



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION
DEPARTMENT OF SCIENCE, MATHEMATICS AND TECHNOLOGY EDUCATION
Management and Cost Accounting
PST 2162

Main Examination Paper

First Semester November 2024

This examination paper consists of 6 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Bernard Moyo

External Examiner: Dr B Dlamini

INSTRUCTIONS

1. Answer all questions

Question 1

I. Define the term equivalent production and explain where the principle is used **(4marks)**

II. The details for the month are

| | <i>Materials</i> | <i>Labour</i> | <i>Overheads</i> | <i>TOTAL</i> |
|-----------------------------|------------------|---------------|------------------|--------------|
| <i>Total Cost</i> | 8172 | 7120 | 5196 | 20488 |
| <i>Degree of completion</i> | 90 | 75 | 55 | -- |

Calculate for the month

I. Total equivalent production for each cost element **(3 marks)**

II. The cost per complete element **(3 Marks)**

III. The value of work in progress **(4 Marks)**

III. Must Ltd Produces Alpha a product requiring two process. Normal loss in each process is 10% the following information relates to the month of May.

| | Process 1 | Process 2 |
|----------------------------|------------|------------|
| Direct Material (8000) | 64800 | |
| Added Materials | | 12960 |
| Direct Labour | 37280 | 40000 |
| Production Overheads | 48000 | 66000 |
| Transfer to Process 2 | 3800 units | |
| Transfer to finished goods | | 4250 units |

Required

Process 1 account **(3 marks)**

Normal Loss Account **(1 mark)**

Abnormal Loss / Profit **(1 mark)**

Process 2 account **(3 marks)**

Question 2

Nust Manufacturing Company produces a uniform product and operates a standard costing system. The standard cost for the first quarter was as follows. It planned to produce 50 units from each ton of raw material. The standard price per ton is \$250.

The company employs 30 employees at standard wage rate of \$5 per hour. The standard working week is 37 and half, during the first quarter of the year the company will operate 12 weeks.

The standard performance for the whole factory is 240 units per hour. Budgeted production overhead for the three \$324000. Budget output is 108 000 units.

During the first week in January 2024 production was 9180 units, consumption of raw materials was 190 tons at an actual price of \$230 per ton. Four employees were paid at \$6.5 per hour and two at \$5.5 per hour the remainder were paid at the standard rate. Actual production overhead incurred was \$26000 and actual hours worked was 37 and a half.

Required

Calculate the following

- | | |
|---------------------------------------------|-----------|
| a. Direct material cost variance | (2 marks) |
| b. Direct material price variance | (2 marks) |
| c. Direct material usage variance | (2 marks) |
| d. Direct labour cost variance | (2 marks) |
| e. Direct labour rate variance | (2 marks) |
| f. Direct labour efficiency variance | (2 marks) |
| g. Production overhead cost variance | (2 marks) |
| h. Production overhead expenditure variance | (2 marks) |
| i. Production overhead volume variance | (2 marks) |

The budgeted output for Nust Ltd for May was 1000 units of product A. Each unit requires two direct labour hours. Variable overheads are budgeted at \$3 per labour hour.

Actual results

Output 900 units

Labour hours worked 1980 hours

Variable overheads \$5544

Required

Calculate

- I. Variable overhead total variance **(2 marks)**
- II. Expenditure Variances **(2 marks)**
- III. Efficiency Variances **(2 marks)**

Question 3

A) Nust limited has the following information for period two

| Output | Total cost \$ |
|--------|---------------|
| 200 | 7000 |
| 300 | 8000 |
| 400 | 9000 |

- I. Calculate variable cost per unit **(2 marks)**
- II. Calculate the total fixed cost **(2 marks)**
- III. Estimate the total cost if output is 350 units **(2 marks)**
- IV. Estimate the total cost if output is 600 units **(2 marks)**

B) Nust Ltd has recorded the following details for Component 427 which is sold in boxes of 10 components

| | |
|----------------|-------------------------------|
| Ordering cost | \$32 per order placed |
| Purchase Price | \$20 per box of 10 components |
| Holding cost | 10% of purchase price |
| Monthly Demand | 1500 components |

Component 427 is currently ordered in batches of 240 boxes at a time. The average inventory held is 120 boxes

- I. Calculate the annual holding cost and the annual ordering cost for component 427 (6 marks)

C) Nust uses components at the rate of 500 units per month, which are bought in at a cost of \$1.2 each from the supplier. It costs \$20 each time to place an order regardless of the quantity ordered. The supplier offers 5% discount on the purchase price for order quantities of 2000 items or more. The current economic order quantity is 1000 units. The total holding cost is 20% per annum of the value of inventory held

Required

Should the discount be accepted (9 marks)

Question 4

Nust Ltd makes and sells one product. The following information is available for period 3.

| | |
|--------------------------------------------------------------------------------------------------------|------|
| Production units | 2500 |
| Sales units | 2300 |
| Opening inventory | 0 |
| Financial data | \$ |
| Unit selling price | 90 |
| Unit cost | |
| Direct materials | 15 |
| Direct labour | 18 |
| Variable production overheads | 12 |
| Fixed production overheads | 30 |
| Variable selling overheads | 1 |
| Fixed production overheads for the period were \$52500 and fixed administration overheads were \$13500 | |

Required:

- Prepare a statement of profit or loss using marginal costing principles. **(8 marks)**
- Prepare a statement of profit or loss using absorption costing principles **(8 marks)**
- Prepare a reconciliation statement of the two profit statements **(4 marks)**
- Discuss the advantages of absorption costing over marginal **(5 marks)**