

4 G Limited manufactures products at two factories. The company uses marginal costing.

REQUIRED

(a) State **four** assumptions used in break-even analysis.

1

.....

2

.....

3

.....

4

.....

[4]

(b) State the formula for calculating the margin of safety in units and sales value.

(i) Units

.....

..... [1]

(ii) Sales value

.....

..... [1]

Additional information

At one factory a single product is made. The following budgeted details are available.

Direct materials per unit	3 kg at \$5 per kg
Direct labour per unit	2 hours at \$9.50 per hour
Fixed costs per month	\$66 000
Selling price per unit	\$48
Sales	8 000 units per month

REQUIRED

(c) Calculate the monthly margin of safety in units.

.....

.....

.....

.....

.....

..... [4]

Additional information

The directors are concerned that there could be a fall in demand for this product. They plan to make some changes to reduce the product's break-even point and encourage sales.

- 1 a different grade of material. The list price of this material is 10% less per kilogram than the existing material.
- 2 Each unit will require 5% more kilograms of this material.
- 3 The supplier of materials has agreed to give a 20% trade discount.
- 4 Make alterations to machinery to improve efficiency at a cost of \$24 000. Machinery is depreciated at 25% per annum.
- 5 Introduce a sales commission of \$0.50 per unit.
- 6 Reduce the selling price by 1.5% per unit.

REQUIRED

- (d)** Calculate the decrease in the monthly break-even point in units if these changes are made.

[8]

Additional information

At the other factory monthly production and sales are normally 14 000 units of a different product. This product has a variable cost of \$65 per unit and a contribution of \$17 per unit. The budgeted factory fixed costs are \$128 000 per month.

A major customer normally purchases 5500 units per month. However, the company has been informed that no units will be required by this customer in August 2022.

The directors are considering two options.

Option A

- 1 Reduce production in August 2022 by 4000 units.
- 2 Run an advertising campaign at a cost of \$2 200 to increase demand so that all production is sold.

Option B

- 1 Continue with normal production in August.
- 2 Store 5500 units in a warehouse at a cost of \$6000.
- 3 At the end of August an overseas customer will purchase all the units in the warehouse at a special price of \$70 per unit. Transport costs of \$1.80 per unit will be incurred on these units.

REQUIRED

(e) Calculate the profit for August 2022 for:

(i) Option A

.....

.....

.....

..... [3]

(ii) Option B

.....

.....

.....

.....

.....

..... [4]

