

MARKSCHEME

May 2006

BUSINESS AND MANAGEMENT

Higher Level

Paper 1

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SECTION A

1. (a) Explain what is meant by

(i) quality circles (*line 68*)

[2 marks]

Quality circles is a technique originating in Japan, where small groups of workers meet to discuss issues of quality and production methods.

[2 marks] for a detailed explanation.

[1 mark] for an explanation lacking detail.

(ii) continuous improvement (*line 68*).

[2 marks]

Continuous improvement is a process of making quality improvements in a series of small steps. It is also known as Kaizen.

[2 marks] for a detailed explanation.

[1 mark] for an explanation lacking detail.

(b) Evaluate the contrasting approaches to quality control proposed by Catherine and Tony.

[10 marks]

Tony has a traditional approach to quality control. He argues that quality is the responsibility of management. He wants to employ additional managers to take responsibility for the supervision of the production process. This type of approach is likely to mean samples from production being taken and checked for quality. The managers make the decisions on how to improve quality. This approach considers quality after production has taken place.

Catherine is a strong advocate of total quality management and wants to use quality circles. This approach will involve the whole workforce in ensuring quality at all stages of production. Quality circles involve staff meeting in groups to try to resolve quality issues and improve the reliability of the production process. This approach needs to be embedded in the culture of the company and may be expensive with retraining costs and the implementation of new systems. It should, however, identify quality issues before production has taken place.

Evaluation of the different approaches needs to consider the merits of each and consider the appropriateness for *SunGen Ltd*. A wide range of points could be raised:

- TQM would require a company-wide approach and commitment from all staff – is this likely to be available? Without a total commitment, a traditional approach may be better
- TQM could require substantial investment in staff training and is likely to take a considerable time to yield benefits, but the benefits are likely to be greater in the medium to long term than with traditional approaches
- TQM may put more emphasis on the process and not enough on the product. However, it may enable the company to focus more clearly on the needs of customers

- TQM may help develop a team approach to quality and involve all staff. This may help motivate staff. A traditional approach may mean more autocratic leadership and demotivate staff
- TQM focuses on finding quality problems before production and so ensuring that the product that is shipped to consumers is defect free. A traditional quality approach only checks for quality after production with sampling and so may allow poor quality products to be shipped. This may be costly for the firm in terms of reputation
- A TQM approach may help improve communication flows – both formal and informal. A traditional approach relies on top-down communication
- *any other relevant point.*

[8 to 10 marks]

A detailed and balanced evaluation of the two different approaches to quality control including a thorough definition and explanation of each method. Evaluation is fully related to the case study and clearly identifies how each approach would affect *SunGen Ltd.* Business theory and terminology is used appropriately throughout.

[5 to 7 marks]

An examination of the two different approaches to quality control including some discussion and an attempt at a definition and explanation of each method, though the answer may not consider each approach evenly. The answer is generally related to the case study and the examination shows how each approach would affect *SunGen Ltd.* Business theory and terminology is generally used appropriately.

[3 to 4 marks]

Limited, if any, evaluation/discussion of the two different approaches to quality control with a brief definition and explanation of each method. There may be some attempt to relate this to the case study but with a tendency to description rather than evaluation.

[1 to 2 marks]

A limited, descriptive answer, perhaps with a very brief definition of one or both approaches to quality, but little explanation.

2. (a) (i) **Examine possible sources of conflict among the staff at *SunGen Ltd.*** **[8 marks]**

There are a number of possible sources of conflict. Conflict frequently occurs between groups and may result from:

- competition between groups
- conflict between staff at different levels in the hierarchy
- conflict resulting from different goals
- conflict resulting from a range of psychological factors.

A number of these potential conflict areas are present in *SunGen Ltd.* These may include:

- staff are complaining of a lack of leadership and vision and this may lead to staff having different goals and not being aware of the company objectives
- Tony McGregor is an old friend of Derek's and this may be a potential cause of conflict. He has a traditional approach to management which may also conflict with some of the more progressive methods proposed by other members of the management team
- Catherine has clear environmental aims and these may not be shared by other members of the team. This may be a potential source of conflict
- a proportion of the staff were recruited internally from Electrical Solutions plc and this may form an informal group with differing aims and objectives from other groups
- there may be some potential for conflict between levels in the hierarchy, particularly if Tony's approach to quality control with additional managers is implemented. These differences in approach may also lead to conflict
- the new appraisal system may lead to possible conflict with high-performing staff being offered significant bonuses. This may be divisive and lead to conflict between groups
- the proposed contract changes are already causing conflict between management and workers with strike action threatened
- the financial situation may cause possible conflict with differences on strategies for dealing with the problems. There may also be differences of opinion on the future prospects for *SunGen Ltd's* market
- *any other relevant point.*

[6 to 8 marks]

A range of sources of conflict are examined and fully explained. All sources are closely related to the case study and the reasons for the conflict examined in detail.

[3 to 5 marks]

Some sources of conflict are examined, though these may not be fully explained at the lower end of the band. Sources are generally related to the case study at the upper end of the band.

[1 to 2 marks]

A limited and general response.

- (ii) **Assess the problems that may arise from the implementation of performance targets as part of Greg and Catherine's proposed appraisal system (line 118).** **[8 marks]**

Performance targets are proposed as part of a new appraisal system. These targets will be negotiated with line managers for each year. This may cause a number of problems and these may include:

- the targets may be divisive as some high-performing staff will be offered bonuses and other incentives. This may demotivate staff who do not achieve these
- performance needs to be measured for appraisal to work effectively but targets may be difficult to quantify for some staff
- the targets may be a factor causing conflict and competition among different staff groups
- staff may be demotivated by excessively high performance targets and this may adversely impact on quality and productivity
- staff may concentrate on working for results that are being appraised and lose focus on other areas
- there may be costs associated with the training implications of target setting
- it may be difficult to benchmark qualitative achievement
- concentration on quantity at the expense of quality
- *any other relevant point.*

Candidates should assess the extent to which these problems are likely to arise if the performance targets are introduced as part of the appraisal system.

[6 to 8 marks]

A detailed assessment of problems that may arise from the implementation of the performance targets.

[3 to 5 marks]

Some assessment of problems that may arise from the performance targets, though this may tend to be descriptive at the lower end of the band. At the upper end of the band the assessment is related to the case study.

[1 to 2 marks]

Essentially descriptive answer with identification of some problems or perhaps just a brief list.

- (b) Evaluate whether *SunGen Ltd* should change suppliers or build “closer relationships with local suppliers” (line 65). **[10 marks]**

SunGen Ltd have been having problems with the quality of components from one or two suppliers. They have considered changing suppliers but the only alternative suppliers are located in Asia. They could therefore change suppliers but this may lead to short term problems with the consistency of supply. They would also need to build appropriate relationships with these suppliers and this may be time-consuming and also perhaps raise costs. Changing to overseas suppliers may lead to problems with language, cultural difficulties and exchange rates. Using suppliers in Asia may help *SunGen Ltd* to reduce direct costs if the suppliers are cheaper and they may be more reliable and produce better quality components.

The other option is to aim to build closer relationships with their domestic suppliers. Candidates may suggest possible ways to do this and these may include:

- working together with the suppliers to develop joint solutions to quality problems
- offering incentives to the suppliers to improve performance – perhaps profit-sharing or shareholdings
- seconding staff from *SunGen Ltd* to suppliers to help them develop production and quality solutions
- regular meetings and the development of other communication systems with the suppliers to enable them to consider problems as soon as they arise
- development of a just-in-time (JIT) approach to production to work together on producing parts as they are required for production
- joint investment in production facilities and agreements to share cost reductions that are achieved through joint action
- possible joint venture with some suppliers for the production of key components

The answer should evaluate both options and consider issues relating to each option. These may include costs (short-term and long-term), reliability of suppliers, resources required. The evaluation may contrast short-term and long-term issues relating to the decision. In future their market may grow to include Asia and so it may be beneficial to build relationships with overseas suppliers. However, in the short-term consistency of supply and quality may be the most important issues as they aim to build their domestic market and reputation.

[8 to 10 marks]

A detailed and balanced evaluation of both options to overcome the problems with suppliers. The answer is linked to the case study where appropriate. Business terminology is used appropriately throughout.

[5 to 7 marks]

Some examination of both options to overcome the problems with some discussion of each option though this may not be balanced. The answer is related to the case study though this may be limited at the lower end of the band. The discussion may tend to be descriptive at the lower end of the band.

[3 to 4 marks]

A brief discussion of both options, though this may tend to be descriptive or there may be a detailed discussion of one option.

[1 to 2 marks]

A limited and general response, which tends to be descriptive or simply lists points.

3. Assess SunGen Ltd's decision to target their products "at individual households" (line 92). [8 marks]

SunGen Ltd have agreed to an expansion plan by Catherine and Ying to target individual households with their existing product range. This may be beneficial for the company in a number of ways:

- it offers them a significantly larger market (they currently only target businesses and housebuilders)
- it may broaden their appeal as households are more likely to be environmentally concerned than businesses
- it may help cash flow with individual customers having to pay faster than business customers
- it will help them expand faster and reach break-even and become profitable quicker
- the market has the potential for future growth and there are currently few other firms in the market
- original market research showed 45 % of those questioned would consider fitting a renewable energy generation system
- the original market research is relatively dated and was not directly focused at this market or products. It may have used an inappropriate approach for this particular market
- *any other relevant benefits.*

However, this expansion may also have problems and these may include:

- the expansion will require an extensive distribution network and this may be expensive – the market is highly geographically dispersed
- the firm may need to carry out new market research
- the firm may need new specialist marketing staff to develop an appropriate marketing approach for this new market
- is the household market sufficiently developed to offer the growth they expect?
- the factory is already running at near full-capacity and so they may lack the required resources for expansion
- *any other relevant problems.*

[6 to 8 marks]

A detailed and balanced assessment of the decision to target households that is directly related to the case study and uses business terminology appropriately.

[3 to 5 marks]

Some assessment of the decision to target households though at the lower end of the band this may tend to be unbalanced and perhaps descriptive. The assessment may not be directly related to the case study.

[1 to 2 marks]

A limited and general response, perhaps just listing points.

4. Contrast the marketing mix used by Electrical Solutions plc with that of *SunGen Ltd*. [12 marks]

Electrical Solutions and *SunGen Ltd* operate in very different market segments and markets. The market for Electrical Solutions is a mass market, whereas that of *SunGen Ltd* is a niche market. The market for electrical products is a market where each individual purchase is relatively smaller and there are likely to be more regular purchases in the medium term as they carry a large range of electrical products. By contrast *SunGen Ltd's* market is for large-scale, expensive one-off purchases of entire energy systems. The target markets are also very different. Electrical Solutions targets individual consumers in a wide range of socio-economic groups, whereas *SunGen Ltd* targets primarily housebuilders. They are starting to target individual consumers as part of their expansion plan, but these are only likely to be consumers of relatively higher socio-economic groups.

This means that the marketing mix of the two companies is likely to be quite different and students need to consider these differences:

- Price – Electrical Solutions are in a very competitive market with intense competition from global conglomerates with significant buying power. They are likely to have to focus on price in their marketing mix far more than *SunGen Ltd*.
- Product – Electrical Solutions sell a wide range of products, mostly at later stages in their life cycles, whereas the products sold by *SunGen Ltd* are innovative products at an early stage in their life cycles. Given that the people who purchase *SunGen Ltd* products are likely to be environmentally concerned, *SunGen Ltd* will need to focus mainly on the product in their marketing mix. Electrical Solutions are likely to put less emphasis on product.
- Place – clear distribution channels are far more important for *SunGen Ltd* than Electrical Solutions. Electrical Solutions have stores that have a clear catchment area and are only aiming to sell in the region of these retail stores. *SunGen*, however, have a national and geographically dispersed market and need therefore to put a great deal of emphasis on the distribution of their products. This will become an even more important element of the market mix when they start to target individual consumers as part of their expansion plan.
- Promotion – both companies will need to focus considerably on promotion, though the nature of the promotion is likely to be very different. Electrical Solutions are likely to require more targeted and regionally focused promotion and may focus more on above the line promotion whereas *SunGen Ltd* have a national, more geographically dispersed market and may need to use more below the line promotion as part of their overall promotional strategy.

Candidates may refer to other “Ps” in their answer and should be credited appropriately for this.

[10 to 12 marks]

A balanced examination of the marketing mix of both companies considering at least four P's. There is a detailed comparison of the marketing mix of the two companies. Business terminology is used appropriately throughout and the contrast is clearly drawn out.

[7 to 9 marks]

An examination of the marketing mix of both companies considering at least three of the four main P's in some detail or at least four P's in less depth. There is some comparison of the marketing mix of the two companies, but the contrast may not be as clear and evident as that in the ***[10 to 12 marks]*** range. Business terminology is generally used appropriately.

[4 to 6 marks]

Some examination of at least two P's of the marketing mix of both companies though this may not be balanced or look at all the P's in detail. There is some comparison of the marketing mix of the two companies, but there may be limited or even no contrast drawn for each P. Some business terminology is used. Candidates should be awarded a maximum of ***[4 marks]*** for a detailed examination of the marketing mix of just one of the two firms.

[1 to 3 marks]

A limited and essentially descriptive answer that may simply list points related to the marketing mix of each company.

SECTION B

5. (a) **Using the information in Appendix 3 of the case study calculate the gross and net profit for Electrical Solutions plc for 2005.** **[2 marks]**

Appendix 3 gives the gross profit margins and turnover and these need to be substituted in the ratio formulae to get:

	2005
(\$000)	Electrical Solutions Plc
Gross profit (\$000)	4268
Net profit (\$000)	1552

[2 marks]

If all calculations are correct.

[1 mark]

If one figure is correct or if the candidates have shown appropriate working but arrived at the wrong figures.

- (b) **Explain the importance of budgeting for SunGen Ltd.** **[4 marks]**

Budgeting is important for *SunGen Ltd* to ensure that they maintain control over their costs. Budgets can be set to allow for planning and outcomes compared to the budgets (perhaps through variance analysis) to monitor progress against targets. This is particularly important for a new rapidly growing firm like *SunGen Ltd* as they will face many cost pressures.

[4 marks]

A clear explanation of the importance of budgeting related to the case study.

[2 to 3 marks]

An explanation of the importance of budgeting though for **[2 marks]** this may not be related to the case study and may tend to be descriptive.

[1 mark]

A limited response, though with some evidence of an understanding of budgeting.

- (c) Evaluate the change in the efficiency position of both Electrical Solutions plc and *SunGen Ltd* between the end of 2005 and the first quarter 2006.

[8 marks]

The value of the efficiency ratios for 2005 and for the first quarter of 2006 are as follows:

Efficiency ratios	2005		2006 (First Quarter)	
	Electrical Solutions plc	<i>SunGen Ltd</i>	Electrical Solutions plc	<i>SunGen Ltd</i>
Stock turnover (number of days)	105	28	106	30
Debtor days (number of days)	14	49	16	53
Creditor days (number of days)	38	39	35	34

The efficiency position for both companies has changed significantly, though they did start from a different base. Electrical Solutions plc, as a retail business, has to hold larger levels of stock and so has a considerably higher stock turnover than *SunGen Ltd* which holds relatively lower stock levels. Electrical Solutions as a retail business also has much lower debtors (higher level of cash payments) and this contrasts with the position at *SunGen Ltd*, which sells a significant proportion of their output to other firms on credit.

The efficiency changes are:

Electrical Solutions plc

- increase in stock turnover indicating perhaps deteriorating stock control or perhaps (given these are quarterly accounts) a seasonal slump in sales
- higher debtor days and lower creditor days. This may indicate a deterioration in credit control and they certainly seem to be paying their creditors quicker (though still greater than standard terms of 30 days), but the higher debtor days figures may be related to selling more stock on credit terms to customers – perhaps a promotion of some sort. Alternatively, it may simply have been less rigorous collection of their debts.

SunGen Ltd

- an increase (2 days) in the stock turnover figure. Could be related to deteriorating stock control or perhaps problems with supplier relationships. May also indicate some build up of stock in anticipation of further growth in demand – turnover has increased at nearly 20 % in the first quarter of the year
- as with Electrical Solutions plc, the debtor days ratio has risen and the creditor days ratio has fallen. This may once again be due to poor credit control, but other reasons are likely to differ. It would seem that they are settling their bills quicker, but the increase in debtor days may also be related to the expansion in demand in the first quarter (turnover increased by nearly 20 %).

Candidates may have calculated different figures for some of the efficiency ratios and should not be penalized for this. They should be credited where they have analysed their own figures appropriately.

[6 to 8 marks]

Detailed and balanced evaluation of the efficiency position of both firms. The evaluation is related to the financial performance of the firm. Business theory and terminology are used appropriately throughout.

[3 to 5 marks]

Some evaluation of the efficiency position of both firms though this may not be balanced at the lower end of the range. Where the efficiency position of just one firm is evaluated, candidates should be awarded a maximum of **[3 marks]**. The answer may tend to be generally more descriptive at the lower end of the range. Business theory and terminology are generally used appropriately, but not consistently throughout the answer.

[1 to 2 marks]

A limited and essentially descriptive answer.

- (d) Analyse ways in which *SunGen Ltd* could improve their efficiency position.**

[6 marks]

SunGen Ltd have a range of options for improving their efficiency position. These could include:

- developing closer relationships with suppliers and perhaps adopting a just-in-time (JIT) method of production. This should help improve stock control and reduce stock turnover
- the adoption of the computer-controlled production management system being considered by Tony and Catherine. This would avoid duplication of systems and improve coordination and efficiency thereby reducing stock turnover
- improve credit control. Creditors are currently being paid faster while debtors are taking longer to pay. Reversing this would increase working capital. Incentives (e.g. discounts) could be offered for early payment and perhaps penalties for late payment by debtors. *SunGen Ltd* could negotiate with their creditors for longer payment terms
- combining credit control operations with their parent company (Electrical Solutions plc) may lead to economies of scale and more efficient credit control
- *any other relevant points.*

[5 to 6 marks]

A number of appropriate methods are suggested. These are analysed in detail and related to the case study. Business terminology is used appropriately.

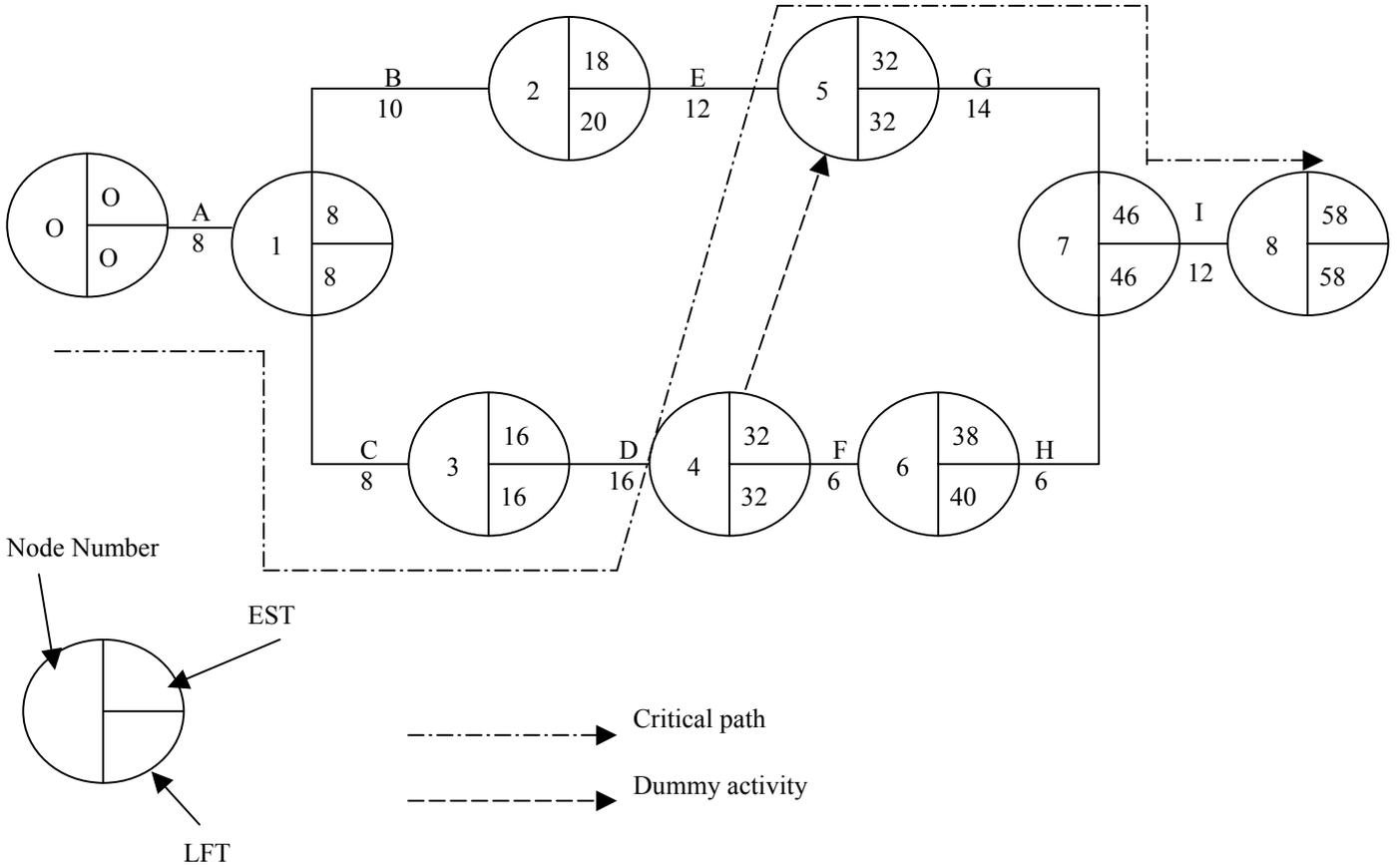
[3 to 4 marks]

Some appropriate methods are suggested and analysed to a certain extent though they may be more general and descriptive at the lower end of the band. They may perhaps not be related to the information calculated.

[1 to 2 marks]

A limited and general response.

6. (a) Draw a network diagram to represent the building of the new production facility, showing clearly the earliest starting times, latest finishing times and critical path. [8 marks]



[7 to 8 marks]

An accurate, fully labelled network including for [8 marks] a key. Up to one minor error may be allowed for [7 marks].

[4 to 6 marks]

An essentially accurate network with up to four minor errors. The network is structured appropriately and shows an understanding of network analysis.

[1 to 3 marks]

Some understanding of network analysis, though the network may have a significant number of errors.

(b) Analyse the benefits to *SunGen Ltd* of producing a Corporate Social Responsibility report.

[6 marks]

SunGen Ltd is focused on a niche market where the consumers are likely to be environmentally highly aware. They may have high expectations of the company that they purchase from to set high standards of corporate social responsibility in all aspects of corporate behaviour (employment practices, environmental behaviour, supply chain responsibility and so on). Publication of a corporate social responsibility report offers *SunGen Ltd* the chance to convey their policies and behaviour to their customers.

The report may also be of interest to other external stakeholders – local government, the community and perhaps suppliers. The report may also help to ensure that *SunGen Ltd* do not get unwanted attention from pressure groups.

The report also offers a good opportunity for the company when drawing up the report to focus on all aspects of their corporate behaviour and ensure that they are meeting all the standards that they have set. Preparation of a CSR report is likely to require quantifiable measures and social responsibility targets and by producing a CSR report, the firm can ensure that they are meeting these. However, once the report is published they need to ensure they keep meeting the appropriate standards if they are to avoid criticism.

[5 to 6 marks]

A detailed analysis of the benefits of a CSR report to *SunGen Ltd*. The analysis is related to the case and attempts to link the CSR report with the activities of the firm.

[3 to 4 marks]

Some analysis of the benefits of producing a CSR report and this is generally related to the case but may lack detail or tend to be a little descriptive, particularly at the lower end of the band.

[1 to 2 marks]

A limited and essentially descriptive answer or an answer that is merely a list of points.

- (c) **Discuss the options available to *SunGen Ltd* to fund the proposed expansion of their “production facility” (line 138).** **[6 marks]**

SunGen Ltd could use either external or internal sources of funds. However, their room to manoeuvre may be a little restricted by their situation. They already have a substantial loan and their gearing ratio is nearly 70 %. They are not able to issue shares as they are a wholly owned subsidiary of Electrical Solutions plc. It may be possible for Electrical Solutions to issue further shares and use this to lend to *SunGen Ltd*. Electrical Solutions could also sell further assets. They are still making losses and so using the profit reserve is also not an option. The options they have to raise the funds may include:

- internal investment from Electrical Solutions plc. They may be able to use profit and cash reserves to help fund further expansion of *SunGen Ltd*, but the Electrical Solutions shareholders will be looking for an adequate return
- sale and leaseback – *SunGen Ltd* may be able to sell some assets and lease them back. This may provide some short-term capital. They could also sell assets, but this is unlikely to be viable given the rate of their expansion
- mortgage – it is possible that they could mortgage some of their fixed assets, and with fixed assets of \$1.3 million, this may have the potential to raise significant capital. However, the viability of this option will depend on the current ownership of the fixed assets
- joint venture – they could perhaps undertake a joint venture, for example, with the firm installing the equipment. This may raise some capital
- government grant – they may be eligible for some national or local government grants because of their environmental profile
- *any other relevant method (though this must be in the context of the case study).*

[5 to 6 marks]

Detailed discussion of relevant sources of finance. The discussion is related to the case and appropriate to the financial context of *SunGen Ltd*. Business terminology is used appropriately throughout. An understanding is shown of the limitations faced by the company in raising finance.

[3 to 4 marks]

Some discussion of sources of finance and these are generally related to the case and appropriate to the financial context of *SunGen Ltd* though they may be more general at the lower end of the band. Some business terminology is used. There is some limited understanding of the limitations but it may not be applied consistently.

[1 to 2 marks]

A limited and descriptive answer that may consider some sources of finance though these may simply be listed and not appropriate to the financial context of the firm.
