Section A

Answer all questions in this section.

A1 A design for a folded A4 leaflet is shown on the right. The leaflet shows how to assemble a flat-pack table.

(a) Complete the 1:2 scale drawing of the design for the leaflet by:

(i) completing the outline of the 296 × 210 A4 sheet of paper; [2]

(ii) drawing the two fold lines; [3]

(iii) adding thick and thin line technique to the drawing of the table. [2]

(b) Use a sketch and notes to show how the drawing of the table on the leaflet could be embossed. [2]

A2 A drawing of a design for the self-adhesive label is shown below.

(a) Complete the full size isometric drawing of the self-adhesive label below by adding the circle and the text box. [4]

(b) The name and address of the table manufacturer are printed on the self-adhesive label. Complete the list below to show three decisions that would be made when selecting the text for the label. One decision has been given.

1. Size

2. ......................................................... [1]

3. ......................................................... [1]
A3  The leaflet is packed in a polythene bag with a card closure.

(a) Complete the drawing below of the development (net) of the card closure. [6]

(b) The information below shows the sales of three different table sizes in 2016.

<table>
<thead>
<tr>
<th></th>
<th>small</th>
<th>medium</th>
<th>large</th>
</tr>
</thead>
<tbody>
<tr>
<td>sales</td>
<td>10000</td>
<td>12500</td>
<td>8000</td>
</tr>
</tbody>
</table>

In the space below draw a three-dimensional bar chart to show the sales of the three different table sizes. Use labels to enhance the appearance of the drawing. [4]
Section B
Answer either question B4 or B5.

B4 A novelty sweet package in the shape of an animal is shown on the right.

(a) Complete the orthographic views below of the novelty sweet package by:

(i) adding the second ear; [3]
(ii) completing the glue tab and the tail; [4]
(iii) completing the end view. [3]

Estimate any dimensions not given.

(c) Spectacles are added to the face on the novelty sweet package. The spectacles are made from SMA.

(i) Complete the words below to show the meaning of SMA. [3]

S……………………… M……………………… A………………

(ii) Give two reasons why SMA is a suitable material for the spectacles. [1]

1. .....................................................................................................
2. .....................................................................................................
A sketch of a model of an office building is shown on the right. The model is made from five blocks.

(a) Render the drawings below to show two materials the blocks could be made from.

<table>
<thead>
<tr>
<th>Two layers of foam board glued together</th>
</tr>
</thead>
<tbody>
<tr>
<td>[5]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A layer of wood and a layer of Styrofoam glued together</th>
</tr>
</thead>
<tbody>
<tr>
<td>[4]</td>
</tr>
</tbody>
</table>

(b) A decision is made to make the blocks from Styrofoam.

(i) Give two reasons why Styrofoam is a suitable material for the blocks.

1. .................................................................................................................[1]

2. .................................................................................................................[1]

(ii) Name a specific adhesive for joining the Styrofoam blocks together.

.......................................................................................................................[1]

(c) A modified model of the office building is to be made by rotating blocks 2 and 4 through 90 degrees on the central axis.

Complete the isometric drawing below of the modified model. [10]

(d) Use sketches and notes to show a method of adding windows to the surface of the Styrofoam model. [3]