



**PAMIBIA UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

**FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION**

DEPARTMENT OF ACCOUNTING, ECONOMICS AND FINANCE

<b>QUALIFICATION : BACHELOR OF ACCOUNTING</b>	
<b>QUALIFICATION CODE:</b> 07BOAC	<b>LEVEL:</b> 6
<b>COURSE:</b> COST & MANAGEMENT ACCOUNTING 201	<b>COURSE CODE:</b> CMA611S
<b>DATE:</b> JUNE 2022	<b>SESSION:</b> THEORY & CALCULATIONS
<b>DURATION:</b> 3 HOURS	<b>MARKS:</b> 100

<b>FIRST OPPORTUNITY EXAMINATION</b>	
<b>FIRST EXAMINER:</b>	Ms H. Kangala, Mr G. Sheehama, Mr H. Namwandi
<b>MODERATOR:</b>	Mr K. Tjondu

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. This question paper is made up of FIVE (5) questions.</li><li>2. Answer All the questions and in blue or black ink.</li><li>3. You are advised to pay due attention to expression and presentation. Failure to do so will cost you marks.</li><li>4. Start each question on a new page in your answer booklet and show all your workings.</li><li>5. Questions relating to this paper may be raised in the initial 30 minutes after the start of the paper. Thereafter, candidates must use their initiative to deal with any perceived error or ambiguities and any assumption made by the candidate should be clearly stated.</li></ol>

**PERMISSIBLE MATERIALS**

Non-programmable calculator/financial calculator

**THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)**

**Question 1****20 Marks**

Stars Ltd manufacture and sell hand lotion. Their manufacturing overheads are allocated based on direct labour hours. It takes 15 minutes to produce one bottle of hand lotion. Standard production for a typical month is 80 000 bottles. The budgeted fixed manufacturing overheads amount to N\$648 000 per annum. There were 23 000 bottles of hand lotion in the finished goods storeroom on 31 July 2021.

Stars Ltd manufactured 85 000 bottles of hand lotion during July 2021 and sold 80 000 units in the same month.

Manufacturing costs during July 2021 are as follows:

Direct material	N\$ 106 250
Direct labour	N\$ 340 000
Variable manufacturing overheads	N\$ 18 700
Variable selling & administration cost	N\$ 42 160
Fixed selling & administration cost	N\$ 60 000
Fixed manufacturing overheads (actual)	N\$ 57 000
Variable marketing cost	N\$ 25 420
Fixed manufacturing overhead rate per bottle	N\$ 0.68

The cream was sold at N\$11.25 per bottle during July. In August, Stars Ltd decided to increase the sales price by 10% because the fixed administration cost increased by N\$20 000 and the direct material cost increased by 10% from 1 August.

78 000 Bottles of hand lotion were manufactured during August. There were 13 500 bottles of hand lotion in the finished goods storeroom on 31 August 2021. All other factors remain unchanged.

Variable non-manufacturing costs vary according to the number of units sold.

**Required:**

- a) Determine the flow of units for August 2021. (2)
- b) Calculate the unit cost using the absorption costing method for July and August 2021. (4)
- c) Compile the statement of comprehensive income for August 2021 if we use the direct costing methods. (9)
- d) The net income for the income statement using the absorption costing method is N\$375 874.38 Reconcile the difference in profit (if any) between the two methods for August 2021. (5)

**Question 2****15 Marks**

Colourful Stuff (Pty) Limited manufactures three products and uses an ABC system. The names of the three products are Pink, Blue and Yellow. The entity uses the same machinery (machine Blicks for assembly and machine Max for compression) to manufacture all three products. Pink and Blue tend to put a lot of pressure on machine Blicks and therefore, the technician needs to inspect the machine frequently.

Manufacturing overheads for the month of October 2021 were as follows:

Assembly	N\$750 000
Compression	N\$840 000
Indirect labour (technician salary)	N\$12 000
<b>Total</b>	<b>N\$1 602 000</b>

**Additional information:**

- The following information for October 2021 has been obtained from the manufacturing department:

Machine	Number of set-ups	Number of technician inspections
Blicks	10	5
Max	8	-
<b>Total</b>	<b>18</b>	<b>5</b>

- The following information also relates to October production:

Product	Units manufactured	Number of Assembly	Set-ups required Compression	Number of technician inspections necessitated
Pink	8 000	3	3	2
Blue	5 000	5	4	2
Yellow	3 000	2	1	1
<b>Total</b>	<b>16 000</b>	<b>10</b>	<b>8</b>	<b>5</b>

3. Management has determined that the number of set-ups of the relevant machine is an appropriate cost driver regarding the activities of assembly and compression and that the number of technician inspections is an appropriate cost driver for the inspection activity. All activity costs were deemed material in size and justified separate treatment. The only task of the technician is to inspect the assembly machine.

**Required:**

Calculate the following (round off all amounts to two decimal places)

- a) The activity rates to be used for: Assembly, Compression and Inspection activity. (3)  
 b) The overhead costs per unit for each of the products. (12)

**Question 3**

**20 Marks**

Plastic Ltd is a plastic processing company which uses a FIFO inventory valuation system. It produces different strengths of plastics for industrial use. The company creates two types of plastic, namely, PLA plastic and ABS plastic, using the same process. ABS is processed further at an additional cost of N\$20 per kilogram. During the month 40 000 kilograms of PLA and 20 000 kilograms of ABS was produced. The sales price for PLA is N\$300 per kilogram and N\$330 for ABS per kilogram. Plastics Ltd had the following inventory details for the month:

	<b>PLA Plastic</b>	<b>ABS Plastic</b>
Opening inventory	5 000	3 000
Units sold	42 000	20 500

The following joint costs were incurred during the month:

**Cost**

Direct material	N\$4 000 000
Direct labour	N\$2 000 000
Manufacturing overheads	N\$1 500 000

All percentages must be rounded off to the nearest percentage.

**Required:**

Allocate the joint cost to the joints using:

- a) Physical units methods (5)  
 b) Relative market value at split-off point (8)  
 c) Calculate the total gross profit for ABS if the joint costs are allocated according to physical units method. (7)

**Question 4****35 Marks**

Ntate Kandongo Steel Ltd is situated in Katutura, it manufactures steel bumpers for motor vehicles. The manufacture of the steel bumpers requires three separate processes. In Process 1 the sheet metal is cut according to specifications. The cut metal pieces are then transferred to Process 2, where special equipment is used to bend and form the metal pieces into mudguard shapes. The shaped mudguards are then transferred to Process 3, where they are completed and polished, and then transferred to the finished goods storage area.

The following information was identified for Ntate Kandongo Manufacturers:

1. Transfers from Process 2: 180 000 units at a cost of N\$394 200.
2. Process 3 work-in-progress at the beginning of the month was 20 000 units at a cost of N\$55 160 (N\$38 000 and N\$17 160 for material and labour respectively). Units were 70% complete for material and 40% complete for conversion costs.
3. Process 3 costs added in the current period:
  - Material N\$110 520
  - Labour Costs N\$36 506
  - Overheads 200% of labour costs
4. Work-in-progress at the end of the month was 18 000 units, which were 90% complete for material and 70% complete for conversion costs.
5. Inspection takes place when the steel bumpers are complete.
6. No losses are expected during the current month.
7. The first-in-first-out stock valuation method is used by Ntate Kandongo Steel Ltd.

**Required:**

- (a) Determine the value of completed production units as well as the value of closing work-in-progress (WIP). **(25)**
- (b) Describe three of the characteristics which distinguish process costing from job costing. **(6)**
- (c) Explain the accounting treatment of normal and abnormal losses. **(4)**

**Question 5****10 Marks**

Elsa D and Evans are friends that decided to start a partnership, Katau Funz, a mobile bungee jumping facility. No equipment has been acquired yet, however the friends are looking into buying equipment that can allow the following bungee jumping procedure:

A group of six people get into cage, which is hoisted up to a certain height by making use of a crane. One person jumps at a time, the only connection to the cage being a rubber band. The one end of the rubber band is fixed to the cage; the other end is fixed to the waist or legs of the person jumping. After swinging for some time on the rubber band, the person is released onto a safety mattress on the ground, ready to let a new group of people get in.

The 2 partners intend to make the facility available at different places, depending on the events taking place in a specific area. The acquired units therefore need to be mobile for this reason. There are only two suitable models of equipment available in the market, with the following details:

	<b>Model A</b>	<b>Model B</b>
Height of jump	45 metres	60 metres
Cost price per unit	N\$450 000	N\$500 000
Duration of session, based on a group of six people (including the time required to hoist the cage)	45 minutes	60 minutes
Annual fixed operating expenses	N\$389 325	N\$423 950
Variable cost per jump	N\$13	N\$13
Selling price of tickets per jump	N\$100	N\$135
Budgeted sales	N\$748 800	N\$1 010 800
Maximum number of jumps (100% capacity)	7 488 jumps	7 488 jumps

The plan is to open the facility throughout the year, from 9am daily Saturday to Sunday. The last jumpers have to be on the ground by 9pm. It is envisaged that regardless of which model is acquired, the facility would operate at full capacity. The owners of Katau Funz have approached you to help them procure the appropriate model, based on the questions below:

**Required:**

- (a) Calculate the number of jumps needed to break-even for each model (4)
- (b) Calculate the number of jumps needed on each model to ensure an annual net profit before tax of N\$302 325. (4)
- (c) i) Based on profitability alone, advise the 2 friends which model they should acquire. (1)
- ii) What other 2 factors besides profitability should Elsa D and Evans consider in deciding which model to acquire? (1)

**\*END OF QUESTION PAPER\***