1 Built environment and construction focus

The management of a large shopping centre has identified a need to communicate more effectively with its customers.

A customer information desk is required.

The product must:
- accommodate three members of staff
- be permanently fixed.

Follow the instructions given on the four A3 answer sheets to complete the question.

2 Engineering focus

Portable light sources are often needed at roadworks and construction sites.

A product to hold a number of high-powered electric lamps is required.

The product must:
- allow the lamps to be adjusted into any required position
- be easily moved from site to site.

Follow the instructions given on the four A3 answer sheets to complete the question.

3 Food focus

A food manufacturer wants to expand its range of food products to include more fish dishes.

A new product that includes fish is required.

The product must:
- appeal to teenagers
- be nutritionally balanced.

Follow the instructions given on the four A3 answer sheets to complete the question.

4 Graphic products focus

The high quality of packaging of luxury electronic products enhances the whole user experience.

An innovative package for a Tablet PC is required.

The package must:
- be able to be used as a carrier for the Tablet PC
- become a useful accessory to use with the product.

Follow the instructions given on the four A3 answer sheets to complete the question.
5 Manufacturing focus
The recycling of household waste has become increasingly important over recent years.

A product that can be used by householders to separate waste for recycling is required.

The product must:
- store different types of waste separately for ease of recycling
- be suitable for use inside the house.

Follow the instructions given on the four A3 answer sheets to complete the question.

7 Systems and control focus
Upstairs windows in houses or flats are difficult to keep clean on the outside.

A product is required to clean the outside of windows, which are not accessible from ground level.

The product must:
- be easily used by householders
- be usable on windows up to 10 metres above the ground.

Follow the instructions given on the four A3 answer sheets to complete the question.

6 Resistant materials focus
A school with limited space in the dining area wishes to encourage students to eat lunch outside in the school grounds during the summer term.

A product that allows students to sit and eat lunch outside is required.

The product must:
- accommodate three students
- be easily assembled and easily stored after use.

Follow the instructions given on the four A3 answer sheets to complete the question.

8 Textiles focus
A company wishes to extend its range of textile products for the home.

A new textile product to store items for a child’s bedroom is required.

The product must:
- be based on a theme of nature
- be easy to clean.

Follow the instructions given on the four A3 answer sheets to complete the question.
Circle the question number you are answering

1 2 3 4 5 6 7 8

(a) Give three justified specification points.

1

(b) range of developed ideas

2

(c) final developed outcome

3

(d) communication

[Total: 54]

Instructions to candidates

ALLOCATION OF MARKS FOR PAPER F524/02

(a) specification points [6]
(b) range of developed ideas [33]
(c) final developed outcome [9]
(d) communication [6]

All dimensions are in millimetres
Where necessary, calculators may be used

For Examiner's Use Only

<table>
<thead>
<tr>
<th>S</th>
<th>R</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>C</th>
<th>Total</th>
</tr>
</thead>
</table>

F524/02 PRODUCT DESIGN CANDIDATE NAME CANDIDATE NUMBER CENTRE NUMBER
(b) Ideas with development
- A range of ideas [15]
- Consider manufacturing/construction detail [12]
- Evaluate ideas with reference to specification and volume production [6]

[Total: 33]
(b) Ideas with development (continued)

<table>
<thead>
<tr>
<th>FOR EXAMINER'S USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>E</td>
</tr>
</tbody>
</table>

F524/02  PRODUCT DESIGN  CANDIDATE NAME  CANDIDATE NUMBER  CENTRE NUMBER
(c) Final developed outcome

Sketch a final developed outcome. Justify key design features. [9]