### Part (a)

**Actual manufacturing O/H’s** FY2013 [15 133 400 – 400 200] = 14 733 200

**Budgeted manufacturing O/H’s** FY2014 [14 733 200 x 94.329%] = 13 897 680

**Budgeted production units** FY2014 [19 313 + 2 383 – 2 418] = 19 278

**Planned machine hours** [19 278 x 20] = 385 560

**Total manufacturing absorption rate** [13 897 680/385 560] = R36.05

**Less variable manufacturing O/H's** - R2.00

**Fixed manufacturing absorption rate** R34.05

**Alternative approach**

**Budgeted manufacturing O/H's** FY2014 = 13 897 680

**Variable manufacturing O/H's** FY2014 [19 278 x 20hrs x R2] = 771 120

**Fixed manufacturing O/H's therefore** = 13 126 560

**Fixed O/H absorption rate** [13 126 560/385 560] = R34.05

**Available & maximum** 6

### Part (b)

**Total manufacturing costs** [35 630.7 + 4 453.8 – 4 049.9] = 36 034 600

**Total manufacturing cost per unit** [36 034 600/19 278] = R1 869.21

**Less fixed manufacturing O/H per unit** [R34.05 x 20hrs] = -R681.00

**Variable manufacturing costs per unit** (rounding diff) R1 188.30

**Variable costs per unit manufactured** [22 908 040/19 278] = R1 188.30

**Contribution from M&M Developers contract**

**Contribution** [(R1 850 – R1 188.30) x 2 000] = 1 323 400

**Marketing costs** -50 000

**Net contribution** 1 273 400

**Total fixed costs**

**Fixed manufacturing overheads** 13 126 560

**Other operating costs** 6 918 900

**Less marketing costs** -400 000

**Less contribution from M&M special order** -1 273 400

18 372 060

**Revenue**

**Excluding M&M special order** [40 985 400 – 3 700 000] = 37 285 600

**Net revenue per unit** [37 285 600/(19 313 – 2 000)] = R2 153.62

**Marketing costs** -R5.00

**Contribution per unit sold**

**Breakeven # of units to be sold** [18 372 060/R960.41] = 19 129.4

**Breakeven # of units to be sold including special order** 21 130

**Net revenue excluding M&M Development order** 37 285 600

**Marketing costs** -350 000

**Revenue per unit** R2 133.40

**Less variable costs** -R1 188.30

**Contribution per unit sold** R945.10

**# of normal units to be sold to breakeven** [18 372 060/R945.10] = 19 439.3

**Total number of units to be sold including special order** 21 439.3

---

**Available & maximum** 6

**Candidate #**

**Marker**

**Marks Achieved**
Discussing *marketing costs* – R5 versus R350 000/17 313???

- Finance charges need to be considered – costs may vary through
- Debate regarding whether logistics costs are fixed or variable

**Available** 21
**Maximum** 12

### Part (c)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Revenue</td>
<td>3 700.0</td>
<td>40 985.6</td>
<td>37 285.6</td>
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<tr>
<td>Cost of sales</td>
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<tr>
<td>Depreciation</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Other fixed O/H's</td>
<td>-2 899.1</td>
<td>-8 386.6</td>
<td>-1 487.9</td>
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<tr>
<td>Other COS</td>
<td>-</td>
<td>-22 504.1</td>
<td>-22 504.1</td>
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<td>Operating lease payments</td>
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<td>Payroll expenses</td>
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<td>-3 960.0</td>
<td>-3 960.0</td>
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<td>Retrenchment costs</td>
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<tr>
<td>Depreciation</td>
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<td>Marketing expenses</td>
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<td>Logistics expenses</td>
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<td>Rental of office space</td>
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<td>-1 800.0</td>
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<tr>
<td>Finance costs</td>
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<td>-1 449.2</td>
<td>-1 449.2</td>
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<tr>
<td>Dividend income</td>
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<td>300.0</td>
<td>300.0</td>
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<tr>
<td><strong>Profit impact</strong></td>
<td>-3 319.9</td>
<td>1846.8</td>
<td>5 166.7</td>
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<td>Operating losses</td>
<td>-3 319.9</td>
<td>-220.0</td>
<td>3 119.9</td>
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<tr>
<td>Realisable value of assets</td>
<td>26 824.8</td>
<td>20 495.2</td>
<td>-6 329.6</td>
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<td>Interest bearing borrowings</td>
<td>-9 996.4</td>
<td>-5 222.1</td>
<td>-4 774.3</td>
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<td>Bank overdraft</td>
<td>-10 293.3</td>
<td>-14 821.5</td>
<td>-4 528.2</td>
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<tr>
<td><strong>Net cash flow impact</strong></td>
<td>3 215.2</td>
<td>231.6</td>
<td>-2 983.6</td>
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</table>

- Conclusion re numerical analysis – appropriate conclusions
- Forecast costs of closure accurate and/or complete?
- Why the large reduction in realisable value of operating assets at end 2014?
- Are there any contractual obligations to continue to supply retail outlets?
- Electro-Grapp should reduce production to ensure limited inventory at year end
- Rumours of later closure could dampen sales as customers prefer to seek alternate sources of supply
- Impact on reputation & credibility of Grapp group from closing division
- Other divisions are in early stage, closure would result in no sustainable business
- Any outstanding warranty obligations that need to be honoured?
- Impact on staff morale of closure of Electro-Grapp?
- Reaction of unions to discontinuance decision?
- Can employees be re-assigned to Gas-Grapp?
- Reconsider any planned capex in Fy2014 given discontinuance decision
- Have potential buyers been identified for assets?
- Continued support of banks? If not, closure may have to happen sooner
- Potential reckless trading by Grapp? Solvency & liquidity analysis
- Relationships with suppliers tarnished given closure. Impact on other divisions?
- Any group costs included in FY2014, which will be incurred regardless of closure?

**Clarity of expression** 1
**Maximum** 24
### Part (d)

<table>
<thead>
<tr>
<th>Item</th>
<th>Value 1</th>
<th>Value 2  \</th>
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<tbody>
<tr>
<td><strong>Loss of the year</strong></td>
<td>-2 713.2</td>
<td>½</td>
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<tr>
<td><strong>Alternate: EBIT</strong></td>
<td>1 564.1</td>
<td>1½</td>
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<tr>
<td><strong>Depreciation</strong></td>
<td>4 780.0</td>
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<tr>
<td><strong>Property, plant &amp; equipment</strong></td>
<td>-1 500.0</td>
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<tr>
<td><strong>Inventories</strong></td>
<td>-403.9</td>
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<tr>
<td><strong>Trade receivables</strong></td>
<td>-244.9</td>
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<tr>
<td><strong>Trade payables</strong></td>
<td>306.1</td>
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<td><strong>Provisions</strong></td>
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<td><strong>Net movement in cash</strong></td>
<td>246.1</td>
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<tr>
<td><strong>Movement in cash and cash equivalents</strong></td>
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<td>4</td>
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<td><strong>Adjustments</strong></td>
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<tr>
<td><strong>Dividend income</strong></td>
<td>-300.0</td>
<td>½</td>
</tr>
<tr>
<td><strong>Finance charges</strong></td>
<td>1 449.2</td>
<td>½</td>
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<tr>
<td><strong>M&amp;M Developers order</strong></td>
<td>-1 273.4</td>
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<tr>
<td><strong>Annual costs savings</strong></td>
<td>2 500.0</td>
<td>1</td>
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<tr>
<td><strong>Tax effect (on-going basis)</strong></td>
<td>-700.0</td>
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</tr>
<tr>
<td><strong>Free cash flow FY2014</strong></td>
<td>1 921.9</td>
<td></td>
</tr>
</tbody>
</table>

Issues for further investigation:

- **Tax cash flows** from FY2015 given tax loss in FY2014?
- **Capex** to maintain operations (1 500 < depreciation of 4 780)

**KMA discount rate of 12.0%** used – maximise value for Grapp

- **PV of FY2014** free cash flows \([1.12^{-1} \times 1 921.9] = 1 716.0\) 1
- **PV of FY2015** free cash flows onwards
  - \(1 921.9 \times 1.03/(12\% - 3\%) \times 0.8938 = 19 638.5\) 1
- Correct use of Gordon Growth Model
- Discount factor at end of FY2014 not end of FY2015

Alternative: \(1 921.9/9\% = 21 354.5\) 3

M&M Developers order
- Any reasonable attempt to **PV order contribution**
- **Investments** 2 000.0 1
- **Interest bearing debt** -20 289.7 1
- **Equity value of 100% of Electro-Grapp** 4 338.2

**NAV valuation**

- NAV at December 2013 9 086.4 1
- **PPE revaluation** -249.3 1
- **Additional inventory obsolescence** -120.0 ½
- **Additional credit losses** -182.0 ½
- **Tax effect of above adjustments** 154.4 1
- **PV of tax loss** 900.0 1
- **Adjusted NAV** 9 589.5

**3% growth rate** in perpetuity < CPI, perhaps increase forecast? 1

How did KMA value the **tax loss** of R3.6m? 1

KMA offer far exceeds forecast cash position from **closing operations** per part (c) above 1

Offer price > Electro-Grapp **NAV** at Jan 2014 1

**Cost for KMA start up own operations** – cheaper to buy, should attract a premium to fair value 1

**Conclusion:** Offer price very attractive 1

| Maximum | 14 |

3
### Part (e)

#### Attractiveness of market

- **Market research indicates** *high growth in demand* for durable goods, 16% p.a. far exceeds CPI probably reflecting *growing middle class*.
- **Rising cost of electricity** in SA may create more demand for gas appliances.
  - **Eskom** may create more demand for gas for cooking:
    - Short term power outages may result in more consumers having gas cookers.
    - Long term supply challenges may be an opportunity for the promotion of gas appliances generally.
- **2 players** dominate local gas stove market, easier for small player such as Grapp to gain market share than to protect high market share.
- Gas an attractive option to restaurant & catering market as it provides quicker, *more intense heat for cooking*.
- **Raw materials** required for manufacture are *sourced locally* – no direct exchange rate risk & shorter lead times.
- Market demand could be boosted by perception that *gas is more environmentally friendly* than electricity sourced from coal power stations.
- **Sources of supply of gas** in SA may not be as established as electricity?:
  - Piped gas only available in major cities/secure supply?
  - Gas canisters available but consumers may find it inconvenient to buy & collect these.

#### Threats

- Increased competition from *Korean competitors*:
  - Lower cost producers.
  - Larger players and hence, apply to spend more on *R&D*.
- **Labour unrest** in SA and on-going demand for wage increases above CPI, impacting on Grapp’s ability to *pass on cost increases*.
- Gas-Grapp *unable to penetrate local market* dominated by 2 suppliers.
- **Retail chains have strong bargaining power:**
  - May restrict Grapp’s ability to negotiate *price increases*.
  - Retailers may *stretch repayment terms*.
  - Retailers may insist on *increasing volume rebates*.
- **Product safety** – incidents involving Grapp stoves may harm reputation & credibility affecting long term product sales.
- Threats of *substitute products* eg. electricity appliances using less power, *other gas powered cooking appliances*.

#### Opportunities

- **Grapp’s product innovation** (plastic pipes etc) may provide an opportunity to grow market share. Following a *differentiation strategy* appropriate to penetrate market.
- **Grapp brand** could be leveraged in gas market given 30 years of operations.
- **Expansion into Africa** could be an option.
- **Maintenance division**’s service levels:
  - Boost demand for Gas-Grapp gas stoves.
  - Provide a stable income source.
- **Weakening ZAR currency**:
  - Grapp could become more price competitive versus Korean manufacturers.
  - Promote export opportunities.
- Develop a range of *other gas appliances* besides stoves.
- Grapp could focus more on gas stoves following *divestment of Electro-Grapp*, *more time & resources* available to grow Gas-Grapp.
- **Merger & acquisition** opportunities to bulk up/leverage synergies.

<table>
<thead>
<tr>
<th>Logical argument</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum</strong></td>
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