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**Design technology**  
**Higher level**  
**Paper 3**

3 November 2025

**Zone A** morning | **Zone B** morning | **Zone C** morning

Candidate session number

1 hour 30 minutes

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**Instructions to candidates**

- Write your session number in the boxes above.
- Do not open this examination paper until instructed to do so.
- Answer all of the questions.
- Answers must be written within the answer boxes provided.
- A calculator is required for this paper.
- The maximum mark for this examination paper is **[40 marks]**.



### Section A

Answer **all** questions. Answers must be written within the answer boxes provided.

- 1. The plate guard, shown in **Figure 1**, is an aid that prevents food from falling off the plate while eating for users with varied ability needs. The plate guard is designed with a curved edge and three clips that attach it to different sized plates, see **Figure 2**. The plate guard is sold in packs of two for a retail price of USD \$15.99.

**Figure 1: The plate guard**



**Figure 2: Close-up showing the guard's curved edge and clip**



- (a) List **two** classifications of users of this plate guard. [2]

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- (b) Outline why plate guards are considered an example of inclusive design. [2]

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**(Question 1 continued)**

(c) Outline **one** advantage of testing plate guards in a usability lab.

[2]

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(d) Explain how the pricing strategy adopted for this plate guard offers value for money for consumers.

[4]

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- 2. Roof mounted solar water heaters, see **Figure 3**, are an option for homeowners who wish to reduce their carbon footprint and save on energy bills. The first commercial solar water heaters were patented around 1891. At present, there are many companies that sell similar solar water heaters in a variety of collector and tank sizes, see **Figure 4**.

**Figure 3: Solar water heaters on rooftops**



[Source: k\_samurkas / iStock.]

**Figure 4: Solar water heaters product family**



- (a) List **two** benefits for creating a brand identity for a company selling solar water heaters. [2]

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**(Question 2 continued)**

(b) Outline **one** corporate strategy that applies to solar water heater companies. [2]

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(c) Outline the advantage of a product family of solar water heaters for users. [2]

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(d) Discuss how solar powered thermal water heaters contribute to energy security. [4]

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### Section B

Read the case study. Answer the following question. Answers must be written within the answer boxes provided.

- 3. Dizzie is an online grocery service aiming to reduce the need for single-use food packaging. Once an order is placed, it is filled in pots, sealed and delivered for free, see **Figure 5**. These pots are later collected, cleaned and reused up to 100+ times. The pots are available in different sizes and are stackable when empty or full, see **Figure 6**. They are made from 100% renewable materials and are 100% recyclable into new pots.

To increase their positive impact, Dizzie adopted a lean production system and expanded their business to big brands and grocery retailers transitioning to reusable packaging.

**Figure 5: Dizzie's reusable pot**



**Figure 6: Stackable Dizzie pots**



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**(Question 3 continued)**

- (a) Customers can be classified through their attitudes and behaviours towards sustainability.

List **two** types of consumers who are most likely to order groceries from Dizzie. [2]

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- (b) Outline **one** reason why Dizzie is an example of decoupling economic growth and negative environmental impact. [2]

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- (c) Outline why Dizzie's packaging meets Datschefski's cyclic principle of sustainable design. [2]

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**(Question 3 continued)**

(d) Explain how Dizzie used ideo-pleasure to increase the sales of its packaging.

[5]

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**References:**

**Figure 3:** k\_samurkas / iStock.

**Figure 4:** Images with permission from Hykon India Limited.

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12EP10

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12EP11

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