ASSIGNMENT 03/2016, FIRST AND SECOND SEMESTER

YOU MUST COMPLETE THIS ASSIGNMENT IF YOU ARE REGISTERED FOR THE FIRST OR SECOND SEMESTER.

THIS ASSIGNMENT IS FOR SELF-ASSESSMENT AND SHOULD NOT BE SUBMITTED FOR MARKING. THE SUGGESTED SOLUTION WILL BE MADE AVAILABLE EARLY IN THE SEMESTER IN ORDER FOR YOU TO REVIEW YOUR ANSWERS.

THIS ASSIGNMENT DOES NOT CONTRIBUTE TOWARDS YOUR SEMESTER MARK.

DUE DATE: SEMESTER 1: 21 April 2016
SEMESTER 2: 28 September 2016

UNIQUE NUMBER: S1 - 675695 and S2 – 871549

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QUESTION 1 (46 marks; 55 minutes)

Important note: It is unlikely that you will get such a long question in the exam focusing on only one topic, but the question is on an examinable standard and tests very important principles.

Feet Treat (Pty) Ltd. has an online shop. The online shop sells bath mats of two different sizes: small (standard price R200 per mat) and regular (standard price R250 per mat).

Each mat consists of a non-slip rubber base and an upper part of soft fabric.

The company values inventory based on the standard absorption costing method. No finished goods or raw materials inventory is kept, as the online shop uses a JIT system for purchases and production.

Standard variable costs per mat are as follows:

	Small mat	Regular mat
Rubber (R24 per m2)	R36,00	R48,00
Soft fabric (R15 per m2)	R27,00	R37,50
Direct labour (Small mat: 15 productive minutes; regular mat: 24 productive minutes)	R20,00	R32,00
Variable manufacturing overheads (allocated based on output units)	R19,00	R24,50

Fixed manufacturing overheads (budgeted at R896 100 for the month of July) are allocated to products based on productive direct labour hours – the total normal capacity of the 55 factory workers is to work 8 700 productive hours per month.

Assume that there were no non-manufacturing costs involved.

The actual sales for July consisted of 5 000 small mats at R180 each and 20 000 regular mats at R260 each. The small mats used 9 000 m_2 of rubber and 10 000 m_2 of soft fabric, whereas the regular mats used 44 000 m_2 of rubber and 52 000 m_2 of soft fabric.

The standard is to allow 10% idle time, but actual idle time amounted to only 360 of the total of 9 000 hours actually clocked. The small mats used 1 296 of the productive hours actually worked. Labourers were paid R84 per clock hour.

Actual variable manufacturing overheads amounted to R17,50 per small mat and R25 per regular mat. Actual fixed manufacturing overheads were R915 840.

The management accountant has compiled the following incomplete and insufficient reconciliation of budgeted and actual profit (the numbers, however, are correct where provided):

(F = Favourable; A = Adverse)

	R
Budgeted profit (based on 24 000 total budgeted sales units in the mix of small mats to regular mats 1:3)	1 635 900
Add/less: Unknown variance(s)	?
Standard profit	1 697 250
Add/less:	?
Material purchase price variance	80 000 (F)
Rubber	106 000 (A)
Soft fabric	186 000 (F)
Other material variances	?
Labour variances	?
Variable manufacturing overhead efficiency variance	0
Other (unknown) variances	?
Actual profit	1 718 660

REQUIRED

a. Calculate the actual price per m_2 of rubber and per m_2 of soft fabric. (4)

b. Redo the reconciliation of budgeted and actual profit showing all the individual variances that are applicable in as much detail as possible to the extent that information is provided in the question, as well as whether each of them is favourable or adverse. You do not have to split the fixed overhead variances between products. (42)

QUESTION 2 (25 marks; 30 minutes)

This question consists of two independent parts.

PART A (16 marks; 19 minutes)

Travelfrenzy Ltd manufactures suitcases. The company values inventory based on the standard **absorption** costing method. Materials are recorded at actual costs. There were no raw materials, work-in-process or finished goods inventory at the beginning or end of 2014.

The following actual results are available for the 2014 year:

Number of suitcases manufactured (demand is unlimited)		80 000
		R
Material purchased	83 000kg	19 090 000
Direct labour	119 500 hours	12 350 000
Variable overheads (recovered based on units produced)		6 000 000
Fixed overheads		1 500 250

Additional information:

1. Material issued to production = 81 050 kg.
2. The actual sales for 2014 amounted to R88 000 000 (80 000 suitcases).

Management of Travelfrenzy Ltd is considering investing in a new machine that could perhaps boost their manufacturing capacity. The estimated annual number of suitcases produced and sold and probabilities based on different output levels are as follows:

No. of suitcases	**Probability**
61 000	0,10
73 000	0,15
74 500	0,18
80 000	0,24
87 000	0,22
95 000	0,11

REQUIRED

(a) Calculate the actual breakeven sales volume in units for 2014. (5)
(b) Calculate the actual breakeven sales value for 2014. (1)
(c) Calculate the units to be sold to obtain a R2 000 000 profit for 2014. The effect of taxation can be ignored. (2)
(d) Calculate the expected number of suitcases the new machine will manufacture and advise management whether the new machine should be bought. (4)
(e) Explain the meaning of the terms standard deviation and coefficient of variation as measures of risk. (4)

Round all your answers to two decimals.

PART B (9 marks; 11 minutes)

Multique (Pty) Ltd. sells two types of eye moisturisers: I-gel and I-creme. The following is an extract from budget documents for the financial year ended 31 March 2015:

	I-gel	**I-creme**
Selling price per unit	R120	R160
Total contribution	R720 000	R1 000 000
Sales units	16 000	10 000
Direct fixed costs (avoidable)	R240 000	R300 000

Common fixed costs amount to R225 400 and can be avoided if no I-gels and no I-cremes are sold.

REQUIRED

(a) Calculate the breakeven units for 2014 based on the standard product mix. (5)
(b) Calculate the breakeven sales value for 2014. (4)

[Drury adapted]

QUESTION 3 (13 marks; 16 minutes)

Summary financial statements are given below for one division of a large divisionalised company.

Summary divisional financial statements for the year ended 31 December 2014:

	Balance sheet		*Income statement*
	R'000		R'000
Non-current assets	1 500	Revenue	4 000
Current assets	600	Operating costs	3 600
Total assets	2 100	Operating profit	400
		Interest paid	70
Divisional equity	1 000	Profit before tax	330
Long-term borrowings	700		
Current liabilities*	400		
Total equity and liabilities	2 100		

*Current liabilities are made up of normal trade payables and creditors.

Additional information:

• It is not the normal nature of this company to borrow/supply loans.The cost of capital for the division is estimated at 12% per year.

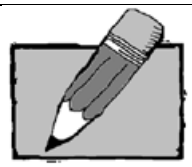
• Annual rate of simple interest on the long term loans is 10%.

• The respective divisions may not use their own discretion on how they borrow money. Head office is responsible for financing decisions.

REQUIRED

a. Calculate the divisional Return on Investment (ROI) for the year ended 31 December 2014. (2)
b. Calculate the divisional Residual Income (RI) for the year ended 31 December 2014. (2)
c. State which method of performance evaluation (i.e. ROI or RI) would be more useful when comparing divisional performance and why. (2)
d. Evaluate whether each of the following statements is true/false:
   i. If head office expenses are allocated to the divisions based on gross income, they should be excluded from the controllable profit calculation. (1)
   ii. Employment equity statistics of the respective divisions should be ignored when assessing the performance of the divisions. (1)
   iii. Divisional profit contribution is the controllable profit, less any non-controllable expenses that are attributable to a division, and which would be avoidable if the division was closed. (1)
e. Explain the difference between managerial and economic performance and state whether it includes controllable and/or non-controllable items, or not. (4)

[CIMA Adapted]



Additional explanatory note on Return on investment (ROI):

Return on investment: Only controllable operating profit and controllable operating assets/liabilities should be taken into account in the calculation of ROI. Net operating profit is profit before interest and taxes and is sometimes referred to as EBIT (earnings before interest and taxes).

Thus: depending on whether it is the normal nature of the company to borrow/supply loans, the interest on these loans should be taken into account (if part of operational activities) or excluded from the operating profit of the company.

QUESTION 4 (12 marks; 14 minutes)

Professional Processors (Pty) Ltd. uses a process costing system. The following information is available regarding quantities for January 2014:

	Units
Opening WIP – 1 Jan. 2014 (20% complete with regard to conversion)	25 000
Put into production during January 2014	75 000
Completed and transferred	80 000
Closing WIP – 31 Jan. 2014 (70% complete with regard to conversion)	5 000

The company uses the weighted average method of inventory valuation. Raw materials are added at the beginning of the process. Conversion occurs evenly throughout the process.

REQUIRED

(a) Prepare a quantity statement for January 2014 assuming that wastage occurs when the process is 60% complete (use the short-cut method if the requirements for its use are met). Normal losses amount to 4% of units that reach the wastage point. (6)

(b) Prepare a quantity statement for January 2014 assuming that wastage occurs evenly throughout the process (use the short-cut method) and are detected at the end of the process. Normal losses amount to 4% of units started in January 2014. (6)

QUESTION 5 (11 marks; 13 minutes)

ABC (Pty) Ltd is a medium sized manufacturer of plastic squeeze bottles in the Midrand area. The management accountant of the company provided you with the following information for the financial year ended 30 April 2014:

	Note	**R**
Sales	1	5 000 000
Dividends received	2	50 000
Cost of sales	3	2 000 000
Office equipment at cost	4	1 000 000
Machinery at cost	4	1 000 000

Additional information:

1. The company expects sales to increase by 8% for the coming financial year. Sales are spread evenly throughout the year.
2. The company invested R100 000 in the shares of Assus Ltd on 1 May 2013. Assus declared dividends on 31 March to all shareholders registered on 31 March 2014 and these dividends were payable on 30 June 2014.
3. The cost of sales is expected to increase by 5% per annum for the coming year. This takes into account all changes in cost of sales, including the increase in sales. The purchases of raw materials are made evenly throughout the year. No inventories of any kind is held.
4. Depreciation on office equipment is 20% per annum on the diminishing balance method and depreciation on machinery is 20% per annum on straight line method. Both the equipment and machinery were purchased on 1 May 2013.
5. To finance the acquisition of office equipment and machinery and the operating expenses for the first six months the company borrowed R3 million from Abza Bank on 1 May 2013 at 8% simple interest per annum. The interest is payable annually on 30 April. The capital is repayable in full on 30 April 2018.
6. For the financial year ended 30 April 2014, the company paid R16 000 per month on factory rental and R12 000 per month on vehicles rental. These are expected to increase by 5% and 6% respectively from 1 May 2014.
7. For the financial year ended 30 April 2014, the company's monthly salaries bill was R120 000. A salary negotiation with the workers' union was settled at 6% for the forthcoming financial year.
8. Administrative expenses were R15 000 per month and will increase by 7% per annum from 1 May 2014.
9. A provision for income tax of R3 000 per month will be made for the forthcoming financial year.

REQUIRED:

Prepare the budgeted statement of profit or loss of ABC (Pty) Ltd for the six months ended 31 October 2014. State reasons for the omission of any items. (11)

QUESTION 6 (6 marks; 7 minutes)

Smart (Pty) Ltd is a distributor of scientific calculators amongst the other products it sells. The company operates for 250 days per annum. The annual demand for the calculators is 10 000 units evenly spread throughout the year. The company maintains a safety stock of 80 calculators.

Additional information:

Purchase price per unit	R30
Order costs per order	R200
Lead time	10 days
Cost of capital (after tax)	15%
Direct inventory holding costs	R5 per unit per year

REQUIRED:

(a) Calculate the economic order quantity for calculators. (3)
(b) Calculate the re-order point for the calculators. (3)

QUESTION 7 (13,5 marks; 16 minutes)

Split (Pty) Ltd is a manufacturer of three products: Wing, Zing and Xeng. The same type of activities is needed in the production process for production of the respective products. The budgeted production is 2 000 of Wing, 2 500 of Zing and 3 000 of Xeng. The selling price per unit is R55 for Wing, R70 for Zing and R58 for Xeng. The variable cost per unit is R1,85 for Wing, R2,62 for Zing and R3,58 for Xeng. The company uses activity based costing.

The total budgeted fixed manufacturing overheads are as follows for the budget period:

Material acquisition	R100 000
Material handling	R50 000
Machine setups	R80 000
Machine maintenance	R110 000
Indirect labour	R60 000
	R400 000

The above overhead items each represent an activity. Machine maintenance is required after a number of operating hours.

The analysis of the cost driver volumes for the budget period is as follows:

	Cost driver volumes per product type			**Total**
Cost driver	**Wing**	**Zing**	**Xeng**	
Machine setups	1	3	2	6
Machine hours	2	3	4	9
Indirect labour hours	3	4	6	13
Material movements	2	1	3	6
Number of orders	3	5	2	10

REQUIRED:

(a) Indicate the most appropriate cost driver for each of the activities. (2,5)
(b) Calculate the profit per unit of each product using the activity based costing approach. (11)

QUESTION 8 (12 marks; 14 minutes)

Tazz (Pty) Ltd is a civil engineering and construction company based in Centurion. The company is considering tendering for a short term local municipality project to construct five small pedestrian bridges. The chief engineer has approached you as the management accountant of the company regarding this project with the following information:

1. Each bridge requires material A and material B. Material A is in stock and costs R10 000 per bridge. Material B will have to be sourced at a cost of R12 000 per bridge. Both material A and material B are regularly used by the company.

2. Each bridge requires 10 hours of type A and 6 hours of type B labour. Direct labour cost is R3 000 per hour for labour type A and R1 000 for labour type B. Casual labourers will be employed for this for the duration of the project. Due to staff shortages the company will also have to hire an architect at a cost of R10 000 to do the drawings of bridges for this project.

3. Administrative expenses specifically for the project will be R10 000. General overheads of R8 000 will be allocated to the project.

4. The company will have to hire additional machinery and equipment for the project at a cost of R30 000. The company's own machinery and equipment was bought last year at a cost of R3 million.

5. A competitor has tendered for this project at R115 000 per bridge.

6. The company use a cost plus pricing policy. Prices are set at total cost plus 10%.

REQUIRED:

(a) Calculate the selling price per bridge for the project and give reasons for any amounts excluded. (10)
(b) List two other factors that the chief engineer should consider before tendering for the project. (2)