IHRA
UNIVERSITY OF COLOMBO

Institute of Human Resource Advancement
University of Colombo, Sri Lanka

Master of Business Management – NO-07

1st Trimester Examination
(Held in February 2019)

MBM 5132 – Accounting for Managerial Decision Making

Instructions to the Candidates

1) Answer **Five (05)** Questions only.

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

3) Paper consists of Nine (09) pages with **Eight (08)** questions.

4) Write down the index number in all pages

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

01.

a. Peter Cox is a well-known motivational speaker. The Management Club (TMC) wants Cox to be the speaker at an all-day seminar. Cox's agent offers TMC the choice of three possible fee arrangements:

Schedule 1: $ 8000 fee

Schedule 2: $ 20 per person + €2000 fixed fee

Schedule 3: $ 50 per person.

Each attendee will be charged a fee of $ 200 for the all-day seminar.

You are required to calculate the TMC's fixed cost and variable cost for hiring Cox under each alternative schedule.

(6 Marks)

b. DM Ltd makes two sizes of moulded plastic container. The Moulding Department is the single manufacturing cost centre in the company. Budgeted sales and costs for the next year are provided in the table below.

Product	$1m^3$ container
Sales volume (unit)	100,000
Selling price per unit	$ 5
Direct materials cost per unit	$ 2
Direct labour hours per unit	0.1
Moulding machine hours per unit	0.1

The direct labour wage rate $ 10 per hour.

The allocated and apportioned costs for the Molding Department for the coming year is expected to be $ 90,000.

You are required to calculate the budgeted production cost per unit and gross profit per unit for each product, using direct labour hours as the basis for absorption.

(14 Marks)

(Total marks 20)

02. XYZ ltd. has 2 fixed price contracts for 2 different clients. The company has enough capacity for both contracts but is uncertain whether they will be profitable. Information pertaining to the production of components required by each client is provided in the table below.

Customer	Alex	Beetle
Component Type	A9	B9
Contract Values	$ 27,000	$ 100,000
Contract Quantity	1000 units	2000 units
Material Cost/unit	$ 15	$ 20
Moulding Time/batch	5 hours	7.5 hours
Batch Size	100 units	50 units

Annual budgeted overheads are provided in the table below.

Activity	Cost Driver	Cost Driver Volume/ year	Cost Pool ($)
Moulding	Moulding Hours	2000	150,000
Inspection	Batches	150	75,000
Production Management	Contracts	20	125,000

You are required to calculate the following.

a. Calculate the activity-based costs and profits for each contract.

(15 Marks)

b. Discuss the advantages and disadvantages of Activity based Costing System

(5 Marks)

(Total marks 20)

03.

a. "The breakeven chart is an excellent planning tool". Explain this statement.

(4 marks)

b. A company manufactures and sells a single product that has the following cost and price structure.

	GBP/Unit	GBP/ Unit
Selling Price		180
Direct Material	22	
Direct Labour	36	
Variable Overhead	14	
Fixed Overhead	12	(84)
Profit per unit		96

The fixed-overhead absorption rate is based on the normal capacity of 2,000 units per month. Assume that the same amount is spent each month on fixed overheads. Budgeted sales for next month is 2,200 units.

You are required to calculate:

i the breakeven point, in sales units per month;

ii the margin of safety for next month;

iii the budgeted profit for next month;

iv The company needs to bid for a tender using 15% mark-up of variable cost. What is the selling price based on cost plus variable cost?

(2 marks each)

c. ABC Ltd is to decide whether or not to proceed with a special order. Use the details below to determine the relevant cost of the order.

i. Materials T and Q will be used for the contract. 100 tonnes of material T will be needed and sufficient material is in stock because the material is in common use in the company. The original cost of the material in stock is $1 per tonne but it would cost $1.20 per tonne to replace if it is used for this contract. The material Q required is in stock as a result of previous over

purchasing. This material originally cost $500 but it has no other use. The material is toxic and if it is not used for this contract, then ABC must pay $280 to have it disposed.

ii. The contract requires 200 hours of labour at $5 per hour. Employees possessing the necessary skills are currently employed by the company, but they are idle at present due to a lull in the company's normal business.

iii. Overhead will be absorbed by the contract at a rate of $10 per labour hour, which consists of $7 for fixed overhead and $3 for variable.

iv. The contract will require the use of a storage unit for three months. ABC is committed to rent the unit for one year at a rental of $50 per month. The unit is not in use at present.

v. A neighbouring business has recently approached ABC offering to rent the unit from them for $70 per month. Total fixed overheads are not expected to increase as a result of the contract.

(8 marks)

(Total 20 marks)

04. A company manufactures three products (X, Y and Z). All direct operatives are the same grade and are paid at Rs. 12 per hour. It is anticipated that there will be a shortage of direct operatives in the following period, which will prevent the company from achieving the following sales targets

Product X	3,600 units
Product Y	8,000 units
Product Z	5,700 units

Selling prices and costs are shown in below Table:

	Product X Rs./Unit	Product Y Rs./Unit	Product Z Rs./Unit
Selling Prices	100	69	85
Variable production cost*	51.60	35	45
Variable Non Production cost	5	3.95	4
Fixed production cost	27	19	20
Fixed non-production cost	7	6	6.20
*includes the cost of direct operatives	24.20	16.50	17.60

The fixed costs per unit are based on achieving the sales targets. There would not be any savings in fixed costs if the production and sales are at a lower level.

You are required to:

Determine the production plan that would maximize profit in the following period, if the available direct operatives' hours total 25,400.

(Total marks 20)

05.

a. Explain how management accounting is related to cost accounting and financial accounting.

(4 marks)

b. "Business decisions are increasingly supported by Management accounting tools." Explain.

(4 marks)

c. Explain the importance of understanding transfer pricing.

(4 marks)

d. "Although, Micro Economics has provided much of the theoretical background to pricing product, there are difficulties in applying the basic economic theory in practice". Explain this statement using relevant theoretical and practical examples.

(8 marks)
(Total marks 20)

06.

BA Logistics (Pvt) Ltd is one of the leading logistics company in UK. Following are the financial details available with "BA Logistics (Pvt) Ltd" for the financial year 2016/2017.

	2015/2016 ($)	2016/2017 ($)
Finished Goods	190,000	185,000
Sales	3,000,000	4,500,000
Raw Material Stock	40,000	35,000
Cost of Sales	1,500,000	1025,000
Operating Profit/ EBIT	1,025,000	2,400,000
Net Profit after Taxation	770,000	905,000
Trade Receivables	600,000	400,000
Trade Payables	200,000	400,000
Purchases	2,850,000	1,845,000
Prepaid Expenses	245,000	185,000
Accrued Liabilities	286,000	145,000
Stated Capital ($10 each)	4,000,000	4,000,000
Preference Share Capital ($ 10 each)	1,850,000	1,550,000
Debentures Issued	1,400,000	1,200,000
Long term bank loan	1,850,000	1,500,000
Preference share dividends	550,000	350,000
Debenture Interest expenses	365,000	250,000
Loan Interest Expense	185,000	150,000
Reserves	945,000	1,550,000
Fixed Assets	9,000,000	8,500,000
Ordinary share dividends	275,000	200,000
Market Price per Share	275	225

Assume that 80% of sales is on credit basis and 75% of purchases is on credit basis.

a. Calculate the following for the 2016/2017 financial year using the information above.

i. **Profitability ratios**

ii. **Liquidity ratios**
Current ratio
Quick /Acid Ratio

iii. **Efficiency ratios**
Inventory turnover ratio
Debtor's turnover ratio

iii. **Leverage Ratios/ Solvency Ratios**
Debt- Equity ratio
Interest Cover ratio

(16 arks)

b. Comment on the performance of the company for 2016/17 financial year.

(04 Marks)

(Total marks 20)

07.

a. What are the differences between net present value (NPV) and internal rate of return (IRR)?

(5 marks)

b. What are the difficulties faced in installing a costing system? How are they overcome?

(5 marks)

c. Alfa Ltd has decided to start two projects namely P and Q. The expected accounting rate of return is 12%. Company has collected the following information on both projects. All figures are in Rs. '000

	Project P		Project Q	
	Estimated Cash inflow	Estimated Cash outflow	Estimated Cash inflow	Estimated Cash outflow
Initial investment		20,000		30,000
Year 1	750	150	2500	800
Year 2	2200	700	2200	600
Year 3	2800	850	2800	700
Year 4	4300	950	4800	700
Year 5	4200	1200	5200	1200
Year 6	6000	1750	8000	1800
Year 7	7500	1000	9000	1200
Year 8	8000	1800	9200	1800

Additional information.

i. Estimated lifetime of the two projects is 08 years.

ii. In addition to the above estimated cash outflows, end of 5th year, Project P and Q should spend Rs.150,000 and Rs. 250,000 for machinery repairs.

iii. End of 08th year the residual value of equipment in either projects were valued at Rs.70,000.

Determine what project should be undertaken, based on the NPV method.

(10 marks)

(Total 20 marks)

08.

a. "If the sales forecast is subject to error, then there is no purpose of budgeting". Do you agree? Briefly explain your answer.

(5 marks)

b. The following information has been collected from books of Alfa Ltd. (All figures Rs.'000)

i. Cash balance as of March 1: Rs.65,000.

ii. Forecasted sales are as follows:

- Credit sales are collected 50% in the month of the sale, 30% in the month following the sale, and 20% in the second month following the sale.
- Inventory purchases average 50% of sales. Of these purchases, 70% are paid for in the month of the purchase, with the remainder paid in the following month.
- Administrative expenses are paid in the month incurred. Expenses include Rs.25,000 for office rent, Rs.30,000 for employee salaries, and Rs.30,000 for miscellaneous expenses.

	January Rs.	February (Rs.	March Rs.	April Rs
Cash sales	127,500	143,000	160,000	175,000
Credit sales	80,000	90,000	120,000	140,000
Total sales	107,500	133,000	180,000	215,000

You are required to prepare of cash Budget for March and April.

(08 marks)

c. Bright Ltd. has prepared the budget for the production of 100,000 units of a product. Cost related information are provided in table below.

	Per unit Rs.
Raw materials	15.80
Direct labour	40.00
Direct variable expenses	2.20
Fixed production overhead	40.00
Work's overhead (60% fixed)	30.00
Administration overheads (80% fixed)	24.00
Selling overhead (50% fixed)	0.80

Actual production in the period was only 80,000 units. You are required to prepare budgets for the original and revised levels of outputs, showing clearly variable cost, fixed cost and total cost.

(7 marks)

(Total 20 marks)

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

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	20%	24%	25%	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	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	0.8548	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	0.4665	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	0.3505	0.3173	0.2875	0.2607	0.2366	0.2149	0.1954	0.1346	0.0938	0.0859	0.0559
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	0.0757	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	0.0254
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	0.1696	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	0.1351	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	0.0151	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	0.1015	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	0.3554	0.2534	0.1813	0.1301	0.0937	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	0.0449	0.0323	0.0234	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	*	*	*	*