



UNIVERSITY OF RUHUNA
FACULTY OF GRADUATE STUDIES

Master of Business Administration Degree Programme Semester I
Examination (January 2020)
Academic Year 2019/2020

MBA 102: ACCOUNTING FOR MANAGERIAL DECISIONS

Duration: 03 hours

The Question Paper contains 07 questions

Answer only Five (05) Questions

Calculators are allowed

- I.
 - I. Discuss the importance of establishing an Internal Control System (ICS) for a manager in an organization in the view of its main characteristics.

(04 Marks)
 - II. What is meant by “ Action Accountability”? Explain the importance of Action / Behavioral controls for a divisional manager in achieving the divisional targets with suitable examples.

(04 Marks)
 - III. “In the absence of a perfect market condition for the intermediate products, none of the transfer pricing methods can perfectly meet both performance evaluation requirements and divisional autonomy except dual rate pricing method”. Do you agree with this statement? Justify your answer.

(04 Marks)
(Total Marks 12)

2.

I. XYZ Company manufactures and sells 'Cables' for the local market. The following budgeted/standard information and actual information are provided relating to the last month.

- (i) The budgeted production and sales volumes 1500 cables.
- (ii) The budgeted fixed overheads associated with this output level Rs. 250,000.
- (iii) The Standard contribution for a unit of output was calculated as follows:

	Rs.	Rs.
Standard selling price (per unit)		2750
Less: Standard manufacturing costs (per unit)		
Raw materials (2 kg at Rs. 250 each)	500	
Direct labour (3 hours at Rs. 500 per hour)	<u>1500</u>	<u>(2000)</u>
Standard contribution margin (per unit)		<u>750</u>

(iv) Actual outcome for the period was as follows.

	Rs.	Rs.
Sales (1800 units)		5,400,000
Less: Manufacturing costs (for 1800 units)		
Raw materials (4000 kg)	1,120,000	
Direct labour (5000 hours)	<u>2,750,000</u>	<u>3,870,000</u>
Actual contribution		<u>1,530,000</u>

v) The actual fixed overheads were Rs. 275,000.

Further, In view of the actual results for the period, the Company executives stated that the performance of the period exceeded the budget in terms of sales in units (by 20%) and selling price also increased. As a result, the contribution margin increased by Rs. 100 per unit, irrespective of greater consumption of direct materials, and higher prices for materials and also higher rates for direct labour compared to the standards/ budgets.

Later, they revealed based on the market investigation that 'our competitors sold for Rs. 3200 per unit and we could have come to this price with no adverse effect on sales volume. Besides, the market size was larger than expected and consequently, ex-post standard sales volume is 1900 units for the period concerned.

Required:

(a) Calculate the following traditional variances

(i) Sales variances: margin price and margin volume

(ii) Material variances: price and usage

(iii) Labor variances: rate and efficiency

(03 Marks)

(b) Prepare 'A reconciliation statement for budgeted contribution with actual contribution.

(02 Marks)

(c) Calculate ex- post sales variances: planning and operational variances

(03 Marks)

II. Relating to the standard costing system, evaluate the appropriateness of preparing/ using following statement/ method for managerial decision making function of a manufacturing firm.

(a) Reconciliation statement for budgeted contribution with actual contribution

(b) Ex-post variance analysis approach over the traditional approach

(04 Marks)

(Total Marks 12)

3.

I. Budgetary controls could be linked / referred to a system of thermostatic control which is discussed under a simple cybernetic control system. In what aspects is this analogy inappropriate for a budgetary control system in the practical world.

(04 Marks)

II. Metal Lanka is a company manufactures two products, known as Dexa and Nexta. Deaxa is produced in department I and Nexta in department II. The following information is available for the year 2020.

(a) Standard Material (per unit) and Labour (per hour) costs are as follows:
 Material X Rs. 15.00; Material Y Rs. 25.00; Direct Labour Rs. 15

(b) Overhead is recovered on a direct labour hour basis. The standard material and labour usage for each product is as follows:

	<u>Dexa</u>	<u>Nexta</u>
Material X	15 units	10 units
Material Y	20 units	05 units
Direct labour	13 hours	18 hours

(c) Other relevant data pertinent to the finished products and to the direct materials are as follows:

	<u>Finished products</u>	
	<u>Dexa</u>	<u>Nexta</u>
Forecast Sales (units)	12,000	8,000
Selling price per unit (Rs.)	1,600	1,200
Ending inventory required Units)	3,200	700
Beginning inventory (Units)	450	110
	<u>Direct Materials</u>	
	<u>Dexa</u>	<u>Nexta</u>
Beginning inventory (units)	5,500	3,500
Ending inventory required units	12,750	4,200

You are required to prepare the following budgets for the next quarter of the year 2020:

- | | |
|--------------------------------------|------------|
| (i) Sales Budget | (01 Mark) |
| (ii) Production budget | (02 Marks) |
| (iii) Direct material usage budget | (02 Marks) |
| (iv) Direct material purchase budget | (02 Marks) |
| (v) Direct labour budget | (01 Mark) |

(Total Marks 12)

4.

I. Sithmina PLC is going to introduce a new product 'Dilmah'. Following estimates have been made relating to this product.

Selling price per unit	Rs.	120
Unit Variable costs	Rs.	80
Fixed costs per month	Rs.	560,000
Relevant range of output		8000- 35,000

Required: considering each of the following situations independently, answer the questions.

- (a) How many units must be sold to earn a profit of Rs.160, 000 per month? (01 Mark)
- (b) What selling price would have to be charged to earn a profit of Rs.180, 000 on sales of 20,000 units per month? (01 Mark)
- (c) If the Company expects to earn a profit of 20% on sales, what sales are required to achieve this target per month? (01 Mark)
- (d) The sales manager suggests that if the Company undertakes advertising campaign for Rs. 50,000, expected sales in section (a) would increase by 2000 units at the initially estimated selling price (Rs. 240).

Advice the Company whether they should undertake the above advertising campaign or not, by depicting the impact of this action on Company profit. (02 Marks)

II. Deshan Company produces and sells three products: P, Q and R with following details.

Products	<u>P</u>	<u>Q</u>	<u>R</u>
Selling price (Rs.)	120.00	150.00	80.00
Variable costs per unit (Rs.)	60.00	75.00	40.00

Monthly fixed costs associated with these three products are Rs. 635,000

Assume that optimum sales mix in units for these three products are;

P – 30%, Q – 50%, R – 20%

Required:

- (a) Calculate the weighted average contribution margin (WACM). (01 Mark)
 - (b) Calculate the monthly sales in units of each product required to earn a profit of Rs. 254,000 per month. (02 Marks)
 - (c) Construct multi-product CVP Chart in view of the sales volumes calculated in section (b), showing the break-even sales, margin of safety and profit levels of the company. (03 Marks)
 - (d) State your observations on this Chart. (01 Mark)
- (Total Marks 12)

5.

I. Why do you need to discount the cash flows when the projects are evaluated? (02 Marks)

II. You are given following three projects for your consideration

	Present Value of Cash Flows (Rs.000)	Initial Investment Outlays (Rs.000)	Profit Index
Project A	200	100	2
Project B	300	200	1.5
Project C	400	420	0.95

- A. Briefly explain which project/s do you accept if these projects are independent projects (01 Mark)
- B. Briefly explain which project do you accept if these projects are mutually exclusive projects (01 Mark)

III. You are given the following information relating to two investment projects

	<u>Project X</u> (Rs.000)	<u>Project Y</u> (Rs.000)
Initial capital expenditure	70,000	75,000
Profit (loss) Year 1	(12,000)	(13,000)
Year 2	13,000	11,000
Year 3	21,000	14,000
Year 4	17,000	12,000



Notes:

1. Estimated resale values at the end of year 4 are Rs.10,000 and Rs.15,000 for the project X and Y respectively.
2. Profit has been calculated after deducting the straight-line depreciation.
3. The cost of capital is 12%

You are required to calculate the followings:

- (i) Payback period for each project. (02 Marks)
- (ii) Net present value of each project. (04 Marks)
- (iii) Explain which project you would recommend for the acceptance. (02 Marks)

(Total Marks 12)

6.

I. Negro Company manufactures and sells high quality garments in the local market. One of its departments is having capacity of manufacturing 1000 T-shirts per month, of which 75% of capacity is used at present. The sales executive's judgment is that this excess capacity remains unchanged for the next quarter. The current selling price of this T-shirts is Rs. 6000 per unit.

Expected monthly costs and revenues per unit relating to the existing capacity are as follows:

	Rs.	Rs.
Selling price		6000
Less:		
Direct labour	1000	
Direct materials	1500	
Variable manufacturing overhead	700	
Fixed manufacturing overhead	1200	
Fixed marketing and distribution overhead	<u>600</u>	
Total costs		<u>5000</u>
Profit per unit		<u>1000</u>

The division is having sufficient direct labour capacity to produce 1000 units at all, but they maintain this excess labour with an intention of satisfying the increasing demand for the same product in the future. Meanwhile, the division is considering to accept special orders, when and where possible, ensuring maximum utilization of resources employed.

JY company located in Rathnapura has offered to buy 250 T- shirts each month for next three months at a price of Rs. 3500 per unit. The JY company would pay for the transportation costs and thus, no additional marketing and distribution costs will be incurred, and further requires the company's logo inserting on the T- shirts at an estimated cost of Rs. 150 per unit. No subsequent sales to this customer are also anticipated.

Required:

- a) List out relevant and irrelevant costs and revenues for this decision (accept or reject the order) (02 Marks)
- b) Evaluate the order from JY company depicting its impact on monthly profit and, advise the Negro company whether they should accept the order or not. (04 marks)

II. Zero company has two divisions: division A produces intermediate product 'Z' which is used by division B as a component of its final product. The company has made initial discussion with another outside supplier regarding outsourcing of component Z, instead of manufacturing it in the division. The division manufactures 1200 units per annum of the components with the following costs that are currently assigned to the components.

	Unit costs (Rs.)
Direct materials	150
Direct labour	200
Variable manufacturing overheads	90
Fixed manufacturing overheads	50
Non- manufacturing overheads	<u>30</u>
Total costs	<u>520</u>

If the division continues to manufacture the components in the future, the above costs are expected to remain unchanged. The supplier has offered to provide 1200 components Z per annum at a price of Rs. 500 per unit for a minimum of five years.

The company is considering two options relating to outsourcing decision.

Option 1: If the company decided to outsource component Z;

- Direct labour force currently employed for this component will be made redundant, but no redundancy costs.
- Direct materials and variable overheads are avoidable
- Fixed manufacturing overheads would be reduced by Rs. 20,000 per annum
- Non-manufacturing overheads would remain unchanged.
- Assume that the capacity required for component Z has **no alternative use**.

Option 2: If the company decided to outsource component Z;

- Assume that excess capacity available from component Z including labour force can be totally used to manufacture and sell 1200 units of component 'M' at a price of Rs. 450 per unit.
- New materials are required for making component 'M' at a cost of Rs. 160 per unit.
- All overheads would be the same as of manufacturing component Z.

Required:

Evaluating make or buy decisions with respect to option 1 and 2 separately, advise the company on;

(a) Whether the division should outsource the component Z or not (Option 1) (03 Marks)

(b) Whether the division should make component Z and do not make component M, **OR** outsource component Z and make component M (Option 2)

(03 marks)

(Total marks 12)

7.

I. "Most organizations need to make decisions about **setting or accepting selling prices** known as: *price makers and price takers* for their products or services. Accounting information is often an important input for pricing decisions".

In view of the above statement, distinguish firms - acting as price takers and as price setters by depicting main features in both situations. (05 Marks)

II. Suppose you were assigned as a business consultant for two manufacturing companies facing different situations as follows.

A price taker firm facing **short term** product mix decisions

A price taker firm facing **long term** product mix decisions

Required:

Advise the above firms describing factors, situations, conditions to be taken into account in making appropriate product mix decisions towards achieving their goals and objectives.

(07 Marks)

(Total Marks 12)

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TABLE 1 Present Value of \$1

Periods	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	20%	25%	30%
1	0.962	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.833	0.800	0.769
2	0.925	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.694	0.640	0.592
3	0.889	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.579	0.512	0.455
4	0.855	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.482	0.410	0.350
5	0.822	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.402	0.328	0.269
6	0.790	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.335	0.262	0.207
7	0.760	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.279	0.210	0.159
8	0.731	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.233	0.168	0.123
9	0.703	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.194	0.134	0.094
10	0.676	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.162	0.107	0.073
11	0.650	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.135	0.086	0.056
12	0.625	0.557	0.497	0.444	0.397	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.112	0.069	0.043
13	0.601	0.530	0.469	0.415	0.368	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.093	0.055	0.033
14	0.577	0.505	0.442	0.388	0.340	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.078	0.044	0.025
15	0.555	0.481	0.417	0.362	0.315	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.065	0.035	0.020
16	0.534	0.458	0.394	0.339	0.292	0.252	0.218	0.188	0.163	0.141	0.123	0.107	0.054	0.028	0.015
17	0.513	0.436	0.371	0.317	0.270	0.231	0.198	0.170	0.146	0.125	0.108	0.093	0.045	0.023	0.012
18	0.494	0.416	0.350	0.296	0.250	0.212	0.180	0.153	0.130	0.111	0.095	0.081	0.038	0.018	0.009
19	0.475	0.396	0.331	0.277	0.232	0.194	0.164	0.138	0.116	0.098	0.083	0.070	0.031	0.014	0.007
20	0.456	0.377	0.312	0.258	0.215	0.178	0.149	0.124	0.104	0.087	0.073	0.061	0.026	0.012	0.005
22	0.422	0.342	0.278	0.226	0.184	0.150	0.123	0.101	0.083	0.068	0.056	0.046	0.018	0.007	0.003
24	0.390	0.310	0.247	0.197	0.158	0.126	0.102	0.082	0.066	0.053	0.043	0.035	0.013	0.005	0.002
25	0.375	0.295	0.233	0.184	0.146	0.116	0.092	0.074	0.059	0.047	0.038	0.030	0.010	0.004	0.001
30	0.308	0.231	0.174	0.131	0.099	0.075	0.057	0.044	0.033	0.026	0.020	0.015	0.004	0.001	0.000
35	0.253	0.181	0.130	0.094	0.068	0.049	0.036	0.026	0.019	0.014	0.010	0.008	0.002	0.000	0.000
40	0.208	0.142	0.097	0.067	0.046	0.032	0.022	0.015	0.011	0.008	0.005	0.004	0.001	0.000	0.000

Note: The present value (PV) factor for N periods and rate r per period = $1 \div (1 + r)^N$. For example, the PV factor for 10%, 5 years = $1 \div (1 + 0.10)^5 = 0.621$ (rounded).