



# **School of Business & Leisure EXAMINATION PAPER**

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**PROGRAMME:**

**BA (Hons) Accounting & Finance**

**Module:**

**MANAGEMENT ACCOUNTING APPLICATIONS  
(Level 6b)**

**DATE:** 17 May 2021

**TIME ALLOWED:** 3 HOURS

**MODULE LEADER:** Mr. Meshack Letlhare

**EXAMINATION** From 17 May 2021, 10 am

**START TIME:**

**SUBMISSION** Before 18 May 2021, 10 am

**DEADLINE:**

**Late submissions will be capped at 40%**

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## **EXAMINATION CONDUCT:**

1. The [BAC Academic Conduct Regulation](#) outlines the behavioural expectations of candidates completing any examination.
2. It is a fundamental principle that students are assessed fairly and equitably. The [BAC Academic Conduct Regulation](#) defines unfair behaviour relating to an examination to be 'cheating'. The University will investigate and may sanction any acts or behaviours which breach the Code of Academic Conduct.
3. In view of the University Covid-19 response and the exceptional actions necessary to conduct off campus exams, all students are reminded that this is an individual task and that students who contact or collude with other students to complete their exam may be subject to sanction later.
4. The criteria to [Exceptional Extenuating Circumstances](#) has been extended to include Covid-19 related issues - this includes illness and self-isolation.

**INSTRUCTIONS TO CANDIDATES APPEAR ON THE FOLLOWING PAGE**

## INSTRUCTIONS TO CANDIDATES:

1. Students are responsible for ensuring that they know how to submit their exam answer file, when the deadline is and that they submit the script in enough time before the deadline expires. It is anticipated that Blackboard will be slower around submission time.
2. Whilst the release period for this exam is a 24-hour period, this exam should take you no longer than the above suggested duration to complete. Please be sensible about the amount of time you spend completing and submitting your work and make allowance for technical issues prior to the deadline.
3. This is an **OPEN BOOK** examination.
4. There are **FOUR** sections in this paper:
  - **SECTION A and B** - answer **ALL COMPULSORY** questions (total 50 marks)
  - **SECTION C and D** - answer **ONE** question from each section (total 50 marks)
5. Your answers must be **typed in Microsoft Word** and submitted in **ONE single Word file** to Turnitin Examination Portal before the deadline.
6. For computational parts of the examination, students are permitted to hand write their numerical answers if they wish to do so. A scanned or photographed image of the hand-written answers must be embedded in the answer file. **Only ONE answer file can be submitted for each examination.**
7. APA referencing is required if you directly quoted materials and/or use concepts from published texts or reports.
8. Academic support will be available from your Module Leader.
9. Any changes or clarification to the exam paper will be communicated via the module email announcements. It is recommended that students monitor email announcements prior to the submission of their final script but particularly in the three hours after the release of the examination paper.
10. The word count for the whole exam is approximately 1,500 words + 10% maximum. Numerical answers are not counted towards the word count. It is for you to decide how you use the 1,500 words on various questions.

## SECTION A

### MULTI-CHOICE QUESTIONS

#### THIS SECTION IS COMPULSORY - ANSWER ALL QUESTIONS

- 1.1 A company values stocks using the weighted average value after each purchase. The following receipts and issues have been made with regards to materials for the month of April 2021:

Date	Units	Receipts P/unit	Valuation	Issues Units
Brought forward	100	5	P500	
4th	150	5.50	P825	
16th				100
20th	100	6	P600	
21st				75

What is the value of the closing stock using this weighted average method as at 21 April 2021?

- A. P1012.50
- B. P976.50
- C. P962.50
- D. P925.00

3 marks

- 1.2 A company uses a predetermined overhead recovery rate based on machine hours. Budgeted factory overhead for a year amounted to P720 000, but actual factory overhead incurred was P738 000. During the year, the company absorbed P714 000 of factory overhead on 119 000 actual machine hours.

What was the company's budgeted level of machine hours for the year?

- A. 116 090
- B. 119 000
- C. 120 000
- D. 123 000

3 marks

- 1.3 A company has over-absorbed fixed production overheads for the period by P6 000. The fixed production overhead absorption rate was P8 per unit and is based on the normal level of activity of 5000 units. Actual production was 4 500 units.

What was the actual fixed production overheads incurred for the period?

- A. P30 000
- B. P36 000
- C. P40 000
- D. P42 000

2 marks

- 1.4 At the end of a period, in an integrated cost and financial accounting system, the accounting entries for overhead over-absorbed would be:
- A. DR Profit and loss account  
CR Work in progress control account
  - B. DR Profit and loss account  
CR Overhead control account
  - C. DR Work in progress control account  
CR Overhead control account
  - D. DR Overhead control account  
CR Profit and loss account
- 2 marks
- 1.5 A company uses process costing to value its output and all materials are input at the start of the process. The following information relates to the process for one month:
- Input 3000 units
  - Opening stock 400 units
  - Losses 10% of input is expected to be lost
  - Closing stock 200 units
- How many good units were output from the process if actual losses were 400 units?
- A. 2800 units
  - B. 2900 units
  - C. 3000 units
  - D. 3200 units
- 3 marks
- 1.6 WTD Ltd produces a single product. The management currently uses marginal costing but is considering using absorption costing in the future. The budgeted fixed production overheads for the period are P500 000. The budgeted output for the period is 2 000 units. There were 800 units of opening inventory at the beginning of the period and 500 units of closing inventory at the end of the period. If absorption costing principles were applied, the profit for the period compared to the marginal costing profit would be:
- A. P75 000 higher
  - B. P75 000 lower
  - C. P125 000 higher
  - D. P125 000 lower
- 3 marks
- 1.7 A company has established a budgeted sales revenue for the forthcoming period of P500 000 with an associated contribution of P275 000. Fixed production costs are P137 500 and fixed selling costs are P27 500. What is the break-even sales revenue?
- A. P75 625
  - B. P90 750
  - C. P250 000
  - D. P300 000
- 2 marks

The following information relates to questions 1.8 and 1.9

SW plc manufactures a product known as the TRD100 by mixing two materials. The standard material cost per unit of the TRD100 is as follows:

		P
Material X	12 litres @ P2.50	30
Material Y	18 litres @ P3.00	54

In October, the actual mix used was 984 litres of X and 1230 litres of Y. The actual output was 72 units of TRD100.

- 1.8 The total material mix variance reported was nearest to
- A. P102 (F)
  - B. P49 (F)
  - C. P49 (A)
  - D. P151 (A)
- 3 marks

- 1.9 The total material yield variance reported was nearest to
- A. P102 (F)
  - B. P49 (F)
  - C. P49 (A)
  - D. P151 (A)
- 2 marks

- 1.10 Which of the following is correct with regard to stocks?
- (i) Stock-outs arise when too little stock is held.
  - (ii) Safety stocks are the level of units maintained in case there is unexpected demand.
  - (iii) A reorder level can be established by looking at the maximum usage and the maximum lead-time.
- A. (i) and (ii) only
  - B. (i) and (iii) only
  - C. (ii) and (iii) only
  - D. (i), (ii) and (iii)
- 2 marks

**Total 25 marks**

**SECTION B**  
**THIS SECTION IS COMPULSORY - ANSWER ALL QUESTIONS**

**Question 2**

- (a) Spar Limited, a retail outlet, is faced with a decision regarding whether or not to expand and build small and large premises at a prime location. Small premises would cost P300 000 to build and large premises would cost P550 000.

Regardless of the type of premises built, if high demand exists then the net income is expected to be P1 500 000. Alternatively, if low demand exists, then the net income is expected to be P600 000.

If large premises are built then the probability of high demand is 0.75. If the smaller premises are built then the probability of high demand falls to 0.6.

Spar has the option of undertaking a survey costing P50 000. The survey products whether there is likely to be a good or bad response to the size of the premises. The likelihood of there being a good response, from previous surveys, has been estimated at 0.8.

If the survey indicates a good response then the company will build the large premises. If the survey does give a good result then the probability that there will be high demand from the large premises increase to 0.95.

If the survey indicates a bad response then the company will abandon all expansion plans

Required:

Using decision tree analysis, establish the best course of action for Spar Limited.  
**(19 marks)**

- (b) Explain the meaning of maximax, maximin and regret criterion decisions with use of examples where appropriate, when making decisions under conditions of risk and uncertainty.

**(6 marks)**

**Total: 25 marks**

**SECTION C**  
**ANSWER ONLY ONE QUESTION FROM THIS SECTION**

**Question 3 DAY LIMITED**

DAY Limited is an engineering company which uses job costing to attribute costs to individual products and services provided to its customers. It has commenced preparation of its fixed production overhead cost budget for the year 2022 and has identified the following costs:

	(P000)
Machining department	600
Assembly department	250
Finishing department	150
Stores department	100
Maintenance department	<u>90</u>
Total	1,190

The stores and maintenance departments are service departments. An analysis of the services they provide indicates that costs should be apportioned accordingly:

	Machining	Assembly	Finishing	Stores	Maintenance
Stores	40%	30%	30%	-	-
Maintenances	55%	20%	25%	-	-

The number of machine and labour hours budgeted for 2022 are:

	Machining	Assembly	Finishing
Machine hours	50 000	4 000	5 000
Labour hours	10 000	30 000	20 000

**Requirements:**

- (a) Prepare an overhead analysis sheet to re-assign service department costs to production department cost centers using the appropriate cost apportionment methods. **(4 marks)**
  
- (b) Calculate appropriate overhead absorption rates for each production department for the year 2022. **(6 marks)**
  
- (c) Prepare a quotation for job number J05, which is to be commenced early in 2022, assuming that it will require:

Direct materials costing P2,400  
Direct labour costing P1,500

And:

	<i>Machine Hours</i>	<i>Labour Hours</i>
Machining department	45	10
Assembly department	5	15
Finishing department	4	12

And that a profit margin of 20% is added on total cost to calculate the selling price.  
**(9 marks)**

- (d) Assume that in 2022 the actual fixed overhead cost of the assembly department totals P300 000 and that the actual machine hours were 4 200 and actual labour hours were 30 700.

Calculate any over /under –absorption in the assembly department and state any two possible causes.  
**(6 marks)**

**Total: 25 marks**

#### Question 4 USA LTD

USA Ltd is a warehousing and distribution company which receives products from customers, stores the products and then re-packs them for distribution as required. There are three customers for whom the service is provided-Joe Ltd, Barrack Ltd and Trump Ltd. The products from all three customers are similar in nature but of varying degrees of fragility. Basic budget information has been gathered for the year to June and is shown in the following table:

	<b>Products Handled (cubic metres)</b>
Joe Ltd	30 000
Barrack Ltd	45 000
Trump Ltd	25 000
	<b>Costs (P000)</b>
Packaging materials (see note 1)	1 950
Labour – normal time	350
- overtime	30
Occupancy	500
Administration and management	60

Note 1: Packaging materials are used in re-packing each cubic of product for Joe Ltd, Barrack Ltd and Trump Ltd in the ratio 1:2:3 respectively. This rate is linked to the relative fragility of the goods for each customer.

Additional information has been obtained in order to enable unit costs to be prepared for each of the three customers using an activity based costing approach.

The additional information for the year to 30 June has been estimated as follows:

- i. Labour and overhead costs have been identified as attributable to each of three work centres - *Receipt and inspection*, *Storage* and *Packing* as follows:

	<u>Cost allocation proportion</u>		
	Receipt and inspection %	Storage %	Packing %
Labour –normal time	15	10	75
- overtime	50	15	35
Occupancy	20	60	20
Administration	40	10	50

(ii) Studies have revealed that the fragility of different goods affects the receipt and inspection time needed for the products for each customer. Storage required is related to the complexity of packaging required by each customer. The re-packing of goods for distribution is related to the average size of the basic incoming product units from each customer.

The relevant requirements per cubic metre of products for each customer have been evaluated as follows:

	Joe Ltd	Barrack Ltd	Trump Ltd
Receipt and inspection (minutes)	5.0	9.0	15.0
Storage (square metres)	0.3	0.3	0.2
Packing (minutes)	36.0	45.0	60.0

**Required:**

Calculate the budgeted average costs per cubic metres of packaged products for each customer for each of the following two circumstances:

- (a) Where only the basic (traditional) budget information is to be used. **(9 marks)**
- (b) Where the additional information enables an activity based costing approach to be applied customer. **(16 marks)**

**Total: 25 marks**

**SECTION D**  
**ANSWER ONE QUESTION FROM THIS SECTION**

**Question 5 BK PROPERTIES**

BK Properties produces and sells many products. The following standard selling price and standard costs relate to one unit of Product SC.

Direct materials:	2 kg at P4.50 per kg
Direct labour:	30 minutes at P8.00 per hour
Fixed production overheads:	P14.00 per direct labour hour
Selling price:	P30.00

Budgeted profit for Product SC in period 1 was P20,000.

The actual results for period 1 were as follows:

Sales revenue of P70,400 was received from 2,200 units produced and sold  
Direct materials of 4,600 kg were purchased and used at a cost of P20,240  
Direct labour cost was P8,715 for 1,050 labour hours worked  
Fixed costs of P16,000 were incurred.

Required:

(a) Produce an operating statement that reconciles budgeted profit and actual profit for period 1. The operating statement should clearly identify the following variances:

- (1) Sales profit volume variance
- (2) Sales price variance
- (3) Direct material price and usage variances
- (4) Direct labour rate and efficiency variances
- (5) Fixed production overhead expenditure and volume variances

**(15 marks)**

(b) Discuss how analysis of the existing variances into operational and planning variances might improve the usefulness of the information provided by the operating statement in part (a) above, and explain what additional information would be needed by BK Properties in order to prepare operational and planning variances for period 1.

**(10 marks)**

**(Total: 25 marks)**

### Question 6 THE AYE, BEE AND CEE

A process costing P200 000 produces 3 products – Aye, Bee and Cee. Output details are as follows:

Product Aye	6 000 litres
Product Bee	10 000 litres
Product Cee	20 000 tonnes

Each product may be sold at the completion of the process as follows:

<b>Sales value at the end of the first process</b>	
Product Aye	P10 per litre
Product Bee	P4 per litre
Product Cee	P10 per tonnes

Alternatively, further processing of each individual product can be undertaken to produce an enhanced product thus.

	<b>Further Processing costs</b>	<b>Sales value after further process</b>
Enhanced Product Aye	P10 per litre	P20 per litre
Enhanced Product Bee	P4 per litre	P8 per litre
Enhanced Product Cee	P10 per tonne	P16 per tonne

Required:

- (a) Explain the following terms:
  - i. Normal process loss;
  - ii. Joint product;
  - iii. By product; **(6 marks)**
- (b) state the appropriate costing treatment for normal process loss and for by-products. **(4 marks)**
- (c) Calculate the apportionment of joint process costs to product Aye, Bee and Cee above, using the sales value at split-off point method. **(9 marks)**
- (d) Explain whether the initial process should be undertaken and which, if any, of the products should be further processed **(6 marks)**

**Total: 25 marks**

**THE END**