	6.7921	6.3968	6.0442	4.9246	4.1371	3.9764	3.3264
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.7066	8.9847	8.3481	7.7843	7.2829	6.8351	6.4338	6.0726	4.9371	4.1428	3.9811	3.3272
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.8226	9.0770	8.4217	7.8431	7.3300	6.8729	6.4641	6.0971	4.9476	4.1474	3.9849	3.3286
30	25.808	22.396	19.600	17.292	15.372	13.766	12.409	11.258	10.274	9.4269	8.6938	8.0562	7.4987	7.0027	6.5660	6.1772	4.9789	4.1601	3.9950	3.3321
35	29.409	24.999	21.487	18.665	16.374	14.498	12.948	11.855	10.567	9.6442	8.8562	8.1755	7.5856	7.0700	6.6166	6.2153	4.9915	4.1644	3.9984	3.3330
36	30.108	25.489	21.832	18.908	16.547	14.621	13.035	11.717	10.612	9.6765	8.8786	8.1924	7.5979	7.0790	6.6231	6.2201	4.9929	4.1649	3.9987	3.3331
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.7791	8.9511	8.2438	7.6344	7.1050	6.6418	6.2335	4.9966	4.1659	3.9995	3.3332
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.9148	9.0417	8.3045	7.6752	7.1327	6.6505	6.2463	4.9995	4.1666	3.9999	3.3333

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