| FACULTY/COLLEGE | College of Business and Economics |
| :--- | :--- |
| SCHOOL | School of Accounting |
| DEPARTMENT | Commercial Accounting |
| CAMPUS(ES) | SWC and DFC |
| MODULE NAME | Costing and Estimating 1A |
| MODULE CODE | BKM11A1/CAE01A1/FPO0AA1/BKM1AA0 |
| SEMESTER | First |
| ASSESSMENT OPPORTUNITY, | Supplementary Summative Assessment <br> Opportunity <br> July 2019 |
| MONTH AND YEAR |  |


| ASSESSMENT DATE | July 2019 | SESSION |  |
| :--- | :--- | :--- | :--- |
| ASSESSOR(S) | Mr D du Plessis \& Ms R Benedict |  |  |
| MODERATOR(S) | Ms M Nevhutanda |  |  |
| DURATION | 180 minutes | TOTAL MARKS | 100 |

NUMBER OF PAGES OF QUESTION PAPER (Including cover page) 6

## INFORMATION/INSTRUCTIONS:

- Answer all questions. Show all calculations and workings clearly.
- Silent, non-programmable calculators may be used.
- Where applicable, round all calculations to two decimal places, unless stipulated otherwise.

| QUESTION | TOPIC | MARKS | TIME |
| :---: | :--- | :---: | :---: |
| 1 | Introduction to Cost and Management Accounting | 20 | 36 minutes |
| 2 | Material | 20 | 36 minutes |
| 3 | Labour | 20 | 36 minutes |
| 4 | Overheads | 20 | 36 minutes |
| 5 | Cost-Volume-Profit Analysis | 20 | 36 minutes |
|  |  | $\mathbf{1 0 0}$ | $\mathbf{1 8 0}$ minutes |

## QUESTION 1

Good Hardware Ltd (GH) is a manufacturer of different kitchen appliances. During March 2019, GH started prototyping a new type of gas stove in response to the load shedding that was experienced throughout the country. The following information relate to these prototypes:

Costs incurred are as follows:

| Opening inventory of stove plates | R10 000 |
| :--- | ---: |
| Stove plates purchased during March | R20 000 |
| Closing inventory of stove plates | R5 000 |
| Glass purchased for stove tops | R30 000 |
| Labour hours worked | 80 hours |
| Wages for labour per hour | R200 |
| Marketer's salary allocated to the job | R10 000 |
| Indirect materials | R18 000 |
| Utilities cost allocated to the job |  |

## REQUIRED:

1.1 Calculate the prime cost.
1.2 Calculate the conversion cost.
1.3 Calculate the manufacturing cost.
1.4 A cost accounting system is a set of systematic processes and procedures used to measure, record and report on cost accounting data. It includes five distinct activities, name three of them.
1.5 Draw and label a graph depicting the total mixed cost of a product broken into its fixed and variable components.

## QUESTION 2

PART A

Soda Ltd manufactures different types of cold drinks. One of the raw material used in the manufacturing process is a gas called carbon dioxide. Soda Ltd uses 10000 litres of carbon dioxide per day during the manufacturing process.

The gas level is reviewed at the end of each day and an order is placed if necessary. Delivery is reliably expected on the fourth day, if any delays occur delivery can be expected at the end of the seventh day. The cost of placing an order is R500 and the cost of carrying a litre of carbon dioxide gas is R1.

Assume Soda Ltd operates 250 days per year.

## REQUIRED:

2.1 Calculate the Economic Order Quantity (EOQ).
2.2 Calculate the safety inventory.
2.3 Calculate the re-order level.
2.4 Calculate the economic average inventory.

PART B

Soda Ltd purchases a special recyclable bottle that is used in the production of their cold drinks. The following transactions took place during May 2019:

| May 01 | Opening balance of bottles consisted of 20000 units at a value of <br> R0,80 each |
| :---: | :--- |
| 11 | Issued 12000 bottles to the production department |
| 18 | Purchased 14000 additional components at R0,90 each |
| 25 | Issued 12000 bottles to production department |
| 26 | Production department returned 1000 bottles to the warehouse |

## REQUIRED:

2.5 Determine the value of the closing inventory of Soda Ltd using the First-In First-Out (FIFO) inventory valuation method.

## QUESTION 3

Susan Moloto works for X\&Y Factory as a machinist. Her wages are calculated at R90 per hour. She worked 54 hours in the week ending 7 July 2019, which included 4 hours on Sunday.

X\&Y Factory works a normal 45 hour, 5 day week, normal overtime is paid at $150 \%$ of normal pay and work done on a Sunday and a public holiday is remunerated at $200 \%$ of normal pay. Susan receives a clothing allowance of R600 per week.

Normal deductions are:

| Description | Employer <br> Contribution | Employee Contribution |
| :--- | ---: | ---: |
| Pension Fund | $7 \%$ of normal pay | $5 \%$ of normal pay |
| Medical Aid | $6 \%$ of normal pay | $7 \%$ of normal pay |
| Unemployment Insurance Fund | $1 \%$ of normal pay | $1 \%$ of normal pay |
| Pay As You Earn |  | $20 \%$ |

## Additional information:

There were no public holidays during the week ending 7 July 2019.
Each employee receives a bonus, equal to four week's wages in the month of their birthday.

## REQUIRED:

3.1 Calculate the net wage for Susan for the week ending 7 July 2019.
3.2 Calculate the cost to company of X\&Y Factory for Susan for the 2019 year.
3.3 What is the formula to calculate the labour recovery rate?
3.4 The time at work not spent working is called?

## QUESTION 4

Ledwaba Ltd consists of three (3) production departments: Department 1, Department 2 and Department 3 and also two (2) service departments: Maintenance and Canteen. The following information was extracted from the accounting records of Ledwaba Ltd.

|  | $\frac{\text { Production }}{\text { Dept 1 }}$ | $\frac{\text { Production }}{\text { Dept 2 }}$ | $\frac{\text { Production }}{\text { Dept 3 }}$ | Maintenance | Canteen |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | 60000 | 270000 | 180000 | 30000 | - |
| Value of <br> equipment | 360 | 240 | 200 | 120 | 30 |
| Number of <br> employees | 400 | 300 | 350 | 120 | 50 |
| $\left.\begin{array}{l}\text { Floor space } \\ (\text { per m }\end{array}\right)$ |  |  |  |  |  |

## Costs incurred:

| Depreciation of factory equipment | R1 200 |
| :--- | :--- |
| Rent of factory building | R2 510 |
| Protective clothing | R7 600 |
| Indirect material | R2 340 |

Secondary allocation for the maintenance department should be done first using the value of equipment as allocation basis followed by the secondary allocation for the canteen using the number of employees.

## REQRUIED:

4.1 Do the primary and secondary allocation to determine the overhead costs to be recovered in each department.
(20)

## QUESTION 5

## PART A

Wily-Wily Elements Ltd's statement of comprehensive income for last year appears below:

| Sales |  | R1500 000 |
| :--- | ---: | ---: |
| Cost of sales: | R250 000 |  |
| Direct materials | 150000 |  |
| Direct labour | 75000 |  |
| Variable overhead | $\underline{100000}$ | $\underline{575000}$ |
| Fixed overhead |  | 925000 |
| Gross profit | $\underline{250000}$ | $\underline{450000}$ |
| Selling, general, and <br> administrative costs: | $\underline{\underline{R 475000}}$ |  |
| Variable |  |  |
| Fixed |  |  |
| Net operating income |  |  |

## REQUIRED:

5.1 Prepare the income statement in Marginal income costing system format.

## PART B

The following information is made available to you.
Total sales value R750 000
Total units sold 15000
Break even units 10000
Break even value R500 000
Total cost R600 000

Total fixed cost R300 000

## REQUIRED:

5.2 Calculate the following:
5.2.1 Margin of safety in units.
5.2.2 Margin of safety in rands.
5.2.3 Total variable costs.
5.3 Draw the Cost Volume profit graph using all of the above information.

