



FACULTY/COLLEGE	College of Business and Economics
SCHOOL	School of Accounting
DEPARTMENT	Financial Management
CAMPUS(ES)	APK
MODULE NAME	Performance Management
MODULE CODE	ADFM005/ S3PFMQ6
SEMESTER	Second Semester
ASSESSMENT OPPORTUNITY, MONTH AND YEAR	Exam Supplementary Assessment Opportunity January 2020

ASSESSMENT DATE	11 January 2020	SESSION	
ASSESSOR(S)	Ms T.G Ramutumbu Ms N. Kamsenza		
MODERATOR(S)	Ms T.G Nharo Mr T. Fusire		
DURATION	3hours (180 min)	TOTAL MARKS	120

NUMBER OF PAGES OF QUESTION PAPER (Including cover page)	13
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INFORMATION/INSTRUCTIONS:

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- This is a closed-book assessment.
 - Read the questions carefully and answer only what is required.
 - Number your answers clearly and correctly as per the question paper.
 - There are 3 sections and must all be answered in the booklets provided.
 - Ensure that you scratch out empty spaces in order to be eligible for a remark.
 - Ensure that you hand in all the answer books and question paper at the end of assessment.
 - Write neatly and legibly on both sides of the paper in the answer book, starting on the first page.
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SECTION A

Question 1.1

Identify which of the following best describes Just-in-time (JIT) :

- A. A sales control system where sales are made as the customer arrives in the warehouse.
- B. A production and inventory control system in which material are purchased and units are produced only as needed to meet actual customer demand.
- C. A production and sales control system in which material are purchased only as needed to meet actual customer demand.
- D. A sales control system in which labourers arrive just in time to start manufacturing to meet customer demand.

(1)

The following information relates to questions 1.2 -1.15:

Mali (Pty) Ltd manufactures two products, Tim and Baktu. Management believes that using activity-based costing (ABC) will yield numerous benefits for the entity. They have decided that they would use ABC to determine the maintenance costs that will be applied to each unit of production. The maintenance costs for the following year are R3 000 000. A detailed analysis of the maintenance functions on an activity base revealed the following:

	% of cost	Tim	Baktu
Scheduled visits	50	6 visits	4 visits
Call-out visits	40	15 visits	5 visits
Rework hours	10	1 200 hours	300 hours

The budgeted units of production are 120 000 units of Tim and 80 000 units of Baktu for the year.

Question 1.2

Calculate the portion of the maintenance costs that is attributable to **scheduled visits**:

- A. R3 000 000
- B. R1 500 000
- C. R1 200 000
- D. R1 800 000

(2)

Question 1.3

Using ABC, calculate the percentage of the maintenance costs for **call-out visits** that will be allocated to all units of Tim:

- A. 75%
- B. 40%
- C. 30%
- D. 15%

(2)

Question 1.4

Using ABC, calculate the maintenance costs for **call-out visits** that will be allocated to each unit of Baktu:

- A. R15.00
- B. R11.75
- C. R2.50
- D. R3.75

(2)

Question 1.5

Using ABC, calculate the maintenance costs for **rework hours** that will be allocated to each unit of Tim:

- A. R3.75
- B. R2.00
- C. R0.75
- D. R0.50

(2)

Question 1.6

Identify which of the following statements is true for Mali Ltd's maintenance costs:

- A. Tim carries higher maintenance costs per unit than Baktu.
- B. The total costs attributable to Tim's scheduled and call-out visits are the same.
- C. 68% of the maintenance costs are attributable to Tim.
- D. Statements A, B and C are true.

(2)

Question 1.7

Which one of the following are support activities in the value chain will a company consider if they wanted to make sure their employees are well trained?

- A. Human resource management.
- B. Manufacturing.
- C. Procurement.
- D. Operations

(1)**Question 1.8**

Which of the following are included within activity based management (ABM)?

- (a) Cost reduction
- (b) Product design decisions
- (c) Variance analysis
- (d) Operational control
- (e) Performance evaluation

- A. (a) only
- B. (a), (c), (d) and (e)
- C. (c), (d) and (e)
- D. (a), (b), (d) and (e)

(2)**Question 1.9**

A company has developed a new product which it will launch next month. During the initial production phase, the company expects to produce 64 batches of the product. The 1st batch is expected to require 25 hours of direct labour and the cost of labour is R10 per hour.

A 90% learning curve is expected to apply and the learning index for a 90% learning curve is - 0.1520.

What is the labour cost of the 64 batches to the nearest R?

- A. R8 503.
- B. R6 826.
- C. R8 906.
- D. R4 675

(2)**Question 1.10**

A theatre offers a special deal whereby two show tickets and pre-theatre dinner can be purchased as a package for a reduced price. This pricing strategy is usually referred to as:

- A. Loss leader pricing
- B. Optional extras
- C. Product bundling
- D. Price discrimination

(1)

Question 1.11

A company is developing a new product. Production will be in batches of 1,000 units and the direct labour cost is expected to reduce due to the effects of learning for the first four batches produced.

The direct cost of the first batch of 1,000 units is expected to be R40 000.

A 90% learning effect is expected to occur and the learning index for a 90% learning curve is - 0.152.

What is the direct labour cost of the 4th batch?

- A. R32 400
- B. R28 056
- C. R129 600
- D. R101 544

(2)**Question 1.12**

M Ltd is a furniture manufacturer. One of M Ltd's products is a chair which is produced in batches of 50. Chairs go through 11 separate production processes which necessitate a total of 18 material movements per batch. 90 batches are produced each year.

There are 30 000 material movements each year, costing R75 000.

Calculate the activity based cost of materials movement per chair, to the nearest R.

- A. R8
- B. R1
- C. R2
- D. R45

(2)**Question 1.13**

Your company supplies a particular product to customers X and Y. The product has a list price of \$40 with a mark-up of 100%.

As Y buys in bulk it receives a discount of 10% for every order of 100 units or more. However, X obtains a discount of 15% whatever the size of the order as it collects the items, thereby saving your company any distribution costs.

The administration cost per order is \$40 and distribution costs are \$800 per order.

X places 10 orders in the year totalling 400 units, and Y places 5 orders for 100 units each.

Choose which your most profitable customer is.

- A. Y
- B. X
- C. They will be equal amounts
- D. Not enough information was provided

(3)

Question 1.14**Fill in the missing words:**

Within a system of target costing, target cost gap is calculated as the difference between and

(2)**Question 1.15**

Which of the following definitions is/are correct?

1. An imposed budget is a budget which, by recognising different cost behaviour patterns, is designed to change as the volume of activity changes

2. Bottom-up budgeting is a process where all budget holders have the opportunity to participate.

- A. Neither are correct
- B. Definition 2 only is correct
- C. Definition 1 only is correct
- D. Both definitions are correct

(1)**Question 1.16**

The process by which the activities of an organization, particularly those regarding planning and decision making, are distributed or delegated away from authoritative location or group.

- A. Responsibility centre
- B. Centralisation
- C. Budgeting Group
- D. Decentralization

(1)**Question 1.17**

Which of the following is not a limitation of activity-based costing?

- A. Maintaining an activity-based costing system is more costly than maintaining a traditional direct labour-based costing system.
- B. Changing from a traditional direct labour-based costing system to an activity-based costing system changes product margins and other key performance indicators used by managers. Such changes are often resisted by managers.
- C. In practice, most managers insist on fully allocating all costs to products, customers and other costing objects in an activity-based costing system. This results in overstated costs.
- D. More accurate product costs may result in increasing the selling prices of some products.

(1)**Question 1.18**

Which of the following approaches is a cost management tool for reducing the overall cost of a product over its entire life cycle with the help of the production, engineering, research, design, marketing and accounting departments?

- A. Benchmarking.
- B. Kaizen costing.
- C. Target costing.
- D. Life cycle costing.

(1)

Question 1.19

S has several sales teams, each of whom is allocated a specific territory. S has used traditional budgeting techniques in the past to provide targets and to motivate sales staff. The sales director is considering switching to a beyond budgeting approach.

Which of the following are potential benefits of beyond budgeting?

Select ALL that apply.

- A. Coordination between sales and production will improve
- B. There will be less scope for budget slack
- C. Sales staff will be better motivated
- D. Coordination and cooperation will increase across the sales department
- E. Less time will be spent on budgeting

(2)

The following scenario relates to questions 20 and 21.

A firm has established that maximum demand for its products is 80 000 units per annum. When it reduced its price by R20, demand rose by 1 600 units.

Question 20

What is the demand function?

- A. $P = 1\,000 - 0,025x$
- B. $P = 1\,000 - 0,0125x$
- C. $P = 50 - 0,025x$
- D. $P = 500 - 0,0125x$

(2)

Question 21

What price should be set in order to sell 50 000 units?

- A. R125
- B. R225
- C. R375
- D. R500

(2)

Question 1.22

Which of these statements are correct?

- i. It is worthwhile for a company to sell further units when the marginal revenue is greater than the marginal cost
- ii. Price is the only factor affecting demand
- iii. Premium pricing is used to imply that the product is different in some way
- iv. Loss leadership is often used for new and different products with a short product lifecycle

- A. (i), (ii), (iii)
- B. (i), (ii), (iii), (iv)
- C. (i), (iii)
- D. (ii), (iv)

(2)

Question 1.23

A company has developed a new product which it will launch next month. During the initial production phase, the company expects to produce 64 batches of the product. The 1st batch is expected to require 25 hours of direct labour and the cost of labour is R10 per hour.

A 90% learning curve is expected to apply and the learning index for a 90% learning curve is - 0.1520.

What is the labour cost of the 64 batches to the nearest R?

(Answer must be written in the answering booklet)

(2)

END OF SECTION A

SECTION B**QUESTION 2****[15 marks]**

A company is developing a new product. During its expected life it is expected that 8 000 units of the product will be sold for R90 per unit.

The direct material and other non-labour related costs will be R45 per unit throughout the life of the product.

Production will be in batches of 1 000 units throughout the life of the product. The direct labour cost is expected to reduce due to the effects of learning for the first four batches produced. Thereafter the labour cost will remain at the same cost per batch as the 4th batch. The direct labour cost of the first batch of 1 000 units is expected to be R40 000 and a 90% learning effect is expected to occur

There are no fixed costs that are specific to the product.

REQUIRED:

- | | | |
|------------|---|------------|
| 2.1 | Calculate the average direct labour cost per batch of the first four batches | (3) |
| 2.2 | Calculate the direct labour cost of the 4th batch. | (6) |
| 2.3 | Calculate the contribution earned from the product over its lifetime. | (6) |

QUESTION 3**[15 marks]**

A company uses “total cost plus” pricing. Recent results show that profits are falling and that the company is losing market share in what is becoming a very competitive market.

REQUIRED:

- | | | |
|------------|--|------------|
| 3.1 | Explain TWO disadvantages of “total cost plus” pricing. | (4) |
| 3.2 | Explain how target costing could be of benefit to the company | (6) |
| 3.3 | Identify and discuss different types of responsibility centre, giving each a practical example. | (5) |

END OF SECTION B

SECTION C**QUESTION 4****[25 marks]**

Biashara (Pty) Ltd is a producer of high grade coffee roasts. The company buys coffee beans from Ethiopia (Buna) and Kenya (Kahawa). The coffee beans are then roasted, blended and packaged in one kilogram bags for sale to specialist coffee houses around the world. The major raw material in the coffee blends is the beans and the company's automated roasting, blending and packaging processes' have substantial overheads. Since the company is highly automated it uses very little direct labour. One kilogram of coffee beans yields one kilogram of roasted and blended coffee.

The budget for the coming year includes fixed production overhead costs of R3 300 000. Production overheads are applied using direct labour hours at the moment. The expected direct labour cost is R2 500 000 and the total budgeted direct labour hours are 18 334 hours. The above-mentioned labour costs are considered a variable cost.

The Buna coffee beans are R25 per kilogram while the Kahawa coffee beans are R22 per kilogram. Each kilogram of roasted and blended coffee requires ten minutes of labour. Packaging is R5 per kilogram of the Buna roast and it is 20% cheaper for the Kahawa roast.

Mr Tsi Binkie, the sales director, has just returned from an executive course at the Johannesburg Business School and has learnt that activity-based costing is more accurate than applying overheads using direct labour hours. He thinks this should be investigated.

The following fixed overhead cost information was compiled by a costing analyst:

Cost Pool	Cost	Cost driver
Ordering	R330 000	Purchase Orders
Material handling	R655 000	Number of set-ups
Roasting and blending	R1 545 000	Roasting and blending hours
Packaging	R770 000	Packaging Hours
	R3 300 000	

	Buna	Kahawa
Planned production and sales	80 000 kg	30 000 kg
Number of setups	32 setups	30 setups
Purchase order size	20 000kg per order	5 000 kg per order
Roasting and blending hours	15 000 hours	10 000 hours
Packaging time	2 400 hours	900 hours

REQUIRED:

- 4.1** Using direct labour hours as the base for applying manufacturing overhead cost to products, undertake the following:
- 4.1.1 Calculate** the predetermined overhead rate that will be used during the upcoming year. **(2)**
- 4.1.2 Calculate** the unit product cost of one kilogram each of the Buna and Kahawa roasts. **(5)**
- 4.1.3 Discuss** whether you agree with direct labour hours being used as a base to apply manufacturing overheads. Should you not agree, recommend a more appropriate traditional base for Biashara to use. **(3)**
- 4.2** Using activity-based costing as a basis for applying manufacturing overhead cost to products, **calculate** the total amount of manufacturing overhead cost assigned to the Buna and Kahawa roasts for the year. **(12)**
- 4.3** The most critical step in activity-based costing is identifying cost drivers. **Define** a cost driver and briefly discuss whether you agree with this statement or not. **(3)**

QUESTION 5**[25 marks]**

Vukani Ltd is considering two mutually exclusive projects to diversify their portfolio of investments. Each project has an initial investment of R150 000. The company's Board of Directors has set a 4-year payback requirement and has calculated its cost of capital at 9%. The cash inflows associated with the two projects are as follows:

Year	Cash inflows (CF _t)	
	Project A	Project B
1	R 45 000	R 75 000
2	R 45 000	R 60 000
3	R 45 000	R 30 000
4	R 45 000	R 30 000
5	R 45 000	R 30 000
6	R 45 000	R 30 000

Required:

- 5.1 Calculate** which project should be accepted if the payback method of project evaluation is applied. **(3)**
- 5.2 Calculate** which project should be accepted if the discounted payback method of project evaluation is applied. **(5)**
- 5.3 Calculate** the net present value (NPV) of each project if a discount rate of 0% is used. **(2)**
- 5.4 Calculate** the net present value (NPV) of each project if a discount rate of 9% is used. **(4)**
- 5.5 Calculate** the internal rate of return (IRR) of each project. **(2)**
- 5.6 Advise** which of the above methods of project evaluation is most appropriate for ranking projects and briefly explain why the other methods are not that suitable. **(4)**
- 5.7 Identify and discuss** different types of responsibility centre, giving each a practical example. **(5)**

END OF SECTION C**Grand Total = 120**