Question 1. An Isometric View, a Front Elevation and a Plan of a Playground Slide are given. In the space indicated:

a) project the End Elevation

b) draw the symbol of the projection used

18 marks
Question 2. The egg cup shown consists of a semi-ellipse mounted on a base. Lines PQ and RS are two normals at points P and R respectively on the semi-ellipse.

a. Using a major axis of 140mm and a minor axis of 90mm, construct the semi-ellipse on the given start lines.

b. Construct the two normals at points P and R to complete the drawing.

*Note: Do not draw the egg.*

14 marks

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Question 3. The tool shown, called a centre-square, is used to find the centre of round bars.

Using the given start lines and centres, draw the centre-square showing clearly the constructions required to locate the centre of the arcs and the points of tangencies.

14 marks
Question 4. Two orthographic views of a wooden kennel are given.
On the given start lines and using the given dimensions, draw an isometric view of the kennel.

Notes:
Place corner X in the lowermost position.
Material thickness is 10mm throughout.

14 marks

Question 5. Health and safety signs can be separated into four categories namely prohibition, hazards, mandatory and safe condition. Colours and shapes distinguish between the different categories.
Three different types of safety signs are given below.

In the space provided:
a) mark the right category and describe by a short phrase the meaning of the particular sign.
b) colour the signs according to the regulations set on ISO 7010.

14 marks

Mark the right category and colour the sign
- Prohibition
- Mandatory
- Hazard Warning
- Safe Condition

Describe message.................................

Mark the right category and colour the sign
- Prohibition
- Mandatory
- Hazard Warning
- Safe Condition

Describe message.................................

Mark the right category and colour the sign
- Prohibition
- Mandatory
- Hazard Warning
- Safe Condition

Describe message.................................
Question 6. The table shows the years in which five Italian football teams won the annual cup competition known as *Coppa Italia*.
Complete the vertical bar graph to show the number of times that each club won the *Coppa Italia* trophy.
Add colour and notation making use of the key.

**Table:**

<table>
<thead>
<tr>
<th>Club</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
<th>Year 9</th>
<th>Year 10</th>
</tr>
</thead>
</table>

12 marks

Question 7. A thin sheet metal candle extinguisher is shown on the right. The upper part of the extinguisher consists of a right cone cut at the base.
Using the given front elevation and the incomplete plan, construct the development of the given cone, starting from the given apex O.

**Note:**

a) Place the seam on OP.

b) Do not complete the plan.

14 marks