

Additional Assessment Materials

Pearson Edexcel GCE in A level Business

9BS0

Resource Set 3

3.3 Decision-making techniques

 3.3.2 Investment appraisals

 3.3.3 Decision trees

 3.3.4 Critical path analysis

**3.3.2 Investment appraisals**

For people in developing countries, purchasing a pair of VisionSpring glasses may be

considered as an investment.

1 Using the data in Extract B, calculate the average rate of return from purchasing a pair of glasses. You are advised to show your working.

(4)

**3.3.3 Decision trees**

The net gain for the new smartwatch is £1.3 million.

2 Using the data in the decision tree, calculate the net gain for the marketing campaign.

State your answer to two decimal places. You are advised to show your working.

(4)

**3.3.4 Critical path analysis**

Innocent Drinks has constructed the network diagram below to plan the launch of

a new line of smoothies. Each number represents how many days each activity is

estimated to take.

3 Using the data in the network diagram above, calculate the Earliest Start Times (EST) and Latest Finishing Times (LFT) for each activity and identify the critical path.

(4)

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| Question Number | Answer | Mark  |
| **1** | **Knowledge 1, Application 3** Quantitative skills assessed:**QS1:** calculate, use and understand ratios, averages and fractions**QS2:** calculate, use and understand percentages and percentage changes**QS6:** calculate investment appraisal outcomes and interpret results**Knowledge: 1 mark for** identifying the formula for calculating Average Rate of Return:average annual return/initial cost x 100 (can be implied)**Application: up to 3 marks for*** Total return **=** 216 – 4 = 212
* Average annual return = 212/2 = 106
* ARR = 106/4 X 100 = 2650%

NB: if the only answer given is 2650% award 4 marks | **(4)** |

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| Question Number | Answer | Mark  |
| **2** | **Knowledge 1, Application 3** Quantitative skills assessed:**QS3:** construct and interpret a range of standard graphical forms**QS8:** use and interpret quantitative and non-quantitative information in order to make decisions**Knowledge: 1 mark for** an understanding of net gain expected value – initial cost (this can be implied)**Application: up to 3 marks for:** * Marketing campaign: (0.6 x £3 million) = £1.8 million (0.4 x -£50,000) = - £20,000
* Expected value: £1.8 million - £20,000 = £1.78 million
* Net gain: £1.78 million - £360,000 = £1.42 million

**NB:** Award 4 marks if candidate only states £1.42 m/1.42 millionAward only 3 marks if candidate only states £1.4 m/1.4 million | **(4)** |

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| Question Number | Answer | Mark  |
| **3** | **Knowledge 1, Application 3** Quantitative skills assessed:**QS 3:** construct and interpret a range of standard graphical forms**QS 8:** use and interpret quantitative and non quantitative information in order to make decisions**Knowledge: 1 mark for** implicit understanding of network diagramsE.g. at least 1 correct calculation of either EST or LFT**Application: 3 marks for:**Circle 1: top 0, bottom 0Circle 2: top 3, bottom 3Circle 3: top 11, bottom 11Circle 4: top 14, bottom 14Circle 5: top 18, bottom 18(to be entered on a diagram)**1 mark** for correct calculation of all ESTs for each node**1 mark** for correct calculation of all LFTs for each node**1 mark** for identification of critical path A, C, F and H | **(4)** |