

Arkwright Examiners' Report for the Aptitude Paper sat on Wednesday 7th February 2007

The most popular questions in this year's paper were No.3, the bicycle newspaper transporter and No.2 the road cone placement system.

**The Examiners are looking for quality not quantity.
Candidates should be discouraged from producing too
many pages, a maximum of 4 A3 sheets is a guideline.**

Specifications

This section continues to be well answered by a majority of candidates. Good candidates covered materials and ergonomics as well as function and produced well justified specifications. This area is worth 15 marks and a weak specification ie, **one lacking qualifying reasons**, can disadvantage candidates throughout the whole paper.

Design Ideas

The better candidates produced a good variety of ideas. They developed and described ideas and their thought processes were evident. A greater variety of concepts is encouraged generally in order to maximise marks in this section. Many candidates failed to produce evaluative comments that consider their specifications and produced instead mainly descriptive annotation. **It is at this stage that flair in a wide range of solutions is being looked for by the examiners.**

Final Solution

This should stand out from the initial ideas and deal with the key issues outlined in the mark scheme. There were some excellent responses where candidates pooled ideas and brought them together to produce a well thought out final solution. A large number of candidates failed to include dimensions. The weaker responses failed to include important details e.g. materials, construction, features etc. Candidates should not re-draw views previously offered, but present new elevations and extended details in this section. Few candidates checked back against their specification.

The strongest scripts showed evidence of cross referencing the developed idea with the identified needs of the product as set out in the specification.

Communication

It is possible to gain full marks for communication, by producing a range of 2D and 3D drawings. Annotation is essential and should link back to the specification and should not be only descriptive. There is no requirement to use colour but its use can enhance the overall quality of the answer.

Q1 . Window Display

The least popular question. The successful candidates demonstrated a basic understanding of system elements and combined these effectively to produce displays that would be eye catching. A lack of technical understanding limited the students' responses with a 'black box' approach being much in evidence.

Q2 . Road Cone Placement System

A popular question with some imaginative and well considered solutions. Candidates recognised the differing requirements, however, what distinguished the good candidates was their ability to recognise how the cones would be picked and placed in a controlled manner.

Q3 . Bicycle Newspaper Transporter

The most popular of the questions. Too many concepts were predictable in style and solution and therefore lacked the required flair and imagination. The choices of materials and construction methods were often inappropriate. The better solutions proposed aerodynamic monocoque structures that lent themselves to stylish promotion.

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