



UNIVERSITY
OF
JOHANNESBURG

Department of Finance and Investment Management
Financial Management 3A
BSR3A01

LAST ASSESSMENT OPPORTUNITY
31 May 2014

Time: 20 minutes reading time + 180 minutes writing time

Marks: 150

Assessors: Ms J Jordaan-Marais *J. Jordaan-Marais*
Ms M McGill *M. McGill*
Mr S Modiba *S. Modiba*
Mr K Badenhorst

Moderator: Mrs A van der Merwe *our moderator is currently in Poland -*
Mrs A Oosthuizen *Please see email attached*
A. Oosthuizen will con.

INSTRUCTIONS:

- **HAND IN YOUR QUESTION PAPER AND ALL ANSWER BOOKS.**
- **START EACH QUESTION ON A NEW PAGE**
- This question paper consists of **15 pages**. Please ensure that you have all pages.
- You are allowed 180 minutes to answer this question paper.
- You are allowed 20 minutes reading time **before the assessment begins** during which you may read the question paper and, if you wish, highlight and/or make notes on the question paper. However, you will **not** be allowed, **under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.
- You are strongly advised to carefully read ALL the question requirements before attempting the question concerned (that is all parts and/or sub questions).
- ALL answers must be written in the answer books provided. Answers or notes written on the question paper will **not** be submitted for marking.
- Silent, non-programmable calculators may be used, unless otherwise instructed.
- Where applicable, show all calculations clearly.
- Answers with Tippex or in pencil will **not** be marked.
- The answer books will **NOT** be marked if the question paper was not handed in.
- **NO CANDIDATE IS PERMITTED TO LEAVE THE EXAMINATION HALL IN THE LAST FIFTEEN MINUTES OF THE ASSESSMENT OPPORTUNITY PERIOD.**

Section	Marks	Time
Reading time		20 minutes
A	15	18 minutes
B	35	42 minutes
C	100	120 minutes
	150	200 minutes

Jordaan-Marais, Joset

From: Annie Van Der Merwe <annie@lheducation.co.za>
Sent: 14 April 2014 12:03 PM
To: Jordaan-Marais, Joset
Subject: Moderation

Dear Joset

I have moderated the Last Assessment Opportunity and Special Last Assessment Opportunity for BSR3A01 for 2014.
I did not find any errors and the papers can be accepted for the assessment.

Regards

Annie van der Merwe

Sent from my iPad



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SECTION A

[15 marks]

QUESTION 1

(15 marks)

REQUIRED:

Select the correct option by **WRITING** the corresponding letter of the answer in your answer book.

Question 1.1

The primary difference between FIFO and weighted average methods of process costing has to do with the treatment of...

- A opening inventory.
- B closing inventory.
- C number of units.
- D direct material.

(1)

Question 1.2

HGT is considering selling specialised equipment with a cost price of R450 000 and carrying amount of R300 000. The equipment can be sold for R250 000. If HGT decides not to sell the equipment, the R250 000 can be classified as a(n) ... cost.

- A irrelevant
- B sunk
- C opportunity
- D variable

(1)

Question 1.3

Which ONE of the following statements is correct when taking a short term decision?

- A Joint costs are always irrelevant when taking a short term decision
- B Only the fixed portion of joint cost is taken into account when taking a decision
- C Joint costs are relevant for decision making purposes
- D Joint costs are allocated to by-products when taking a decision

(1)

Question 1.4

Powerlines is a company that produces a single product in one process. If the actual loss for the month of June is more than the expected normal loss for the month of June, the company is in...

- A an abnormal loss position.
- B an abnormal gain position.
- C a normal gain position.
- D a normal loss position.

(1)

Question 1.5

A method of allocating joint cost based on sales value rather than units of measurement is known as...

- ☐ A physical measures method.
- B relative sales value method.
- C constant gross profit method.
- D relocation method.

(1)

Question 1.6

Earthtime sells product Z to customers at 90% of Bigtime's selling price. Bigtime's prevailing market price for product Z is R130 per unit. Both companies make a contribution margin ratio of 40% on product Z. Identify which ONE of the following statements is correct.

- A Assuming that both companies have equal fixed costs and equal sales units, Earthtime will make a higher profit than Bigtime
- B Bigtime's variable cost per unit will be 10% lower than Earthtime's contribution per unit
- C Assuming that both companies have equal fixed costs, break even sales value will be equal for both companies
- ☐ D Earthtime's contribution per unit will be higher than Bigtime's contribution per unit

(2)

Question 1.7

TPZ has material A with a carrying amount of R25 per unit in inventories at the end of the year. TPZ bought material A two years ago for R30 per unit. Material A currently has a replacement value of R32. Material A can be sold in an open market for R19 per unit. Identify the relevant cost for decision making purposes if TPZ has no alternative use for material A.

- A R25 per unit
- B R30 per unit
- C R32 per unit
- D R19 per unit

(2)

Question 1.8

The following represent the expected values and standard deviations for alternatives 1-4:

Alternative 1 has an expected profit of R100 000 and a standard deviation of R16 000

Alternative 2 has an expected profit of R100 000 and a standard deviation of R15 000

Alternative 3 has an expected profit of R200 000 and a standard deviation of R15 000

Alternative 4 has an expected profit of R200 000 and a standard deviation of R30 000

Identify which ONE of the following statements is correct.

- A Alternative 4 has the highest amount of relative risk.
- B Alternative 1 and 2 have equal amount of relative risk
- C Alternative 2 and 3 have equal amount of relative risk
- D Alternative 2 and 4 have equal amount of relative risk

(2)

The following information applies to question 1.9 – 1.10

RS4 is one of many items produced by Delta. The standard cost schedule for a unit of RS4 shows that 2 hours of labour are required at R10 per hour. The variable overhead rate is R2 per labour hour. Delta produced 6 000 units of RS4 in the month of June. The variance report for the month of June reflects the following variances:

Total labour variance	R4 000 Adverse
Total variable overhead variance	R1 500 Favourable

Question 1.9

Actual labour cost for the month of June can be calculated as...

- A R116 000
- B R120 000
- C R124 000
- D R121 000

(2)

Question 1.10

Actual variable overheads for the month of June can be calculated as...

- A R24 000
- B R22 500
- C R25 500
- D R20 000

(2)

END OF SECTION A

SECTION B

[35 marks]

QUESTION 2

(10 marks)

This question has TWO sections which are related

Question 2.1

(3 marks)

News.com is a web site that offers users access to current national and international news stories. News.com doesn't charge users a fee for accessing the site but charges advertisers R0.50 per "hit" to the web site. A "hit" refers to a user who logs on to the page using a username and password.

News.com is considering two alternate internet service providers (ISPs), NetCom and Globalink, that will link News.com's computer system to the Internet. These firms are identical in terms of access speeds and number of users able to connect to the site per minute and both are equally reliable.

NetCom proposes to charge R30 000 per month plus R0.10 per hit to News.Com. Globalink will charge R20 000 per month plus R0.20 per hit. Assume that the only costs that News.com incurs are the ISP's access fees.

Source: www.metu.edu.tr, adapted

REQUIRED

- 2.1 Advise News.com on which service provider to use, using break-even analysis to guide your answer. You may assume that demand is not known. **(3)**

Question 2.2

(7 marks)

Assume that News.com expects a monthly demand (in terms of number of hits) of either 50 000 if the economy is slumping or 150 000 if it is booming, each of which, they think, is equally probable.

A market research company has been approached for an estimate of more accurate demand figures. They have provided the following estimation:

Demand	Probability
50 000	0.1
70 000	0.2
100 000	0.5
120 000	0.1
150 000	0.1

REQUIRED

- 2.2 Advise News.com on which service provider to use and calculate the maksimum amount that News.com should be willing to pay for the market research. **(7)**

QUESTION 3

(10 marks)

Tapcon produces one product named ZIRCON using three raw materials. The standard ingredients for **one** ZIRCON (which has a standard weight of 9 kilogrammes), are:

	R
5 kg of Platinum @R7 per kg	35
3 kg of Copper @ R5 per kg	15
1 kg of Silver @R4 per kg	4
9 kg	54

During the month of April, Tapcon produced 83 430 kg of product ZIRCON using the following combination of raw materials:

	R
47 700 kg of Platinum	333 900
25 200 kg of Copper	133 560
17 100 kg of Silver	37 620
90 000 kg	505 080

REQUIRED

Calculate the material mix and material yield variance for product ZIRCON.

(10)

QUESTION 4

(15 marks)

Telmat is a company that manufactures mobile phones. This market is very volatile and competitive and achieving adequate product profitability is extremely important.

Telmat is an advanced company that has been producing electronic equipment for many years and has costing systems in place to accurately monitor and predict costs. The company also makes use of the balance scorecard to manage performance.

The company is considering introducing Target costing and Life-cycle costing systems.

Source: CIMA, included in Management Accounting by Seal, Garrison & Noreen, 4th edition, adapted

REQUIRED

- 4.1 Discuss the two systems that the company is considering to introduce as well as the advantages (or disadvantages) that this specific company is likely to gain from these two systems.

(8)

- 4.2 Discuss the balanced scorecard, how it fits together and how it supports the company's strategy.

(7)

END OF SECTION B

SECTION C

[100 marks]

QUESTION 5

(25 marks)

PEEK-A-BOO (Pty) Ltd, manufactures baby bottles. The company uses absorption costing.

You are given the following information regarding the product:

- a) The budget prepared for standard costing purposes assumes the following:
- Production and sales: 1 000 bottles per week
 - Plastic per bottle: 0.1 kg @ R18 per kg
 - Silicone per bottle: 0.05 kg @ R40 per kg
 - Direct labour consists of 5 workers who are each paid at a rate of R25 per hour. They each work a standard 40 hour week.
 - Indirect labour consists of a full time supervisor who is paid a fixed salary of R2 000 per week.
 - Factory rent amounts to R3 000 per week.
 - Variable overheads amount to 20% of direct wages paid.
 - Fixed overheads are absorbed on the basis of direct labour hours.
 - The selling price per bottle is budgeted at R45 per bottle.
- b) The following information is relevant to the week ended 7 April 2014.
- Production was equal to sales which was 1 200 bottles.
 - The actual cost of raw materials used in production was:
 - Plastic R2 250
 - Silicone R4 000150 kg of plastic were used and 80 kg of silicone.
 - The 5 workers each worked the budgeted 40 hour shift at the standard rate, but two workers also each worked 5 hours overtime for which they were paid R30 per hour.
 - Fixed overhead expenditure was as budgeted except that factory rent increased by 10% on 1 April 2014.
 - Variable overheads were absorbed at the budgeted rate.

REQUIRED

- 5.1 Prepare a statement showing the composition of the standard cost per bottle. **(7)**
- 5.2 Prepare a statement of variances for the week ended 7 April 2014 including:
- 5.2.1 Material price and quantity variances for Plastic
 - 5.2.2 Labour rate and efficiency variances
 - 5.2.3 Fixed overhead budget and volume variances **(12)**
- 5.3 Explain the fixed overhead volume variance calculated above by analysing which part was caused by a variance in capacity and which part was caused by a variance in efficiency. **(6)**

QUESTION 6

(25 marks)

This question has **TWO** sections which are related

Question 6.1

(13 marks)

Tutstuff (Pty) Ltd sells a wide variety of drums, bins, boxes and other containers that are used in the chemical industry. One of the company's products is a heavy-duty corrosion-resistant metal drum, called the WVD drum, used to store toxic waste.

Production is constrained by the capacity of an automated welding machine that is used to make precision welds. A total of 2 000 hours of welding time is available annually on the machine. Each drum requires 0.4 hour of welding time. At present, the welding machine is used exclusively to make WVD drums.

The accounting department has provided the following financial data concerning WVD drums:

WVD Drums		R	
Selling price per drum			149
Cost per drum			
Direct materials		52.10	
Direct labour (R18/hour)		3.60	
Manufacturing overhead	Note 1	4.50	
Selling and admin	Note 2	29.80	90
Margin per drum			59

Note 1

Manufacturing overhead is allocated to products on the basis of labour hours. Most of the manufacturing overhead consists of fixed common costs such as rent on the factory building, but some of it is variable. The variable manufacturing overhead has been estimated at R1.35 per WVD drum.

Note 2

Selling and administrative expenses are allocated to products on the basis of revenues. Almost all of the selling and administrative expenses are fixed common costs, but it has been estimated that variable selling and administrative expenses amount to R0.75 per drum.

Additional information:

Management believes that 8 000 WVD drums could be sold each year if the company had sufficient capacity. Currently, the company has two options available to increase capacity:

Option 1

The company can hire an additional welding machine for an amount of R21 000 per month. All other costs will remain constant if the new machine is acquired.

Option 2

The company can buy additional drums from an outside supplier. Harcor Industries has been identified as a suitable supplier and would be able to provide up to 2 000 WVD type drums per year at a price of R138 per drum. TutStuff would resell the drums bought from Harcor Industries at its normal sales price. An additional labeling cost of R0.75 per drum would however be incurred.

REQUIRED

- 6.1 Advise Tutstuff (Pty) Ltd on whether they should hire an additional welding machine or whether they should buy the drums externally.

(13)

Question 6.2

(12 marks)

Assume that the company has decided NOT to increase its capacity (as in 6.1).

Martha Step, the production manager, has suggested that the company should make better use of the welding machine by replacing the production of WVD drums with the production of bike frames. The bike frames require 0.5 hours of welding time per frame and will sell for far more than the drums. Martha believes that TutStuff could sell up to 1 600 bike frames per year, to bike manufacturers, at a price of R254 each.

The accounting department has provided the following data concerning the proposed product:

Bike Frames		R	
Selling price per frame			254
Cost per frame			
Direct materials		99.40	
Direct labour (R18/hour)		28.80	
Manufacturing overhead	Note 1	36.00	
Selling and admin.	Note 2	47.80	212
Margin per drum			142

The bike frames could be produced with existing equipment and personnel.

Note 1

Manufacturing overhead is allocated to products on the basis of labour hours. Most of the manufacturing overhead consists of fixed common costs such as rent on the factory building, but some of it is variable. The variable manufacturing overhead has been estimated at R1.35 per WVD drum and R1.90 per frame.

Note 2

Selling and administrative expenses are allocated to products on the basis of revenues. Almost all of the selling and administrative expenses are fixed common costs, but it has been estimated that variable selling and administrative expenses amount to R0.75 per drum and would be R1.30 per frame.

REQUIRED

- 6.2 Advise management on the optimal production mix, when considering the production of WVD drums and bike frames, with the existing welding machine.

(12)

QUESTION 7

(25 marks)

Digit Ltd makes and sells a single product. Annual production and sales in units for 2014 are expected to be 210 000 (**52 500 per quarter**), and the standard cost and selling price per unit is:

	R
Selling price	30
Variable costs:	
Materials	8
Labour	8
Overheads	2

Annual fixed overheads for 2014 are budgeted at:

Manufacturing	R528 000
Non-manufacturing	R336 000

Actual production and sales for the **first quarter** of 2014 was 48 000 units.

The actual revenue and expenditure for the **first quarter** of 2014 was as follows:

	R
Sales revenue	1 506 000
Expenditure:	
Materials	355 500
Labour	376 500
Variable overhead	97 200
Fixed overheads:	
Manufacturing	120 000
Non-manufacturing	105 000

Digit Ltd divides the annual budget by 4 in order to produce quarterly variance analysis reports.

REQUIRED:

- 7.1 Prepare the first quarter variance analysis report showing the static budget, flexible budget, static budget variances and flexible budget variances. **(20)**
- 7.2 Discuss the differences between a static budget and a flexible budget. **(2)**
- 7.3 Discuss the advantages of the flexible budget approach. **(3)**

QUESTION 8

(25 marks)

Industrial Research Company (IRC) produces three chemical products, Sulpha, Alpha and by-product Zinc. The chemical products are produced in two consecutive processes. Process 1 involves the mixing of raw materials. At that stage none of the products are distinguishable. At the end of process 1, all finished output is transferred to process 2. Products only become distinguishable at the end of process 2. IRC operates a FIFO based process costing system.

The operating results for the two processes for the year ended 2013 were as follows:

Process 1

Raw materials are added at the beginning of process 1. The normal loss is estimated at 10% of units started at the beginning of the period. Losses are identified when the process is 40% complete. Losses can be sold as scrap for R1.50 per kg.

Input

	R
Opening work in progress (3 000kg, 70% complete)	13 500
Raw materials (110 000kg @ R3.50 per kg)	385 000
Labour and overheads	125 000

Output

	Kg
Transferred to process 2	98 250
Closing work in progress (80% complete)	2 500

Process 2

Units transferred from process 1 are processed further and split into the three chemical products at the end of the process. There was no opening or closing work in progress. No losses are expected in the process. Zinc is sold for R11.50 per kg after further processing costs of R1.75 per kg.

Input

	R
Labour and overheads	225 000
Transferred from process 1 (98 250kg)	?

Output

	Kg
Sulpha	61 300
Alpha	36 700
Zinc	250

Additional information:

There was no opening stock of finished goods at the beginning of the period.

Sales for the period were as follows:

	R
Sulpha (42 200kg @ R17 per kg)	717 400
Alpha (30 300kg @ R15.75 per kg)	477 225
Zinc (250kg @ R11.50 per kg)	2 875

The company does not allocate normal losses to abnormal losses should any arise.

Proceeds from the sale of by-products will be utilized to reduce joint costs.

REQUIRED

- 8.1 Calculate the cost of output transferred to process 2. **(15)**
- 8.2 Using the relative sales value method to allocate joint costs, calculate the cost of closing finished goods at the end of 2013. **(10)**

END OF SECTION C

Table of Areas under the Normal Curve

Values of the Standard Normal Distribution Function

Z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1960	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2517	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.6	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4863	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4932	.4934	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.9	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990