

# CDT: DESIGN AND COMMUNICATION

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Paper 7048/01  
Structured

## Key message

Whilst many excellent answers were seen, the following were considered to be areas where improvement could be made:

- the projection of sizes between views in orthographic projection;
- the knowledge of working foam board to make 3D articles;
- the alignment of surfaces to vanishing points in estimated perspective;
- the use of fold lines shown correctly as - · · - or - - - - -
- the correct use of flow chart symbols;
- the use of pictograms to convey information or a process;
- the rendering of solids to show a shape;
- the drawing of sectional views from items shown pictorially;
- the drawing of circles in planometric projection;
- the drawing of exploded sectors of a pie chart in isometric.

## General Comments

Candidates were required to complete **one** question from **Section 1 (Question 1 or Question 2)** and **two** questions from **Section 2 (Question 3 - Question 6)**. This rubric instruction was followed by the majority of candidates but a small number answered more than three questions. It would be beneficial to candidates if they were made aware that all the questions were not to be attempted and to follow the rubric instructions.

**Question 1** was the most popular of the **Section 1** questions and **Questions 4** and **6** were the most popular of the **Section B** questions.

The standard of work was comparable to that of the previous year. It was clear from the responses that there are many able candidates who were well prepared for the examination.

Centres are reminded not to secure the papers together with string, staple, paper clip or a treasury tag. Candidates' answer sheets should be placed in the despatch envelope in the order listed on the attendance register. It is however, very important that the candidate completes his/her own details on both working sheets.

## Comments on specific questions

### **Question 1**

This question had been formatted to give the candidate the working order of drawing the three views required. It was by far the most popular of the **Section 1** questions.

- (a) Candidates were required to complete a given parts list. Many candidates missed this part of the question.

- (b)(i) Candidates were required to produce a view in the direction of arrow **FE** of the assembled display stand. Some candidates drew this in line format whilst other candidates included the 20 mm thickness of foam board to a scale of 1:10. Both responses were accepted.
- (ii) A view in the direction **EE** was required to be drawn. Many candidates projected this view whilst a minority drew the view completely independently.
- (iii) A view of the assembled stand to scale was required to be drawn in the direction of arrow **P**. Again, many candidates drew this in projection above or below their **FE** view depending on their choice of 1<sup>st</sup> or 3<sup>rd</sup> angle projection.
- (c) Many candidates drew a 60 × 100 rectangle with triangular cut-outs at the top. Not all the triangles drawn were equilateral and to size. Many candidates drew a circle correctly to size with an ellipse correctly to size and touching the circle. Whilst a large majority of candidates drew a slot, not all candidates drew the slot to the correct size and scale.
- (d)(i) Many candidates did not show a sectional view that revealed the construction of foam board. Candidates who had previous practical experience of working with foam board drew a v-cut correctly.
- (ii) This part of the question required a one-piece development (net) of the support shown in part (d). Successful candidates drew three main parts to the same width with the middle part half the depth of the base, so that it could be folded 'back' with the vertical part appearing in the middle and in line with the apex of the two triangles. The two triangles were generally correctly drawn and attached to the base with fold lines drawn appropriately.

## Question 2

- (a) Candidates attempted this estimated two-point perspective drawing by drawing in the remaining part of the front view correctly with lines projected to VP2. Successful candidates drew in the left hand vertical part of the window proportionately. The drawing of the gable end and its window required the candidates to align the drawing with VP1. The drawing of the gable apex required the 60 end to be divided and the centre line raised 20 mm on the front corner to determine the apex of the gable. A ridge line could then be drawn towards VP2. A line parallel to the left hand gable could then be drawn to determine the right hand end of the ridge. Successful candidates drew in the gable end window in line with the front window and centrally placed.
- (b) The question required candidates to interpret the two given orthographic views given, and draw the one-piece development (net) required to make the exhibition stand from card. Some candidates included the base. The question required all fold lines and glue tabs to be drawn. Glue tabs were to be shown as -- · · -- or - - - -
- (c) Many candidates drew a flow chart with four further process boxes correctly ordered and labelled and a finish box to the same design and style as the start box.
- (d) This part of the question proved to be difficult for some candidates.
- The question required a layout of the room with six exhibition stands drawn in the correct arrangement in planometric. The information tower was to be added by drawing two circles 20/30 vertically spaced and joined to show a cylinder. One stand was to be labelled 'Sun King'. The entrance and exit were to be shown in the correct positions on the planometric view.
- (e) Candidates were required to draw a 'mechanism' that would allow the words 'Sun King' to be changed to one of three different colours on the face of the card. The most successful solutions seen were rotating discs and sliding display cards that aligned with the window.

## Question 3

- (a) The Process diagram required candidates to complete the missing pictograms. Whilst many candidates achieved the first pictogram, many candidates found the second and last pictogram more difficult.







