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THE OPEN UNIVERSITY OF SRI LANKA
MASTER OF BUSINESS ADMINISRATION IN HUMAN RESOURCES MANAGEMENT
FINAL EXAMINATION – DECEMBER 2010
MCP 2132 - MANAGERIAL FINANCE
DURATION: THREE (03) HOURS

DATE: 08TH JANUARY 2011 **TIME: 1.30 PM – 4.30 PM**

This paper consists of six questions. You are required to answer any five. All questions carry equal marks. Discounted tables will be provided.

Question One

(A) For the relevant cost data in items (i) – (vii), indicate which of the following cost elements the best classification.

a) Sunk cost
b) Incremental cost
c) Variable cost
d) Fixed cost
e) Semi-variable cost
f) Semi-fixed cost
g) Controllable cost
h) Non-controllable cost
i) Opportunity cost

i. The company is considering selling an old machine. The machine has a book value of Rs. 20,000. In evaluating the decision to sell the machine, the Rs. 20,000 is a ....

ii. As an alternative to the old machine the company can rent a new one. It will cost Rs. 3,000 a year. In analyzing the cost-volume behaviour the rental is a ....

iii. To run the company's machines, there are two alternative courses of action. One is to pay the operators a base salary plus a small amount per unit produced. This makes the total cost of the operators a ....

iv. As an alternative, the company can pay the operator's a flat salary. It could then use one machine when volume is low, two when it expands and three during peak periods. This means that the total operator cost would now be a ....

v. The machine mentioned in (i) could be sold for Rs. 8,000. If the company considers retaining and using it the Rs. 8,000 is a ....

vi. If the company wishes to use the machine any longer, it must be repaired. For the decision to retain the machine, the repair cost is a ....

vii. The machine charged to the foreman of each department at a rate of Rs. 3,000 a year. In evaluating performance of the department, the charge is a ....

(B) The following data pertains to Job BOP 432.

Direct material Rs. 3,000
Direct labour Rs. 2,000
Direct expenses Rs. 1,000.

The estimated overheads for the coming 3 month period are Rs. 100,000 and direct labour anticipated to be expended is Rs. 200,000. It is customary to charge a mark-up of 20% on cost of production in order to cover non-manufacturing overheads and to ensure a profit margin.

Quote a price for Job 432:

i. In times of high demand in your workshop
ii. In time of low demand in your workshop.

Question Two

(A) Criss-Cross Furniture Ltd. manufactures three products: wall racks, clothes-hangers and lamp-stands. The envisages sales mix is 60%, 25% and 15% respectively with an estimated sales value of Rs. 1,000,000 for the coming year. Cost structure of the three products is given below:

	Wall racks (Rs)	**Clothes-hangers(Rs.)**	**Lamp-stands (Rs)**
Selling price	100	100	100
Variable cost	50	70	80
Contribution per unit	50	70	80

Fixed costs are budgeted at Rs. 100,000.
The organization is now considering revising its target sales mix to 80%, 15% and 5%. Fixed costs are expected to increase to Rs. 120,000 as a result.

Compare the effect of the two alternative sales mixes and recommend a suitable course of action.

(B) Imagine a ship repair yard which is short of work with many men idle but receiving a guaranteed wage. Tenders are invited for an immediate repair to a damaged ship which will take a few weeks to complete. Rumours on the grapevine suggest that another firm is tendering on the basis of direct labour and material costs plus only one third of the normal fixed overhead charge. Is it still worth competing?

Question Three

1) (A) An accountant is using the concept of Net-Present Value (NPV) to assess three alternative methods of paying for a new computer system which is expected to have a commercial life of eight years before replacement.

i. Rent the system for eight years at Rs. 1,200,000 per annum, payable annually in advance, inclusive of all servicing and maintenance.

ii. Outright purchase for Rs. 5 million, with a service contract of Rs. 400,000 payable annually in advance. After eight years the system would have a resale value of 10% of its original purchase price.

iii. Hire purchase of a deposit of Rs. 1,500,000 and seven further annual payments of Rs. 1,000,000, inclusive of all servicing, after which time (i.e. after eight years) the company would own the system, then worth Rs. 500,000.

If discount factor is 12% which option would you recommend?

(B) The discounted cash-flow method is superior to all other methods of project appraisal. Give your views.

Question Four

Nadana Limited manufactures one standard product and in common with other companies in the industry, is suffering from the current depression in the market. Currently it is operating at a normal level of activity of 70% which represents an output of 126,000 units, but the sales director believes that a realistic forecast for the next budget period would be a level of activity of 50%. You are given the following estimates:

Item	**Level of activity**		
	60%	70%	80%
Direct material (Rs.)	75,600	88,200	100,800
Direct wages (Rs.)	32,400	37,800	43,200
Production overheads (Rs.)	75,200	82,400	89,600
Administration overheads (Rs.)	63,000	63,000	63,000
Selling and distribution overheads	84,600	88,200	91,800
Total	330,800	359,600	388,400

Profit is 20% of the selling price.

(a) You are required, from the data given in the current flexible budget above, to prepare a budget on a level of activity of 50%, which should show clearly the contribution which could be expected. Discuss briefly, the problems which may arise from such a change in level of activity.
(b) Discuss the advantages of Autocratic Budgeting vs. Participative Budgeting.

Question Five

Summarized results of Electo Ltd., an electrical engineering business are given below

Electo Ltd

Profit and Loss Account (Rs.000')

	Year ended	
	31.12.2009	**31.12.2010**
Turnover	60,000	50,000
Cost of Sales	42,000	34,000
Gross Profit	18,000	16,000
Operating Expenses	15,500	13,000
Operating Profit	2,500	3,000
Interest payable	2,200	1,300
Profit before taxation	300	1,700
Taxation	350	600
(Loss) Profit after taxation	(50)	1,100
Dividends	600	600
Transfer (from) to reserves	650	500

Balance Sheet (Rs.000')

	Year ended	
	31.12.2009	**31.12.2010**
Fixed Assets		
Intangible	500	--
Tangible	12,000	11,000
Current Assets		
Stocks	14,000	13,000
Debtors	16,000	15,000
Bank and cash	500	500
	30,500	28,500
Creditors due within one year	24,000	20,000
Net current assets	6,500	8,500
Total assets less current liabilities	19,000	19,500
Creditors due after one year	6,000	5,500
	13,000	14,000
Capital and reserves		
Share capital	1,300	1,300
Share premium	3,300	3,300
Revaluation reserve	2,000	2,000
Profit and Loss	6,400	7,400
	13,000	14,000

(a) Prepare a Table of the following ratios, calculated for both years, clearly showing the figures used in the calculations:
Current ratio; quick assets ratio; stock days; debtors' collection period (days); creditors' collection period (days); gross profit %; net profit %; interest cover; debt to equity ratio and ROCE.

(b) Comment on the performance and the financial position of the company.

(c) List the limitations of the above analysis

Question Six

Write short notes, distinguishing between the items in each pair and giving their relevance in business:

i. Profitability vs. liquidity
ii. Internal rate of Return (IRR) vs. Economic Internal Rate of Return (EIRR)
iii. Break-even point vs. Cash Break-even point
iv. Rolling budgets vs. zero-based budgets.

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A-1 Present Value of $1 Due at the End of n Periods:

$$PVIF_{k,n} = \frac{1}{(1 + k)^n}$$

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	.9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	.8772	.8696	.8621	.8475	.8333	.8065	.7813	.7576	.735
2	.9803	.9612	.9426	.9246	.9070	.8900	.8734	.8573	.8417	.8264	.7972	.7695	.7561	.7432	.7182	.6944	.6504	.6104	.5739	.540
3	.9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.6407	.6086	.5787	.5245	.4768	.4348	.397
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.292
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	.5194	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.214
6	.9420	.8880	.8375	.7903	.7462	.7050	.6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	.3704	.3349	.2751	.2274	.1890	.158
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3139	.2791	.2218	.1776	.1432	.116
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506	.3269	.3050	.2660	.2326	.1789	.1388	.1085	.085
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	.3075	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.062
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.046
11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	.1346	.0938	.0662	.0472	.034
12	.8874	.7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	.1685	.1372	.1122	.0757	.0517	.0357	.025
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	.3677	.3262	.2897	.2292	.1821	.1625	.1452	.1163	.0935	.0610	.0404	.0271	.018
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.0985	.0779	.0492	.0316	.0205	.013
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	.3152	.2745	.2394	.1827	.1401	.1229	.1079	.0835	.0649	.0397	.0247	.0155	.009
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	.1069	.0980	.0708	.0541	.0320	.0193	.0118	.007
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0600	.0451	.0258	.0150	.0089	.005
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	.2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0376	.0208	.0118	.0068	.003
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	.0431	.0313	.0168	.0092	.0051	.002
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	.1037	.0728	.0611	.0514	.0365	.0261	.0135	.0072	.0039	.002
21	.8114	.6598	.5375	.4388	.3589	.2942	.2415	.1987	.1637	.1351	.0926	.0638	.0531	.0443	.0309	.0217	.0109	.0056	.0029	.001
22	.8034	.6468	.5219	.4220	.3418	.2775	.2257	.1839	.1502	.1228	.0826	.0560	.0462	.0382	.0262	.0181	.0088	.0044	.0022	.001
23	.7954	.6342	.5067	.4057	.3256	.2618	.2109	.1703	.1378	.1117	.0738	.0491	.0402	.0329	.0222	.0151	.0071	.0034	.0017	.000
24	.7876	.6217	.4919	.3901	.3101	.2470	.1971	.1577	.1264	.1015	.0659	.0431	.0349	.0284	.0188	.0126	.0057	.0027	.0013	.000
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	.0245	.0160	.0105	.0046	.0021	.0010	.000
26	.7720	.5976	.4637	.3604	.2812	.2198	.1722	.1352	.1064	.0839	.0525	.0331	.0264	.0211	.0135	.0087	.0037	.0016	.0007	.000
27	.7644	.5859	.4502	.3468	.2678	.2074	.1609	.1252	.0976	.0763	.0469	.0291	.0230	.0182	.0115	.0073	.0030	.0013	.0006	.000
28	.7568	.5744	.4371	.3335	.2551	.1956	.1504	.1159	.0895	.0693	.0419	.0255	.0200	.0157	.0097	.0061	.0024	.0010	.0004	.000
29	.7493	.5631	.4243	.3207	.2429	.1846	.1406	.1073	.0822	.0630	.0374	.0224	.0174	.0135	.0082	.0051	.0020	.0008	.0003	.000
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	.0116	.0070	.0042	.0016	.0006	.0002	.000
35	.7059	.5000	.3554	.2534	.1813	.1301	.0937	.0676	.0490	.0356	.0189	.0102	.0075	.0055	.0030	.0017	.0005	.0002	.0001	*
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	.0460	.0318	.0221	.0107	.0053	.0037	.0026	.0013	.0007	.0002	.0001	*	*
45	.6391	.4102	.2644	.1712	.1113	.0727	.0476	.0313	.0207	.0137	.0061	.0027	.0019	.0013	.0006	.0003	.0001	*	*	*
50	.6080	.3715	.2281	.1407	.0872	.0543	.0339	.0213	.0134	.0085	.0035	.0014	.0009	.0006	.0003	.0001	*	*	*	*
55	.5785	.3365	.1968	.1157	.0683	.0406	.0242	.0145	.0087	.0053	.0020	.0007	.0005	.0003	.0001	*	*	*	*	*

*The factor is zero to four decimal place

Table A-2 Present Value of an Annuity of $1 per Period for n Periods:

$$PVIFA_{k,n} = \sum_{t=1}^{n} \frac{1}{(1 + k)^t} = \frac{1 - \frac{1}{(1 + k)^n}}{k} = \frac{1}{k} - \frac{1}{k(1 + k)^n}$$

Number of Periods	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	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.757
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	1.331
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	1.766
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	2.095
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	2.345
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	4.3436	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	2.9304
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	7.4869	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	7.6061	6.8109	6.1422	5.8474	5.5755	5.0916	4.6755	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
21	18.8570	17.0112	15.4150	14.0292	12.8212	11.7641	10.8355	10.0168	9.2922	8.6487	7.5620	6.6870	6.3125	5.9731	5.3837	4.8913	4.1212	3.5514	3.1158
22	19.6604	17.6580	15.9369	14.4511	13.1630	12.0416	11.0612	10.2007	9.4424	8.7715	7.6446	6.7429	6.3587	6.0113	5.4099	4.9094	4.1300	3.5558	3.1180
23	20.4558	18.2922	16.4436	14.8568	13.4886	12.3034	11.2722	10.3711	9.5802	8.8832	7.7184	6.7921	6.3988	6.0442	5.4321	4.9245	4.1371	3.5592	3.1197
24	21.2434	18.9139	16.9355	15.2470	13.7986	12.5504	11.4693	10.5288	9.7066	8.9847	7.7843	6.8351	6.4338	6.0726	5.4509	4.9371	4.1428	3.5619	3.1210
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
26	22.7952	20.1210	17.8768	15.9828	14.3752	13.0032	11.8258	10.8100	9.9290	9.1609	7.8957	6.9061	6.4906	6.1182	5.4804	4.9563	4.1511	3.5656	3.1227
27	23.5596	20.7069	18.3270	16.3296	14.6430	13.2105	11.9867	10.9352	10.0266	9.2372	7.9426	6.9352	6.5135	6.1364	5.4919	4.9636	4.1542	3.5669	3.1233
28	24.3164	21.2813	18.7641	16.6631	14.8981	13.4062	12.1371	11.0511	10.1161	9.3066	7.9844	6.9607	6.5335	6.1520	5.5016	4.9697	4.1566	3.5679	3.1237
29	25.0658	21.8444	19.1885	16.9837	15.1411	13.5907	12.2777	11.1584	10.1983	9.3696	8.0218	6.9830	6.5509	6.1656	5.5098	4.9747	4.1585	3.5687	3.1240
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
35	29.4086	24.9986	21.4872	18.6646	16.3742	14.4982	12.9477	11.6546	10.5668	9.6442	8.1755	7.0700	6.6166	6.2153	5.5386	4.9915	4.1644	3.5708	3.1248
40	32.8347	27.3555	23.1148	19.7928	17.1591	15.0463	13.3317	11.9246	10.7574	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966	4.1659	3.5712	3.1250
45	36.0945	29.4902	24.5187	20.7200	17.7741	15.4558	13.6055	12.1084	10.8812	9.8628	8.2825	7.1232	6.6543	6.2421	5.5523	4.9986	4.1664	3.5714	3.1250
50	39.1961	31.4236	25.7298	21.4822	18.2559	15.7619	13.8007	12.2335	10.9617	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995	4.1666	3.5714	3.1250
55	42.1472	33.1748	26.7744	22.1086	18.6335	15.9905	13.9399	12.3186	11.0140	9.9471	8.3170	7.1376	6.6636	6.2482	5.5549	4.9998	4.1666	3.5714	3.1250