

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
A2 GCE
F524/02
DESIGN AND TECHNOLOGY
Product Design: Component 2

FRIDAY 10 JUNE 2016: Morning
DURATION: 1 hour 30 minutes
plus your additional time allowance
MODIFIED ENLARGED

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| Candidate forename | | | | | | Candidate surname | | | | | |
| Centre number | | | | | | Candidate number | | | | | |

Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:
None

OTHER MATERIALS REQUIRED:
A calculator may be used

A calculator may be used for this paper

READ INSTRUCTIONS OVERLEAF

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| 3 | | | |
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| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| TOTAL | | | |



INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.

Use black ink. HB pencil may be used for graphs and diagrams only.

This paper is to be taken with F524/01 in the same examination session of 2 HOURS 30 MINUTES. The times given on the front of each paper are advisory.

Components 01 and 02 should be available to candidates for the full session.

This paper (F524/02) contains EIGHT Design theme based questions.

Answer ONE question only.

Read each question carefully. Make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part question.

The total number of marks for this paper is 54.

All dimensions are in mm.

Where appropriate, calculations should be shown.

Follow the instructions given on the four A3 answer sheets.

HAND IN THE FOUR A3 ANSWER SHEETS INSIDE THIS FOLDER AT THE END OF THE EXAMINATION.

This folder is for F524/02 ONLY.

| | |
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| <p>Answer ONE question only.</p> <p>1 BUILT ENVIRONMENT AND CONSTRUCTION FOCUS</p> <p>As part of a project to transform a seafront area the local council has decided to update existing beach huts.</p> <p>A product that would replace an existing beach hut is required.</p> <p>The product must:</p> <p>have a plan area not greater than 4 metres x 2.5 metres</p> <p>be manufactured from portable panels that can be assembled on site.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> | <p>3 FOOD FOCUS</p> <p>A local zoo wants to increase its range of food products in the cafe and shop.</p> <p>A children’s snack box is required.</p> <p>The product must:</p> <p>be able to provide a nutritionally balanced lunch for a child</p> <p>be easily eaten without additional cutlery.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> |
| <p>2 ENGINEERING FOCUS</p> <p>It is often difficult to cut the branches of tall trees.</p> <p>A product that would enable an adult to cut branches without the use of a ladder or steps is required.</p> <p>The product must:</p> <p>be able to cut small branches up to 2.5 metres from ground level</p> <p>be able to be stored easily.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> | <p>4 GRAPHIC PRODUCTS FOCUS</p> <p>Fancy dress and themed parties are becoming very popular.</p> <p>A product is required that could be assembled and disassembled to use at a children’s party.</p> <p>The product must:</p> <p>be able to be used on more than one occasion</p> <p>be suitable for sale in flat-pack form.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> |
| <p>F524/02 PRODUCT DESIGN</p> | |

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| <p>5 MANUFACTURING FOCUS</p> <p>Children’s bedrooms can be small and cramped.</p> <p>A multi-functional unit for a child’s bedroom is required.</p> <p>The product must be:</p> <p>suitable for children of 3 years of age and above</p> <p>produced as a flat-packed item for self-assembly by an adult.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> | <p>7 SYSTEMS AND CONTROL FOCUS</p> <p>People can be at risk during very cold weather.</p> <p>A product that will clearly indicate that the temperature has fallen below a safe level in a room is required.</p> <p>The product must:</p> <p>have an audible and/or visual alarm to indicate that the temperature has fallen below the set level</p> <p>have an adjustable temperature setting.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> |
| <p>6 RESISTANT MATERIALS FOCUS</p> <p>It is often difficult to transport supplies to people that have been affected by severe weather conditions such as snow or floods.</p> <p>A product is required that could be used to transport supplies over short distances.</p> <p>The product must:</p> <p>be able to be pulled or pushed by a single person</p> <p>be easily adaptable for use over different surface conditions.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> | <p>8 TEXTILES FOCUS</p> <p>Primary School children need protecting from the sun when working or playing outdoors.</p> <p>A wearable product that could be used to protect primary aged children from the sun is required.</p> <p>The product must:</p> <p>be suitable for a child aged between 4 and 11 years</p> <p>be easily adapted to suit a range of sizes.</p> <p>Follow the instructions given on the four A3 answer sheets to complete the question.</p> |
| <p>F524/02 PRODUCT DESIGN</p> | |

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Circle the question number you are answering

1 2 3 4 5 6 7 8

(a) Give THREE justified specification points.

1 _____

2 _____

3 _____

_____ [6]

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]

[TOTAL: 54]

All dimensions are in millimetres

Where necessary, calculators may be used

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(c) Final developed outcome

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

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END OF QUESTION PAPER

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