University of Kelaniya – Sri Lanka

External Examinations Branch

Faculty of Commerce & Management Studies

Bachelor of Business Management (General) Degree Second Examination (External) – 2010
January 2012

BMGT E 2035 – Accountancy for Managers

No. of questions : 07 Time: 03 Hours

Answer any five (05) questions only.

(01) (a) "An efficient system of costing is an essential factor for industrial control under modern conditions of business and as such may be regarded as important part in the efforts of any management to secure business stability." Discuss.

(05 marks)

(b) Necmo star operates a mega store featuring sports merchandise. It uses an Economic order quality (EOQ) decision model to make inventory decisions. It is now considering inventory decisions for its kandy hokey jerseys product line.

Date for 2011 are :

Expected annual demand for hokey jerseys	20,000
Ordering cost per purchase order	Rs. 400
Carrying costs per year	Rs: 14 per jersey

Each jersey cost Rs: 80 and sells for Rs: 160. The Rs: 14 carrying cost per jersey per year comprises the required return on investment of Rs: 9.60 (12%) plus Rs. 4.40 in relevant insurance and transportation costs. The purchasing lead time is 07 days. Megastore is opened 365 days a year.

You are required to.

(a) Calculate the EOQ

(b) Calculate the number of orders that will be placed each year.

(c) Calculate the reorder point.

(d) Describe JIT purchasing and its benefits.

(10 marks)

(c) State each of the following functions with its respective cost driver.

Function	Representative Cost Driver
Purchasing	
Distribution	
Accounting	
Data processing	
Research and Development	

(05 marks)

(Total 20 marks)

(02) (a) Gamma Ltd. produces and sells two products A and B. It is expected to produce and sell 12,000 units of A and 10,000 units of B.

Estimated cost details are as follows.

	A	B
	Rs.	Rs.
Direct material	80	48
Direct Labour	50	40
Other variable overheads	30	22

Estimated production overhead is Rs: 630,000/=

Direct Labour Hour rate is Rs: 10/= per hour;

The production overhead, Rs: 630,000/= comprises for the following.

Activity	**Estimated Overheads (Rs.)**	**Cost Driver**	**Expected Activity Cost Driver**	
			A	**B**
Milling	277,000	Machine Hours	12000	8000
Material Receipts	50,000	Number of Receipts	600	400
Quality	72,000	Number of Inspection	500	300
Machine Setup	96,000	Number of Setups	6000	4000
Packing	90,000	Number of Delivery	40	20
Design	45,000	Number of Design	03	02

If the company uses the basis of direct labour hours for absorption of overheads to productions.

(i) Calculate predetermined overheads absorption rate per hour.

(ii) Total cost per unit applying the above ratio.

(12 marks)

(b) A machine was purchased on January 1st, in the current year by the XYZ company. The following information relate to the machine.

Cost of machine	Rs: 40,000
Estimated life	15 years of 1800 hours per year
Estimated scrap value	Rs: 2500
Estimated repairs for whole life	Rs: 10500
Power consumed per hour	15 units @0.07 per unit
Insurance	0.75% per month
Consumable stores	Rs. 25 per month

The machine is installed in a department whose monthly rent is Rs: 500 and this machine occupies 1/5 of the area. Total monthly lighting expenses is Rs: 40 for 10 light points, of which 03 relate to the machine. A supervisor with monthly salary of Rs: 5000/= devotes 1/4 of his time to this machine. Calculate machine hour rate.

(08 marks)

(Total 20 marks)

(03) a) What is the cause of difference between the marginal costing profit and the absorption costing profit?

(03 marks)

b) The following data apply to the videotape production plant of the capital company for October 2011.

	Manufacturing cost Estimated per videotape (Rs.)
Direct Material	320
Direct Manufacturing Labour	180
Variable manufacturing Overheads	140
Fixed manufacturing Overheads Cost	200
Total Manufacturing Overheads Costs.	840

Variable manufacturing overhead varies with the number of units produced. Fixed manufacturing overhead of Rs: 200/= per tape is based on estimated fixed

manufacturing cost of Rs: 300,000,000, per month and estimated production of 300,000 tapes per month. Capital company sells each tape for Rs: 1000/=

Marketing costs for the company has two components variable marketing costs (Sales Commission) of 5% of revenues.

Fixed monthly costs of Rs: 650,000/=

During October 2011, a sales person, asked the chairman for permission to sell, 1000 tapes at Rs: 800/= per tape to a customer not in Capital's normal marketing channels. The Chairman refused this onetime special order proposal because the selling price was below the total estimated manufacturing cost.

You are required to;

(i) What would be the effect on monthly operating income of accepting the special order.

(ii) What are the factors should Chairman consider before accepting or rejecting the special order?

(Total 12 marks)

c) "A finance director suggested that marginal costing should be considered in the future for decision making and that the absorption costing is misleading". Do you agree with this statement? Give reasons.

(05 marks)

(Total 20 marks)

(04) Senuda Limited is manufacturing four products A, B, C and D. The details of which are shown below:

Product	Sales in units ('000)	Selling price per unit (Rs.)	Variable cost per unit (Rs.)
A	40	80	56
B	20	160	32
C	100	16	16.8
D	40	40	28
	200		

Budgeted fixed costs are Rs. 800,000/- per annum.

You are required to:

(a) Calculate the total contribution earned by each product and their combined total contributions.

(03 marks)

(b) Calculate the breakeven point in revenue terms and show how these four products should generate that revenue.

(04 marks)

(c) Plot the above data in the form of a contribution to sales graph (Referred to as a profit - volume graph) in your answer booklet. Highlight the breakeven point.

(06 marks)

(d) Describe briefly three ways in which the overall contribution to sales ratio could be improved.

(03 marks)

(e) The management has decided to change the sales mix of 200,000 units to 2:4:3:1 ratio of A, B, C and D respectively. Calculate the new breakeven point in revenue terms.

(04 marks)

(Total 20 marks)

(05) You are given the following estimated figures and notes about Maduwanthi Ltd.' a manufacturing company that makes product "Q"

The selling price per unit of product "Q" is Rs: 2000/=. The actual sales of the last quarter and the budgeted sales of the next quarters are given as follows.

Quarter	Sales units.
Last quater	1920
Q_1	2880
Q_2	2880
Q_3	3360
Q_4	2160

The starting date of the first quater is 01st of April.

All sales are on credit. The past sales records indicate that 75% of debtors pay within the same quarter and 20% of debtors in the following quater. The remain amount of debtors is written off as bad debts.

The cash balance at bank at the beginning of Q_1 is Rs. 500,000/= and the company has an agreed over draft facility of Rs: 1000,000.

Quater	Prime cost (Rs.)	Wages (Rs.)	Rent (Rs.)	Administration expenses (Rs.)
Last quater	1270,000	310,000	40,000	140,000
Q_1	1550,000	350,000	40,000	150,000
Q_2	1820,000	350,000	40,000	150,000
Q_3	1220,000	300,000	60,000	150,000
Q_4	1550,000	350,000	60,000	160,000

Notes;

(1) Materials are supplied evenly each month and are paid for in the month following delivery. There is no change in stock levels.

(2) Wages are paid in the same quarter in which they are incurred.

(3) Rent is payable quaterly in advance on the first day of each quarter.

(4) Administration expenses are payable within the same quarter.

Other expenses/ incomes

(i) Variable overheads are paid each quarter at 60% of the wages bill.

(ii) Rates of Rs: 300,000/= per annum is paid in two installments on 1st of June and 1st December.

(iii) Sales commission of 10% of gross sales is paid in the quarter following the sales.

(iv) Half yearly interest at 15% per annum is receivable on treasury bills of Rs: 4,000,000/= on 30th September and 31st March.

(v) A final dividend for the last year of Rs. 0.50 per share on 500,000 shares is estimated and will be paid in Q_1 and an interim dividend of the same amount for Q_3.

(vi) New machinery costing Rs: 3,000,000/= is to be installed in August which is paid for immediately less a retention of 10% payable after six months.

(vii) Depreciation is Rs: 50,000/= per quarter.

(viii) Selling and distribution expenses are Rs: 50,000/= per month and are payable within the same month.

(ix) Interest on bank overdraft is payable yearly in arrears at 20% calculated on average cash balances, on the fourth quarter end days. However, no interest is paid this year.

You are required to,

(a) Prepare the quartely cash budgets for the next year ending Q_1 to Q_4

(08 marks)

(b) Prepare the budgeted profit and loss statement for the next year ending Q_1 to Q_4

(08 marks)

(c) Explain different ways in which Maduwanthi Ltd. could finance its short term cash deficit.

(04 marks)
(Total 20 marks)

(06) a) Semico company wants to buy a new item of equipment. Two models of equipment namely X and Y are available, one with a slightly higher capacity and greater reliability than the other. The expected costs and profits of each item are as follows.

	Equipment Item X	**Equipment Item Y**
Capital cost (Rs.)	800,000	1,500,000
Life	5 years	5 years
Profits before depreciation	Rs:	Rs:
Year 1	500,000	500,000
Year 2	500,000	500,000
Year 3	300,000	600,000
Year 4	200,000	600,000
Year 5	100,000	600,000
Disposal value	0	0

Average Rate of Return is measured as the average annual profit after depreciation, divided by the average net book value of the asset.

Required;

Decide which item of equipment should be selected, if any, if the company target ARR is 30%

b) XYZ plc is a company engages in manufacturing of different types of products. The company has intended to manufacture a new product "X" and the details of the projects are as follows.

(i) The project invlove the use of both a new machine (costing Rs. 3,000,000) and existing machine, which cost Rs. 1,800,000 two years ago and has a current net book value of Rs. 600,000. The project would have an net residual value of Rs. 100,000 and lifetime of the project is 5 years.

(ii) The investment in working capital requirement would be Rs. 350,000 in the first year rising to Rs. 100,000 in the second year and remaining at this level until the end of the project, at which all be recovered.

(iii) Annual sales of the product would be 10,000 units, selling at Rs. 900 per unit. Unit costs would be as follows.

Direct labour (4 hours at Rs. 100 per hour)	400
Direct materials	200
Fixed costs including depreciation	100
	700

(iv) The cost of capital of the company is to be 15%

You are required to decide whether XYZ plc should purchase the machine (Ignore taxation.)

(10 marks)
(Total 20 marks)

(07) The profit and loss statements and balance sheets of two merchandising businesses operated as sole proprietorships by Kanchan and Sameer are given below.

Profit and Loss statements

For the year ended 31st December 2010

		Kanchan Rs:		**Sameeer Rs:**
Sales		2,000,000		4,000,000
Less: Cost of sale				
Opening inventory	140,000		580,000	
Plus purchases	880,000		1,880,000	
	1020,000		2,460,000	
Less: Ending Inventory	120,000	900,000	620,000	1,840,000
Gross Profit		1,100,000		2,160,000
Less : operating expenses		700,000		1,160,000
Operating profit		400,000		1,000,000
Less: Interest expense		40,000		60,000
Net profit		360,000		940,000

Balance Sheet
As at 31st December 2010

		Kanchan Rs:		Sameeer Rs:
Assets				
Non current assets (net)		2,000,000		3,500,000
Inventory		120,000		620,000
Trade debtors	81,600		510,000	
Less: provision for doubtful debts	1,600	80,000	10,000	500,000
Cash at bank		100,000		360,000
		2,300,000		4,980,000
Owner's Equity and Liabilities				
Capital 01,01,2010	1,400,000		2,420,000	
Net profit	360,000	1,760,000	940,000	3,360,000
Non current liabilities : Bank loan		400,000		600,000
Current liabilities		140,000		1,020,000
		2,300,000		4,980,000

Additional information

(5) At the beginning of 2010, total assets of the two businesses were as follows.

Kanchan Rs: 2,220,000

Sameer Rs: 4,820,000

(2) Both Kanchan and Sameer are in the same line business.

(3) Fifty percent of all purchases and sales of both businesses are on credit.

Required:

(a) Calculate the following ratios for both businesses.

(1) Return on assets (2) Return on sales

(3) Current ratio (4) Quick ratio

(5) Inventory turnover (6) Average Collection Period.

(12 marks)

(b) On the basis of the ratios calculated, provide a comparative analysis of the operating performance and financial position of the two businesses of Kanchan and Sameer. In your analysis, you are also expected to identify any problem areas and possible causes.

(05 marks)

(c) What additional information is needed to comment on the adequacy of profitability and liquidity of the two businesses?

(03 marks)
(Total 20 marks)

Table A-1 The Present Value of One Rupee

Year	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	.990	.980	.971	.962	.952	.943	.935	.926	.917	.909
2	.980	.961	.943	.925	.907	.890	.873	.857	.842	.826
3	.971	.942	.915	.889	.864	.840	.816	.794	.772	.751
4	.961	.924	.888	.855	.823	.792	.763	.735	.708	.683
5	.951	.906	.863	.822	.784	.747	.713	.681	.650	.621
6	.942	.888	.837	.790	.746	.705	.666	.630	.596	.564
7	.933	.871	.813	.760	.711	.665	.623	.583	.547	.513
8	.923	.853	.789	.731	.677	.627	.582	.540	.502	.467
9	.914	.837	.766	.703	.645	.592	.544	.500	.460	.424
10	.905	.820	.744	.676	.614	.558	.508	.463	.422	.386
11	.896	.804	.722	.650	.585	.527	.475	.429	.388	.350
12	.887	.789	.701	.625	.557	.497	.444	.397	.356	.319
13	.879	.773	.681	.601	.530	.469	.415	.368	.326	.290
14	.870	.758	.661	.577	.505	.442	.388	.340	.299	.263
15	.861	.743	.642	.555	.481	.417	.362	.315	.275	.239
16	.853	.728	.623	.534	.458	.394	.339	.292	.252	.218
17	.844	.714	.605	.513	.436	.371	.317	.270	.231	.198
18	.836	.700	.587	.494	.416	.350	.296	.250	.212	.180
19	.828	.686	.570	.475	.396	.331	.227	.232	.194	.164
20	.820	.673	.554	.456	.377	.312	.258	.215	.178	.149
21	.811	.660	.538	.439	.359	.294	.242	.199	.164	.135
22	.803	.647	.522	.422	.342	.278	.226	.184	.150	.123
23	.795	.634	.507	.406	.326	.262	.211	.170	.138	.112
24	.788	.622	.492	.390	.310	.247	.197	.158	.126	.102
25	.780	.610	.478	.375	.295	.233	.184	.146	.116	.092
30	.742	.552	.412	.308	.231	.174	.131	.099	.075	.057
35	.706	.500	.355	.253	.181	.130	.094	.068	.049	.036
40	.672	.453	.307	.208	.142	.097	.067	.046	.032	.022
45	639	.410	.264	.171	.111	.073	.048	.031	.021	.014
50	.806	.372	.228	.141	.087	.054	.034	.021	.013	.009

Table A-1 The Present Value of One Rupee *(Contd.)*

Year	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	.901	.893	.885	.877	.870	.862	.855	.847	.840	.833
2	.812	.797	.783	.769	.756	.743	.731	.718	.706	.694
3	.731	.712	.693	.675	.658	.641	.624	.609	.593	.579
4	.659	.636	.613	.592	.572	.552	.534	.516	.499	.482
5	.593	.567	.543	.519	.497	.476	.456	.437	.419	.402
6	.535	.507	.480	.456	.432	.410	.390	.370	.352	.335
7	.482	.452	.425	.400	.376	.354	.333	.314	.296	.279
8	.434	.404	.376	.351	.327	.305	.285	.266	.249	.233
9	.391	.361	.333	.308	.284	263	.243	.225	.209	.194
10	.352	.322	.295	.270	.247	.227	.208	.191	.176	.162
11	.317	.287	.261	.237	.215	.195	.178	.162	.148	.135
12	.286	.257	.231	.208	.187	.168	.152	.137	.124	.112
13	.258	.229	.204	.182	.163	.145	.130	.116	.104	.093
14	.232	.205	.181	.160	.141	.125	.111	.099	.088	.078
15	.209	.183	.160	.140	.123	.108	.095	.084	.074	.065
16	.188	.163	.141	.123	.107	.093	.081	.071	.062	.054
17	.170	.146	.125	.108	.093	.080	.069	.060	.052	.045
18	.153	.130	.111	.095	.081	.069	.059	.051	.044	.038
19	.138	.116	.098	.083	.070	.060	.051	.043	.037	.031
20	.124	.104	.087	.073	.061	.051	.043	.037	.031	.026
21	.112	.093	.077	.064	.053	.044	.037	.031	.026	.022
22	.101	.083	.068	.056	.046	.038	.032	.026	.022	.018
23	.091	.074	.060	.049	.040	.033	.027	.022	.018	.015
24	.082	.066	.053	.043	.035	.028	.023	.019	.015	.013
25	.074	.059	.047	.038	.030	.024	.020	.016	.013	.010
30	.044	.033	.026	.020	.015	.012	.009	.007	.005	.004
35	.026	.019	.014	.010	.008	.006	.004	.003	.002	.002
40	.015	.011	.008	.005	.004	.003	.002	.001	.001	.001
45	.009	.006	.004	.003	.002	.001	.001	.001	.000	.000
50	.005	.003	.002	.001	.001	.001	.000	.000	.000	.000