This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. They show the basis on which Examiners were initially instructed to award marks. They do not indicate the details of the discussions that took place at an Examiners’ meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published Report on the Examination.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates’ scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes must be read in conjunction with the question papers and the Report on the Examination.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the June 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.
**Grade thresholds** taken for Syllabus 9705 (Design and Technology) in the June 2005 examination.

<table>
<thead>
<tr>
<th>Component 1</th>
<th>maximum mark available</th>
<th>minimum mark required for grade:</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>120</td>
<td>72</td>
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The thresholds (minimum marks) for Grades C and D are normally set by dividing the mark range between the B and the E thresholds into three. For example, if the difference between the B and the E threshold is 24 marks, the C threshold is set 8 marks below the B threshold and the D threshold is set another 8 marks down. If dividing the interval by three results in a fraction of a mark, then the threshold is normally rounded down.
### MARK SCHEME

**MAXIMUM MARK: 120**

**SYLLABUS/COMPONENT: 9705/01**  
DESIGN AND TECHNOLOGY  
Written 1
Section A

1 (a) Three pieces of appropriate data identified 3 x 1
e.g. related to height and depth of wheelchair distance from
foot to knee and knee to hip 3

(b) Three features identified 3 x 1
e.g. height of seat, depth of seat, height of table 6

2 (a) Three dangers identified 3 x 1
Clear explanation of each 3 x 1 6

(b) Four appropriate safety rules given 4 x 1 4 10

3 (a) Correct production method given i.e. lamination 1

(b) Quality of explanation related to producing curved shape 0-3 marks 3

(c) Basic sketching showing some understanding of a former and its use
0-2 marks

Good sketching showing a clear understanding of a former
and it use 3-4 marks 4 8

4 (a) Suitable change made
i.e. making slots deeper 0-2 marks
Clear explanation of change 0-2 marks 4

(b) Appropriate explanation related to the base being too small 0-2 marks 2

(c) Clear explanation showing an enlarged base 2 8

5 (a) Correct motion stated i.e. rotary 1

(b) Sketch showing an appropriate mechanism 0-3 marks
Clear explanation of mechanism and indication of moving parts 0-3 marks 6

(c) Mechanism correctly named i.e. bevel gears, worm gear 1 8

Section B

6 (a) Explanation related to it being a brittle material which is easily broken 0-2 marks 2

(b) Suitable material named e.g. polystyrene 1
Appropriate reason 1 mark 2

(c) Marking out described 0-2 marks
Cutting and shaping described 0-3 marks
Appropriate tools and equipment explained 0-3 marks 8

(d) Some level of understanding the process shown 0-4 marks
Good level of understanding the process shown 5-8 marks 8 20

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7  (a) Suitable metal identified 1 mark
   Two appropriate reasons for choice given 2 x 1  3

   (b) Suitable cross section for rail drawn 0-2 marks
       Suitable cross section for leg drawn 0-2 marks  4

   (c) Appropriate method given 0-2 marks
       Quality/clarity of description 0-3 marks  5

   (d) Suitable material identified 1 mark
       Two appropriate reasons for choice given 2 x 1  3

   (e) Appropriate method given 0-2 marks
       Quality/clarity of description 0-3 marks  5  20

8  (a) Suitable wood identified 1 mark
   Two appropriate reasons for choice given 2 x 1  3

   (b) Appropriate method given 0-2 marks
       Quality/clarity of communication 0-2 marks  4

   (c) Layout of information 0-2 marks
       Correct sizes 0-4 marks  6

   (d) Suitable finish identified  1

   (e) Details about application of finish 0-2 marks
       Details about the working environment 0-2 marks
       Details about cleaning the equipment 0-2 marks  6  20

Section C

9  (a) Four appropriate features identified 4 x 1  4

   (b) (i) Feature described 0-4 marks
       Quality/clarity of communication 0-2 marks  6

        (ii) As for part (i)  6

   (c) Quality and depth of discussion 0-4 marks  4  20

10 (a) Appropriate disadvantage explained 0-2 marks  2

    (b) Appropriate properties identified 3 x 1
        Explanation of properties 3 x 1  6

    (c) Design features identified 3 x 1
        Quality/clarity of communication 0-3 marks  6

    (d) Quality and depth of discussion 0-6 marks  6  20

11 (a) Appropriate materials identified
        A wood  B plastic  C metal  3 x 1  3

    (b) (i) Appropriate explanation 0-2 marks  2
| (ii) | Appropriate age ranges given 3 x 1 | 6 |
|      | Appropriate explanations 3 x 1 |   |
| (c) (i) | Correct methods identified 3 x 1 | 3 |
| (ii) | Features identified 3 x 1 |   |
|      | Quality/clarity of communication 0-3 marks | 6 | 20 |