Amandla Engineering (Pty) Ltd (‘Amandla’) manufactures diesel generator sets (‘gensets’) at its factory located in Johannesburg. Gensets are primarily used as a source of back-up power by customers in commerce and industry. The demand for gensets has increased significantly over the past years as a result of the frequent power outages.

Amandla manufactures a standard genset producing 20kVA of power. The key components of a genset are the diesel engine, alternator, electrical control panel, steel enclosure and fuel tank. Amandla imports diesel engines from a supplier based in Japan, which are priced in US dollars. Other components are sourced from local suppliers.

**Budgeted and actual results for the year ended 28 February 2009**

The Production Director of Amandla, Mr John Wright, is most pleased with the performance of the company for the year ended 28 February 2009. Gross profit was 23% higher than the budget. The gross profit margin was 24.5% against a budgeted gross profit margin of 23.4%. Earnings before interest, tax, depreciation and amortisation (EBITDA) was an impressive 41.3% higher than the budgeted EBITDA.

Extracts from the budget for the year ended 28 February 2009 and the actual results per the management accounts for the year are set out below:

<table>
<thead>
<tr>
<th>AMANDLA ENGINEERING (PTY) LTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUDGETED AND ACTUAL RESULTS</td>
</tr>
<tr>
<td>FOR THE YEAR ENDED 28 FEBRUARY 2009</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes</th>
<th>Budget</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Revenue</td>
<td>1</td>
<td>246 330 000</td>
</tr>
<tr>
<td>Opening inventory</td>
<td>2</td>
<td>(14 040 000)</td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel engines</td>
<td>3</td>
<td>(120 232 500)</td>
</tr>
<tr>
<td>Other material components</td>
<td></td>
<td>(31 280 000)</td>
</tr>
<tr>
<td>Variable manufacturing overheads</td>
<td></td>
<td>(4 535 600)</td>
</tr>
<tr>
<td>Fixed manufacturing overheads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct labour</td>
<td>4</td>
<td>(19 283 200)</td>
</tr>
<tr>
<td>Other fixed manufacturing overheads</td>
<td></td>
<td>(13 880 500)</td>
</tr>
<tr>
<td>Closing inventory</td>
<td>2</td>
<td>14 531 250</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td></td>
<td>57 609 450</td>
</tr>
<tr>
<td>Foreign exchange profits</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Non-manufacturing expenses</td>
<td></td>
<td>(20 000 500)</td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td></td>
<td>37 608 950</td>
</tr>
</tbody>
</table>
Notes

1 Amandla budgeted to manufacture and sell 7 820 gensets at R31 500 each during the year. The company actually manufactured and sold 8 500 gensets.

2 Opening inventory at 1 March 2008 consisted of 750 diesel engines at an actual cost of R11 190 000 and other materials of R2 850 000. Closing inventories comprised 750 diesel engines at an actual cost of R13 125 000 and other materials of R3 037 500. There was no opening or closing inventory of work in progress or finished goods.

3 Budgeted purchases of diesel engines and actual costs are set out in the table below:

<table>
<thead>
<tr>
<th>Year ended 28 February 2009</th>
<th>Budget</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of diesel engines purchased</td>
<td>7 820</td>
<td>8 500</td>
</tr>
<tr>
<td>US price per diesel engine</td>
<td>US $2 050</td>
<td>US $2 000</td>
</tr>
<tr>
<td>Average exchange rate during the year</td>
<td>US $1 : R7,50</td>
<td>US $1 : R8,50</td>
</tr>
</tbody>
</table>

4 Amandla employed 160 production personnel and 34 electricians at its factory throughout the 2009 financial year. Production personnel are responsible for the manual labour involved in assembling gensets. Electricians perform all the wiring required in gensets and the installation of electrical control panels.

The budgeted and actual labour hours available for manufacturing during the year ended 28 February 2009, together with overtime and idle time, are set out below:

<table>
<thead>
<tr>
<th>Year ended 28 February 2009</th>
<th>Budget</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available hours for manufacturing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production personnel</td>
<td>294 400</td>
<td>294 400</td>
</tr>
<tr>
<td>Electricians</td>
<td>62 560</td>
<td>62 560</td>
</tr>
<tr>
<td>Overtime hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production personnel</td>
<td>0</td>
<td>11 600</td>
</tr>
<tr>
<td>Electricians</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Idle time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production personnel</td>
<td>44 160</td>
<td>0</td>
</tr>
<tr>
<td>Electricians</td>
<td>0</td>
<td>3 060</td>
</tr>
</tbody>
</table>

Mr Wright believes that in the manufacturing environment, labour represents a fixed overhead cost as opposed to a variable overhead cost. He bases his view on the fact that the company has to pay production personnel and electricians irrespective of manufacturing output.

The hourly wage rate for electricians was three times that of production personnel during the 2009 financial year, which is consistent with prior years. The overtime rate is 1,5 times the normal hourly wage rate.
5 The lead time between order and delivery of diesel engines is three months. Amandla orders engines based on its estimate of future customer orders and sales. The Financial Director of Amandla, Mr Guy Ciccone, takes out forward cover based on orders of diesel engines. Forward exchange contracts are sometimes rolled over when engine deliveries are delayed. Mr Ciccone also occasionally takes out more forward cover than is required if he believes the rand will deteriorate against the US dollar. The foreign exchange profits of R1 850 000 earned during the 2009 financial year represent net profits from excess forward cover and the ineffective portion of hedges.

Costing and pricing of customer orders

The Production Division estimates the manufacturing cost of gensets and provides this information to the Sales and Marketing Division for the purpose of quoting prices to customers. Amandla generally marks up the estimated manufacturing cost by 30% to determine the selling price of gensets to customers. A typical example of a costing estimate provided by the Production Division to the Sales and Marketing Division is set out below:

<table>
<thead>
<tr>
<th>Customer</th>
<th>Gideon Enterprises Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order date</td>
<td>4 November 2008</td>
</tr>
<tr>
<td>Estimated delivery</td>
<td>28 November 2008</td>
</tr>
<tr>
<td>Order quantity</td>
<td>50 gensets</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturing costing sheet</th>
<th>US $</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 diesel engines at a total cost of Engines are in stock and were purchased for R16 500 each</td>
<td>100 000</td>
<td>825 000</td>
</tr>
<tr>
<td>Other material costs Materials ordered from local suppliers and costing based on supplier quotes</td>
<td></td>
<td>205 000</td>
</tr>
<tr>
<td>Estimated variable manufacturing overheads</td>
<td></td>
<td>29 000</td>
</tr>
<tr>
<td><strong>Total variable costs</strong></td>
<td></td>
<td><strong>1 059 000</strong></td>
</tr>
<tr>
<td>Recovery of direct labour and other fixed overheads Standard recovery of 27.5% of estimated materials costs</td>
<td></td>
<td>283 250</td>
</tr>
<tr>
<td><strong>Estimated manufacturing cost</strong></td>
<td></td>
<td><strong>1 342 250</strong></td>
</tr>
</tbody>
</table>

Signed off by Production Director Yes
Date 3 November 2008

All amounts exclude VAT.
<table>
<thead>
<tr>
<th></th>
<th>REQUIRED</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Analyse and provide detailed comments on the direct labour expense for the year ended 28 February 2009 in comparison to the budget. Your answer should include commentary on wage rates, labour efficiencies, capacity utilisation and idle time. Show all relevant ratios and calculations.</td>
<td>20</td>
</tr>
<tr>
<td>(b)</td>
<td>Discuss, with reasons, whether or not you agree with the Production Director’s view that the direct labour expense is a fixed manufacturing overhead cost.</td>
<td>5</td>
</tr>
<tr>
<td>(c)</td>
<td>Identify and discuss any areas for improvement in Amandla Engineering (Pty) Ltd’s existing procedures and methodology for the costing and pricing of customer orders.</td>
<td>10</td>
</tr>
<tr>
<td>(d)</td>
<td>Identify and describe four key business risks faced by Amandla Engineering (Pty) Ltd.</td>
<td>8</td>
</tr>
</tbody>
</table>

**Presentation marks:** Arrangement and layout, clarity of explanation, logical argument and language usage. 2