

INTERNATIONAL
BACCALAURÉAT
BACHILLERATO



BACCALAUREATE
INTERNATIONAL
INTERNACIONAL

M02/370/H(1)M

MARKSCHEME

May 2002

BUSINESS AND MANAGEMENT

Higher Level

Paper 1

1. (a) **Explain why customer questionnaires handed in at the end of holidays may not provide reliable research data for Open Views.** [3 marks]

- Samples need to be representative. This is a self chosen sample, not one selected on a statistical basis.
- Those who are the most or least pleased are more likely to complete the form.
- It is not known what the questions are like; whether they are sufficiently detailed or biased and/or relevant. Shades of opinion may not be catered for.
- The sample size may not be large enough to ensure statistical significance.

[3 marks]

Two or more issues are explained.

[1 to 2 marks]

One issue is explained, or two or more simply listed.

- (b) **Analyse the customer satisfaction information provided in *appendix 2*. Comment on the trends shown and whether these should worry Joseph Obeng.** [4 marks]

- The physical aspects of the holiday, the accommodation and leisure facilities show higher satisfaction ratings than last year.
- All elements of the holiday relating to a personnel input, such as service, food and entertainment show a decline in satisfaction ratings. In particular there is a worrying reduction in satisfaction ratings of resort service, food standards and entertainment.
- Overall satisfaction with the entire package is down. Customers believe holidays offer less value for money and quality, and more customers feel the holiday did not meet their expectations.
- Satisfaction ratings are still creditable, with most customers viewing elements of the package as excellent or good. However, there are signs of deterioration that need to be addressed.
- Joseph Obeng should be worried by the research findings. Half of bookings are repeat bookings by satisfied customers. If satisfaction falls, demand could be significantly reduced. In addition, word of mouth recommendations as a form of promotion is very powerful.

[3 to 4 marks]

Information in *appendix 2* is accurately analysed and interpreted, and the main issues identified, with examples from the research. It is recognised that Joseph Obeng should be concerned by the trends shown with adequate explanations.

[1 to 2 marks]

The analysis is either general or more detailed without the main trends being identified. Alternatively the issues are identified but not supported by data. Reference needs to be made to the concerning nature of the trends for Joseph Obeng.

- (c) **Suggest, with practical details, *three* courses of action to address any problems identified in your analysis.** **[6 marks]**

- More detailed research needs to be conducted. This might include in-depth interviews with dissatisfied customers or follow-up questionnaires.
- The areas where dissatisfaction has been noted need further investigation. This could include analysis of customer/staff interactions and standards, plus an investigation of external variables that might be intervening.
- Improved staff training with emphasis on weak areas, and a review of recruitment and retention policies.
- Joseph needs to convene meetings with all senior staff, including Manjit, Marc and Peter to put in place strategies to address weaknesses.

Award **[1 mark]** for each appropriate course of action suggested, and **[2 marks]** if the course of action is supported by practical details. A maximum of **[2 marks]** per suggestion is permissible.

2. (a) **Describe, with relevant examples, *three* internal economies of scale and consider how these will apply to Open Views as it grows in size.** **[8 marks]**

Possible examples of internal economies of scale:

- *purchasing economies* – bulk-buying discounts and favourable credit terms
- *technical economies* – larger-scale production reduces unit cost and allows for division of labour
- *marketing economies* – specialist advertising is possible and adverts reach larger audiences and cover more production reducing unit cost
- *financial economies* – easier for larger firms to get loans and often granted at lower interest rates
- *managerial economies* – increases specialisation and division of labour
- *risk-bearing economies* – larger firms can diversify reducing reliance on single products
- *increased capital utilisation* – using productive facilities more effectively, thus reducing unit cost.

For Open Views it means they can buy hotel rooms and accommodation more cheaply, and are able to get charter rates on aircraft. The division of labour can be used throughout the organisation *e.g.* specialist buyers, accountants, computer staff. The opening of Warm Breezes is an example of diversification. Loans to finance such expansion may be cheaper and easier to arrange.

[7 to 8 marks]

Three economies of scale are described with relevant illustrations and are applied to Open Views and/or Warm Breezes.

[3 to 6 marks]

Two or three economies of scale are described. At the top of the band they would need to be illustrated, although these may not be directly related to Open Views.

[1 to 2 marks]

A limited response, either in number or expansion and illustration.

(b) Using the information provided in *appendix 3*, and relevant ratio calculations, analyse Open Views' profitability, liquidity and efficiency, and discuss whether Joseph is satisfying his desire to maintain financial and cost control of his business. *[10 marks]*

- Sales revenue has increased by 20.6 % from 1999 to 2000, but only by 16.5 % last year.
- During the same period cost of goods sold increased by 28.9 % and 24.5 %, and overheads by 21.7 % and 18.6 %.
- Costs are clearly increasing at a higher rate than sales.
- Gross profit has improved each year, but net profit declined in 2001 from 2000, after increasing from 1999 to 2000.
- Working capital has declined slightly this year, although total assets employed have increased over all three years.
- 2000 saw an increase in share capital as Marc invested in the business. This appeared to have been spent on reducing long-term liabilities and the purchase of more fixed and current assets.

Ratio analysis

Profitability:

	1999	2000	2001
1. Gross Profit Margin			
GPM = $\frac{\text{Gross Profit}}{\text{Sales}} \times 100$	$\frac{24.8}{28.6} \times 100 = 86.7\%$	$\frac{29.6}{34.5} \times 100 = 85.8\%$	$\frac{34.1}{40.2} \times 100 = 84.8\%$
2. Net Profit Margin			
NPM = $\frac{\text{Net Profit}}{\text{Sales}} \times 100$	$\frac{3.6}{28.6} \times 100 = 12.6\%$	$\frac{3.8}{34.5} \times 100 = 11\%$	$\frac{3.5}{40.2} \times 100 = 8.7\%$
3. Return on Capital Employed			
ROCE = $\frac{\text{Net Profit}}{\text{Capital Employed}} \times 100$	$\frac{3.6}{44.1} \times 100 = 8.2\%$	$\frac{3.8}{44.7} \times 100 = 8.5\%$	$\frac{3.5}{47.8} \times 100 = 7.3\%$
4. Mark-up			
$\frac{\text{Gross Profit}}{\text{Cost of goods sold}} \times 100$	$\frac{24.8}{3.8} \times 100 = 652.6\%$	$\frac{29.6}{4.9} \times 100 = 604.1\%$	$\frac{34.1}{6.1} \times 100 = 559\%$

Efficiency/Activity ratios:

<i>Asset turnover</i> = $\frac{\text{Sales}}{\text{Net Assets}}$	$\frac{28.6}{44.1} = 0.65$ times	$\frac{34.5}{44.7} = 0.77$ times	$\frac{40.2}{47.8} = 0.84$ times
--	----------------------------------	----------------------------------	----------------------------------

Liquidity ratios:

<i>Current ratio</i> = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$	$\frac{3.4}{2.1} = 1.62$	$\frac{3.8}{2.5} = 1.52$	$\frac{4.1}{2.9} = 1.41$
---	--------------------------	--------------------------	--------------------------

Gearing ratio:

$\frac{\text{Long-term loans}}{\text{Capital employed}} \times 100$	$\frac{13.7}{44.1} \times 100 = 31.1\%$	$\frac{8.1}{44.7} \times 100 = 18.1\%$	$\frac{10.8}{47.8} \times 100 = 22.6\%$
---	---	--	---

- Gross and net profit margins are declining reflecting the relative increase in cost of goods sold and overheads.
- Reducing profitability is also reflected in a falling ROCE ratio and mark-up. Although still remarkably high (reflecting the exclusive nature of the holidays), this may reflect the need to react to competition and less favourable economic circumstances.
- Assets are being used more efficiently, producing more sales per dollar invested. This may be the result of economies of scale.
- Liquidity is worsening and in 2001, the current ratio has fallen below the rule of thumb of 1.5/2:1. Again this may be a reflection of poorer management of working capital and cost control.
- The business became lower geared in 2000 after Marc invested capital into the business. This year the gearing has increased, as the result of more longer-term borrowing to finance expansion of the business.

Although there are no major concerns about the financial state of the business, except perhaps for the cash flow position, there are signs that cost control is becoming poorer, and/or costs are increasing for external reasons *e.g.* inflation, rents, accommodation and travel expenses *etc.* There may be evidence of the beginnings of overtrading; a situation Joseph is obsessive about avoiding.

[8 to 10 marks]

The financial and ratio analysis is detailed and accurate. At least four ratios are calculated and applied for ***[10 marks]***. There is a recognition that financial and cost control may not be strict enough, backed up with evidence to support a cogent discussion.

[3 to 7 marks]

The financial and ratio analysis is accurate at the upper end of the band. Discussion may be more limited and the number of ratios calculated may be less or the interpretation less detailed at the lower end of the markband.

[1 to 2 marks]

Some financial interpretation is attempted, but it is very limited, and possibly inaccurate.

3. (a) **Applying your knowledge of motivation and leadership theory, analyse the likely effects on employees of Joseph Obeng’s, Marc Leroux’s and Peter Storm’s management styles.** **[9 marks]**

- Joseph’s management style is a strange mixture. Major decisions are centralised and when Joseph is present, his style is “hands-on” and paternalistic. When he is absent, the style is rather laissez faire. Staff are able to cope in most circumstances as they are relatively experienced. However, financial and performance indicators are suggesting that a lack of consistency and support is affecting staff efficiency and motivation.
- Marc’s style is impersonal and bureaucratic. He uses management by objectives, but staff lack confidence in his experience and knowledge.
- Peter Storm is autocratic and patronising.

All three styles are likely to have some negative effect on motivation. Staff at Open Views have to cope with inconsistent management, and appear to have little control over important decision making. When they are given responsibility it is often in the form of crisis management.

Employees at Warm Breezes are in a service environment, requiring flexibility. Again they do not feel included in decision-making and feel patronised and unsupported as evidenced by high staff turnover. They also feel unrepresented as there are no senior local managers who might understand their needs more fully. There is little justification for this style of management given the environment.

Relevant theory may include leadership theories such as Blake and Mouton, and Tannenbaum and Schmidt. Relevant motivation theory could be Mayo, Maslow, McGregor and Herzberg.

[7 to 9 marks]

The three leaders styles are accurately identified with illustration from the case study. The effects on motivation are analysed using appropriate motivational and/or leadership theory. These may be brief at the lower end of the band.

[3 to 6 marks]

The three leaders styles are described, possibly in general terms. There is an attempt to examine the effects on motivation of staff. There may be no theory applied.

[1 to 2 marks]

A limited and general response, not using theory.

- (b) **Assess the potential role of a trade union at Open Views in promoting the views of employees and in helping to resolve conflicts within the workplace.** *[4 marks]*

Unions can:

- help express their members concerns collectively to management in a more effective manner
- represent their member's interests in tribunals or law courts
- pressurise employers by threatening a range of supporting action, such as strikes
- help resolve conflict through negotiation and discussion
- bring issues to management before they threaten to cause conflict.

In the case of Warm Breezes, a trade union may place pressure on management to be more democratic, to raise salaries and to review health and safety lapses.

Whether unions can help resolve conflict at Warm Breezes will depend upon the attitudes of the employees, employers and unions. Peter Storm and Joseph Obeng may perceive unions as a threat and may resist their influence. The union may wish to exercise their muscle, possibly for political reasons. The employees may ignore the good of the company in pursuit of their own individual objectives. Alternatively, all three groups may work closely together. In some countries the unions are merely an extension of the government and therefore are likely to seek conflict resolution.

[3 to 4 marks]

A range of union functions are assessed, beyond just that of industrial action. Specific functions are considered which promote the interests of employees and address conflict resolution. The answer relates to the issues of importance at Warm Breezes and/or Open Views, such as health and safety and salaries.

[1 to 2 marks]

Issues are limited and functions merely described. The answer may not refer to Warm Breezes or Open Views.

4. (a) **Examine the commercial advantages of firms acting in an ethical and socially responsible manner.** *[6 marks]*

Commercial advantages of an ethical and socially responsible manner:

- positive effects on employee recruitment, retention and motivation
- public relations advantages, improving brand and corporate image
- it may justify the price premium charged by Open Views
- this may pre-empt legislation which demands action, thereby giving competitive advantage
- better relationships with the local community and government which may allow future plans for expansion to be approved.

Award *[1 mark]* for listing each of the above and up to *[2 marks]* if the advantage is expanded or illustrated, up to a maximum of *[6 marks]*.

- (b) **Produce a set of ethical and environmental guidelines to support Joseph and Manjit’s application to expand Warm Breezes. Evaluate how your guidelines will address the local community’s objections to the present operations and proposed expansion.** **[10 marks]**

Ethical guidelines:

these could relate to:

- treatment of staff – clear recruitment, staff development and training policies, participation in decision-making
- terms improved and conditions of employment enhanced
- health and Safety issues reviewed and a policy developed
- racial, cultural and sexual discrimination
- industrial relations
- profit sharing with employees and the community
- sponsoring community programmes *e.g.* education, sport and leisure
- respect for, and development of the local culture
- use of local facilities and services
- honesty and respect for all local stakeholders.

Environmental guidelines:

- respect for the local environment
- risk assessment of the potential effects of expansion plans on wildlife, fauna and natural features such as the coral reef
- waste and recycling policies
- energy conservation.

These may be reflected in new mission and value statements.

The guidelines are evaluated against the community’s objections to the present operations and proposed expansion and relate to actual operational changes.

For instances:

- increased recruitment of local managers
- respect for, and integration of local culture
- an environmental risk assessment, reducing negative externalities
- greater wealth accruing to the local populations.

[9 to 10 marks]

A detailed and coherent approach suggesting practical and relevant ethical and environmental policies and programmes. These are reviewed against objections, and judgements made on their likely success in addressing and reassuring the local community.

[6 to 8 marks]

Intelligent suggestions with some review and evaluation, but possibly the answer may be poorly structured. Ethical and environmental issues suggested may also lack clarity at the lower end of the band.

[3 to 5 marks]

Descriptive and rather limited suggestions, but of relevance and value.

[1 to 2 marks]

A limited and general answer.

SECTION B

5. (a) From the information presented in the case study, identify *two* reasons why Peter has chosen such a short Payback period and high Average Rate of Return. *[2 marks]*

Joseph has made it clear that financial control is his priority. The Caribbean economies are relatively unstable and inflation and high interest rates a threat. Peter will want to repay any investment as soon as possible and will need a high ARR to pay for the high cost of capital. He may also be aware of Open Views' declining liquidity position.

Award *[1 mark]* for each relevant point identified up to a maximum of *[2 marks]*.

- (b) Using the information provided, calculate the Payback, Average Rate of Return and Net Present Value, for both Option 1 and Option 2, and state whether the options satisfy Peter's criteria for investment. *[8 marks]*

OPTION 1: Commercial centre

- (a) *Payback: Initial cost = \$ 8.4m*

$$\begin{aligned} \text{Years 1 - 3: } & \$ 1.6\text{m} + \$ 2.8\text{m} + \$ 3.4\text{m} = \$ 7.8\text{m} \\ & \text{To payback, needs another } \$ 0.6\text{m} \\ & \frac{0.6}{3.6} \times 12 \text{ months} = 2 \text{ months} \end{aligned}$$

Payback = 3 years 2 months

- (b) *Average Rate of Return*

$$\text{Total return} = \$ 19.6\text{m}$$

Average annual return:

$$\frac{\$ 19.6\text{m}}{6} = \$ 3.27\text{m}$$

$$\text{ARR} = \frac{\$ 3.27\text{m}}{\$ 8.4\text{m}} \times 100 = 38.9 \%$$

(c) Net Present Value (NPV):

$$\begin{aligned}
1.6 \times 0.88 &= 1.408 \\
2.8 \times 0.77 &= 2.156 \\
3.4 \times 0.68 &= 2.312 \\
3.6 \times 0.6 &= 2.16 \\
4.0 \times 0.52 &= 2.08 \\
4.0 \times 0.46 &= \underline{1.84} \\
&11.956 \\
(8.4) \times 1 &= (8.4) \\
\text{NPV} &= \underline{\underline{3.556}}
\end{aligned}$$

[N.B. If the candidate does not round the decimal places]:

$$\begin{aligned}
1.6 \times 0.877 &= 1.4032 \\
2.8 \times 0.769 &= 2.1532 \\
3.4 \times 0.675 &= 2.295 \\
3.6 \times 0.592 &= 2.1312 \\
4.0 \times 0.519 &= 2.076 \\
4.0 \times 0.456 &= \underline{1.9152} \\
&11.9738 \\
(8.4) \times 1 &= (8.4) \\
\text{NPV} &= \underline{\underline{3.5738}}
\end{aligned}$$

OPTION 2: New cottages

(a) Payback: Initial cost = \$ 4.4m

$$\begin{aligned}
\text{Years 1 - 3: } & \$ 0.8\text{m} + \$ 1.4\text{m} + \$ 2.0\text{m} = \$ 4.2\text{m} \\
& \text{To payback, needs another } \$ 0.2\text{m} \\
& \frac{0.2}{2.4} \times 12 \text{ months} = 1 \text{ month}
\end{aligned}$$

Payback = 3 years 1 month

(b) Average Rate of Return

Total return = \$ 11.5m

Average annual return:

$$\frac{\$ 11.5\text{m}}{6} = \$ 1.92\text{m}$$

$$\text{ARR} = \frac{\$ 1.92\text{m}}{\$ 4.4\text{m}} \times 100 = 43.6 \%$$

(c) Net Present Value (NPV):

$$\begin{aligned} 0.8 \times 0.88 &= 0.704 \\ 1.4 \times 0.77 &= 1.078 \\ 2.0 \times 0.68 &= 1.36 \\ 2.4 \times 0.6 &= 1.44 \\ 2.3 \times 0.52 &= 1.196 \\ 2.6 \times 0.46 &= \underline{1.196} \\ &6.974 \\ (4.4) \times 1 & \quad (4.4) \\ \text{NPV} &= \underline{\underline{2.626}} \end{aligned}$$

[N.B. If the candidate does not round the decimal places]:

$$\begin{aligned} 0.8 \times 0.877 &= 0.7016 \\ 1.4 \times 0.769 &= 1.0766 \\ 2.0 \times 0.675 &= 1.35 \\ 2.4 \times 0.592 &= 1.4208 \\ 2.3 \times 0.519 &= 1.1937 \\ 2.6 \times 0.456 &= \underline{1.1856} \\ &6.9283 \\ (4.4) \times 1 & \quad (4.4) \\ \text{NPV} &= \underline{\underline{2.5283}} \end{aligned}$$

Both options satisfy Peter's criteria.

[7 to 8 marks]

Calculations are accurate and well laid out with full working. The answers are assessed against Peter's criteria. Allow two errors, or some unclear working for **[7 marks]**.

[3 to 6 marks]

Calculations are clearly laid out at the top of the band and predominantly accurate. The answers are assessed against Peter's criteria. Accuracy and layout is noticeably worse at the bottom of the band.

[1 to 2 marks]

A limited response. Working may be unclear or missing, and calculations are either limited or predominantly inaccurate.

- (c) **Using the investment appraisal information you have just calculated and additional financial and non-financial information provided in the case study, select an expansion option and justify your choice.** ***[5 marks]***

Other information and issues:

- potential liquidity and cash flow problems
- availability of finance for new expansion
- local community and government objections to expansion
- diversifying has risks – new customers and markets. Open Views may be diluting its luxury image if it develops the new cottages, but has little experience in the corporate sector
- positive response by local community to the creation of new jobs.

The decision is a tight one using different types of investment appraisal. The commercial centre has higher initial costs, slightly longer payback and a lower ARR. However, its NPV is higher and it is better regarded by the local community.

[5 marks]

Relevant additional financial and non-financial information identified, an expansion option selected and intelligently justified. The closeness of the result is highlighted.

[3 to 4 marks]

Some factors identified with an attempt to link them to the selection of an option. The closeness of the result is not highlighted.

[1 to 2 marks]

Limited and/or inaccurate identification of factors, with little or no attempt to incorporate them in the selection of an option.

- (d) **Using relevant examples, consider to what extent external factors may affect the accuracy of the figures presented by Peter Storm.** **[5 marks]**

Possible external factors:

- economic booms or slumps at a regional or international level
- increasing / decreasing inflation and interest rates
- additional competition from MNCs or regional competitors
- fashion may affect demand for certain locations
- political or social unrest
- unemployment rates may alter, affecting the cost of labour
- new legal restrictions, *e.g.* taxation or employment legislation.

There is evidence in the case study that the regional economies are subject to fluctuations, which may affect economic factors such as inflation and interest rates. These changes may significantly affect cash inflows and outflows. The availability and cost of factors of production may alter budgets and profit predictions. Recessions and booms will influence levels of demand.

[5 marks]

Relevant external constraints identified and applied in a clear and cogent manner.

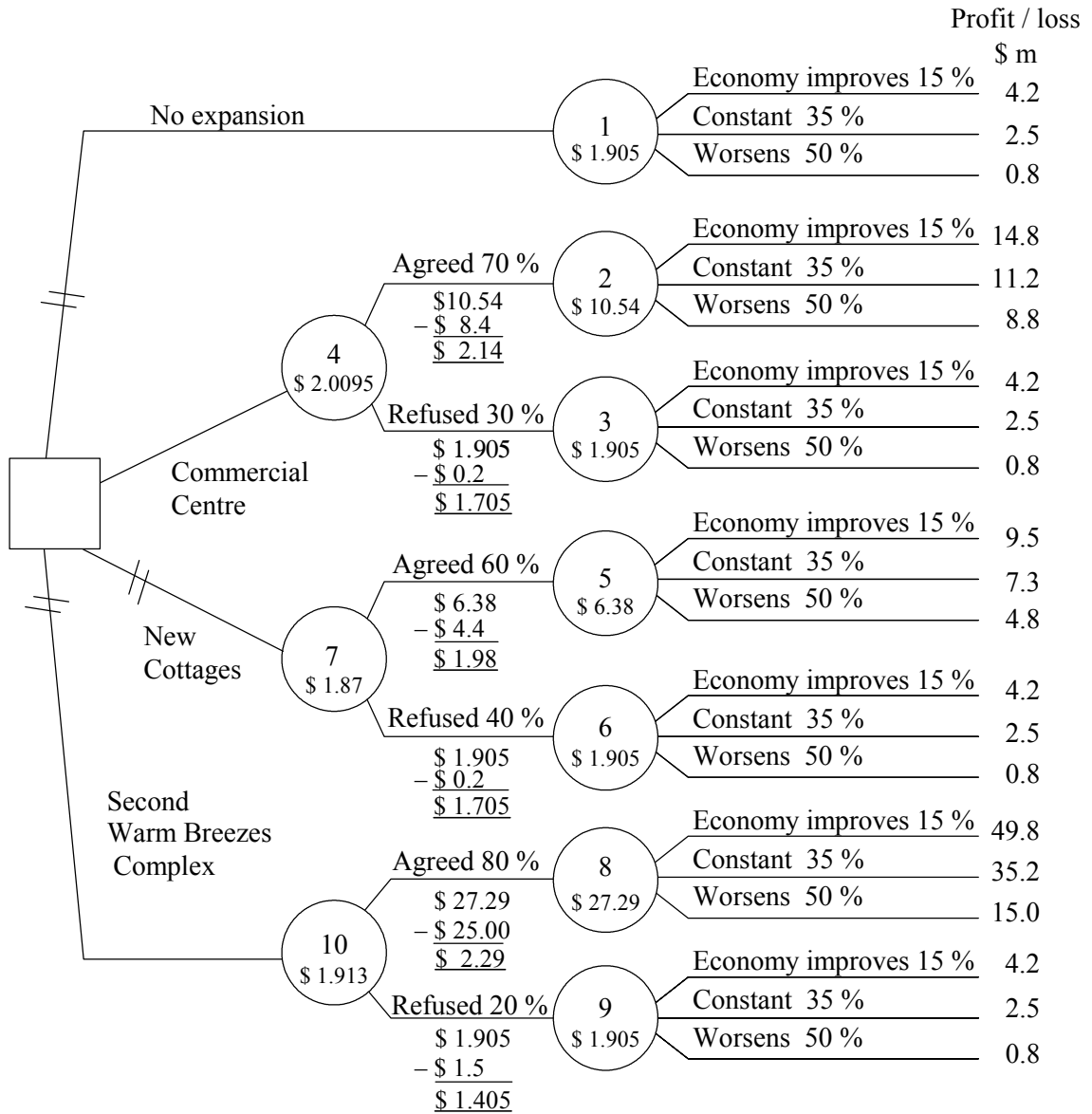
[3 to 4 marks]

Some external factors identified with an attempt to link them to the figures.

[1 to 2 marks]

Limited and/or inaccurate identification of external factors, with little or no attempt to link them to the figures.

6. (a) Prepare a decision tree to represent Warm Breezes' options and calculate the expected values of each. [7 marks]



Key:

~~—~~ Rejected options on financial return grounds

□ Decision node

○ Chance node

Calculations:

	\$ m		\$ m
Node 1:	$4.2 \times 15 \%$	=	0.63
	$2.5 \times 35 \%$	=	0.875
	$0.8 \times 50 \%$	=	<u>0.4</u>
			<u>1.905</u>

Node 2:	$14.8 \times 15 \%$	=	2.22
	$11.2 \times 35 \%$	=	3.92
	$8.8 \times 50 \%$	=	<u>4.4</u>
			<u>10.54</u>

Node 3:	$4.2 \times 15 \%$	=	0.63
	$2.5 \times 35 \%$	=	0.875
	$0.8 \times 50 \%$	=	<u>0.4</u>
			<u>1.905</u>

Node 4:	$10.54\text{m} - \$ 8.4\text{m} = \$ 2.14\text{m}$		
	$2.14 \times 70 \% = 1.498$		
	$\$ 1.905\text{m} - \$ 0.2\text{m} = \$ 1.705\text{m}$		
	$1.705 \times 30 \% = \underline{0.5115}$		
	$= \underline{\mathbf{2.0095}}$		

Node 5:	$9.5 \times 15 \%$	=	1.425
	$7.3 \times 35 \%$	=	2.555
	$4.8 \times 50 \%$	=	<u>2.4</u>
			<u>6.38</u>

Node 6:	$4.2 \times 15 \%$	=	0.63
	$2.5 \times 35 \%$	=	0.875
	$0.8 \times 50 \%$	=	<u>0.4</u>
			<u>1.905</u>

Node 7:	$\$ 6.38\text{m} - \$ 4.4\text{m} = \$ 1.98\text{m}$		
	$1.94 \times 60 \% = 1.188$		
	$\$ 1.905\text{m} - \$ 0.2\text{m} = \$ 1.705\text{m}$		
	$1.705 \times 40 \% = \underline{0.682}$		
	$= \underline{\mathbf{1.87}}$		

Node 8:	$49.8 \times 15 \%$	=	7.47
	$35.2 \times 35 \%$	=	12.32
	$15.0 \times 50 \%$	=	<u>7.5</u>
			<u>27.29</u>

	\$ m		\$ m
Node 9:	$4.2 \times 15 \%$	=	0.63
	$0.5 \times 35 \%$	=	0.875
	$0.8 \times 50 \%$	=	<u>0.4</u>
			<u>1.905</u>

Node 10: $\$ 27.29\text{m} - \$ 25.00\text{m} = \$ 2.29\text{m}$
 $2.29 \times 80 \% = 1.832$

$\$ 1.905\text{m} - \$ 1.5\text{m} = \$ 0.405\text{m}$
 $0.405 \times 20 \% = \underline{0.081}$
 $= \underline{\mathbf{1.913}}$

[7 marks]

An accurate decision tree, fully labelled. Calculations are shown and it is clear where values have come from.

[5 to 6 marks]

Essentially accurate tree, although some calculations of values are not clear and/or there may be up to two errors.

[3 to 4 marks]

The tree contains several errors as do the calculations, which may not be developed or even shown.

[1 to 2 marks]

The diagram is essentially incorrect, but there is some understanding of its form and/or some attempt at working.

- (b) **Which course of action is most desirable according to your decision tree?** *[1 marks]*

To build the commercial centre.

Award *[1 mark]* for this answer.

N.B. Candidates should not be double penalised. Award *[1 mark]* if the candidate selects the course of action using their own incorrect figures.

- (c) **To what extent would the additional financial and non-financial information provided in the case study support the course of action suggested by the decision tree?** *[6 marks]*

Other information and issues:

- potential liquidity and cash flow problems
- availability of finance for new expansion
- local community and government objections to expansion
- diversifying has risks – new customers and markets. Open Views has little experience in the corporate sector
- positive response by local community to the creation of new jobs.

[5 to 6 marks]

Relevant additional financial and non-financial information identified and the decision to build the commercial centre evaluated.

[3 to 4 marks]

Some factors identified with an attempt to link them to the decision.

[1 to 2 marks]

Limited and/or inaccurate identification of factors, with little or no attempt to link them to the decision.

N.B. Candidates should not be double penalised. If their decision tree results in another action, then discussion related to this should be credited.

- (d) (i) **Explain what is meant by price and income elasticity of demand. [2 marks]**

The sensitivity of demand to changes in price and income. Two equations:

$$P_{ed} = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

$$Y_{ed} = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in income}}$$

Award **[1 mark]** for each correct explanation up to a maximum of **[2 marks]**. The candidate need **not** provide the formulas.

- (ii) **By reference to information in the case study, including *appendix 1*, analyse and explain the significance of the elasticity results established for Warm Breezes. [4 marks]**

A price elasticity of 0.85 means that the demand is relatively price inelastic. An increase in price will lead to a smaller proportionate fall in demand, resulting in higher revenues. The fact that demand is price inelastic may reflect the high customer satisfaction rates and brand loyalty.

An income elasticity of 1.12 means that the demand for holidays at Warm Breezes is relatively income elastic. As incomes increase, demand for holidays at Warm Breezes will rise proportionately more. Conversely, a decline in income will lead to the opposite result. If there is a decline in GDP growth as predicted, this is likely to have an adverse affect on demand.

[3 to 4 marks]

Explains the meaning of the elasticities and applies the findings to Warm Breezes.

[1 to 2 marks]

An attempt at explaining the meaning of the elasticities, but the answer may lack clarity or accuracy.
