



BUS.IN1 Technology and business

AQA 8132 • Calculator allowed • about 55 minutes

Total Marks

--

Name: _____ Date: ____ / ____ / ____

Answer ALL questions in the spaces provided. Show your working for any calculation: method marks are available even if your final answer is wrong. Thornfield Home and Garden, used throughout this pack, is a fictional business.

1 Which one of the following is an example of e-commerce?

- ☐ A) A customer buying plants directly from a business's website
- ☐ B) A customer paying by cheque inside a shop
- ☐ C) A customer receiving a paper mail-order catalogue through the post
- ☐ D) A customer looking at a shop window display

(Total for Question 1 is 1 mark)

2 Which one of the following is a benefit to a business of building its own website?

- ☐ A) It removes the need for the business to pay any business rates
- ☐ B) It allows the business to reach customers beyond its local area, at relatively low extra cost
- ☐ C) It guarantees that customers will spend more money in the physical shop
- ☐ D) It prevents competitors from ever undercutting the business's prices

(Total for Question 2 is 1 mark)

3 State three examples of technology a business like Thornfield Home and Garden could use to market itself to customers.

(Total for Question 3 is 3 marks)

- 4** Thornfield is planning a new online store, in addition to its physical garden centre.
- (a)** The website will cost 100 pounds a month to host and maintain. Calculate the annual hosting and maintenance cost. (2)

- (b)** Building the website is also a one-off cost of 8,000 pounds. Using your answer to part a, calculate the total cost of the website in its first year. (2)

(Total for Question 4 is 4 marks)

- 5** Thornfield forecasts that the website will generate extra sales of 3,000 pounds a month in its first year, on top of its existing shop sales. Calculate the total extra revenue this would generate over a full year. Show your working.

(Total for Question 5 is 2 marks)

- 6** Using your answers to question 4b and question 5, calculate the net benefit to Thornfield in the first year, before any online payment fees. Show your working.

(Total for Question 6 is 2 marks)

- 7** Thornfield's online payment processor charges a fee of 1.5% of the value of every online sale. Using your answer to question 5, calculate the total fee Thornfield would pay in the first year. Show your working.

(Total for Question 7 is 2 marks)

- 8** Using your answers to question 6 and question 7, calculate Thornfield's net benefit in the first year after the payment processor's fee. Show your working.

(Total for Question 8 is 2 marks)

- 9** Explain one advantage to Thornfield's customers of the new website.

(Total for Question 9 is 3 marks)

- 10** Explain one drawback to Thornfield of relying more heavily on technology.

(Total for Question 10 is 3 marks)

- 11** State two ways Thornfield could use technology inside its physical shop to improve customer service.

(Total for Question 11 is 2 marks)

- 12** Explain how the growth of price-comparison websites and online-only retailers has increased the competitive pressure on a business like Thornfield.

(Total for Question 12 is 3 marks)

13 Explain one action Thornfield could take to reduce the risk identified in question 10.

(Total for Question 13 is 3 marks)

14 State two groups of stakeholders, other than customers, who could be affected by Thornfield launching a website.

(Total for Question 14 is 2 marks)

15 Thornfield's new website is forecast to generate a net benefit of 26,260 pounds in its first year, after hosting and payment fees (question 8), and could bring real advantages to customers (question 9). However, questions 10 and 12 show it also brings cybersecurity risks and increased competitive pressure.

Recommend whether Thornfield Home and Garden should go ahead with launching the website. Justify your answer using the figures and points made earlier in this pack.

(Total for Question 15 is 9 marks)

Mark scheme · BUS.IN1 Technology and business

Question 1

- **B1** A cao
- **Answer: A**

Question 2

- **B1** B cao
- **Answer: B**

Question 3

- **B1** one acceptable example, e.g. a business website
- **B1** a second acceptable example, e.g. social media advertising or posts
- **B1** a third acceptable example, e.g. email marketing/newsletters, online customer reviews, or a listing on a price-comparison website
- **Answer: Any three, e.g. a business website; social media advertising; email marketing; online customer reviews; price-comparison listings.**

Question 4

- (a) **M1** 100 x 12 seen
- (a) **A1** 1,200 pounds cao
- **(a) Answer: 1,200 pounds.**
- (b) **M1** 8,000 + 1,200 seen (ft from part a)
- (b) **A1** 9,200 pounds cao
- **(b) Answer: 9,200 pounds.**

Question 5

- **M1** 3,000 x 12 seen
- **A1** 36,000 pounds cao
- **Answer: 36,000 pounds.**

Question 6

- **M1** 36,000 - 9,200 seen (ft from questions 4b and 5)
- **A1** 26,800 pounds cao
- **Answer: 26,800 pounds.**

Question 7

- **M1** 36,000 x 0.015 seen (ft from question 5)
- **A1** 540 pounds cao
- **Answer: 540 pounds.**

Question 8

- **M1** 26,800 - 540 seen (ft from questions 6 and 7)
- **A1** 26,260 pounds cao
- **Answer: 26,260 pounds.**

Question 9

- **B1** identifies the point, e.g. customers can browse and buy plants and garden products at any time, without travelling to the garden centre
- **B1** develops the point, e.g. this is more convenient, especially for customers who live further away or who cannot visit during opening hours
- **B1** links clearly to an outcome, e.g. this helps explain the 36,000 pounds of extra revenue forecast in question 5, since Thornfield can now reach customers it previously could not serve
- **Answer: Customers can browse and buy at any time without travelling to the garden centre, which is more convenient, especially for those who live further away or cannot visit during opening hours, helping explain the 36,000 pounds of extra revenue forecast in question 5.**

Question 10

- **B1** identifies the point, e.g. a website and online payment system can be targeted by a cyber-attack or can suffer a technical fault
- **B1** develops the point, e.g. a data breach or a period when the website is down could mean lost sales and damage to Thornfield's reputation
- **B1** links clearly to an outcome, e.g. this could reduce or wipe out the 26,260 pound net benefit calculated in question 8
- **Answer: A cyber-attack or technical fault could cause a data breach or downtime, leading to lost sales and reputational damage, which could reduce or wipe out the 26,260 pound net benefit calculated in question 8.**

Question 11

- **B1** one acceptable example, e.g. self-service or contactless payment tills
- **B1** a second acceptable example, e.g. digital stock-check screens for staff, or a digital customer loyalty card
- **Answer: Any two, e.g. contactless/self-service payment tills; digital stock-check screens; a digital loyalty card scheme.**

Question 12

- **B1** identifies the point, e.g. customers can now compare Thornfield's prices with rivals in seconds using price-comparison websites, and online-only retailers often have lower costs since they do not run a physical shop
- **B1** develops the point, e.g. this makes it harder for Thornfield to charge higher prices without losing customers to a cheaper online rival
- **B1** links clearly to an outcome, e.g. Thornfield may need to keep prices competitive or emphasise other advantages, such as expert advice or seeing plants in person, to retain customers
- **Answer: Price-comparison websites let customers compare prices instantly, and online-only retailers often have lower costs, making it harder for Thornfield to charge higher prices without losing customers, so it may need to stay price-competitive or emphasise advantages like expert advice and seeing plants in person.**

Question 13

- **B1** identifies the point, e.g. Thornfield could invest in cybersecurity software and staff training, or take out insurance against a data breach
- **B1** develops the point, e.g. this makes a successful attack less likely, or reduces the cost to Thornfield if one still happens
- **B1** links clearly to an outcome, e.g. this helps protect the 26,260 pound net benefit calculated in question 8 rather than losing it to a cyber incident
- **Answer: Investing in cybersecurity software, staff training or insurance against a data breach makes a successful attack less likely, or reduces its cost, helping protect the 26,260 pound net benefit calculated in question 8.**

Question 14

- **B1** one acceptable group, e.g. existing shop staff, whose roles may change to include fulfilling online orders
- **B1** a second acceptable group, e.g. delivery couriers/suppliers, or nearby rival garden centres who now face increased competition
- **Answer: Any two, e.g. existing shop staff; delivery couriers or suppliers; other local garden centres.**

Question 15

- **Level 1** (1-3): Makes simple, undeveloped comments about the website decision, with little or no use of the pack's figures and no clear recommendation.
- **Level 2** (4-6): Gives a developed argument for or against the website, using some of the pack's figures, but does not fully weigh both sides or reach a clearly justified recommendation.
- **Level 3** (7-9): Weighs the evidence for and against the website, using the net-benefit and risk figures from this pack, and reaches a justified recommendation supported by that analysis.
- **Indicative content:**
 - For going ahead: the website is forecast to generate a net benefit of 26,260 pounds in its first year alone, after both hosting costs and payment fees (question 8), a substantial return relative to the 9,200 pound first-year cost (question 4b).
 - For going ahead: question 9 shows the website gives genuine convenience benefits to customers, which could support repeat business and reputation beyond the figures already counted.
 - Against going ahead: question 10 shows the website exposes Thornfield to cybersecurity and technical-fault risk that could reduce or wipe out the forecast net benefit if it is not managed.
 - Against going ahead: question 12 shows the wider shift to online shopping also increases competitive pressure on Thornfield from price-comparison sites and online-only rivals, a risk the website itself does not remove.
 - Judgement: given the large forecast net benefit relative to the cost, and that question 13 identifies practical ways to manage the cybersecurity risk, a reasonable recommendation is that Thornfield should go ahead with the website, provided it invests in the safeguards identified in question 13 to protect the forecast return.