

TECHNICAL GRAPHICS

SUBJECT 7049

PAPER 4

GENERAL COMMENTS

The majority of candidates produced good quality projects compared to those of the previous session. Most of the candidates attempted the building option. The candidature also increased by about twenty percent (20%) compared to the previous session.

SPECIFIC COMMENTS

DESIGN BRIEF

Design briefs were well done by most candidates, however, in some cases, candidates omitted key words like: cottage in the building option or temporary in the engineering option. In some cases, candidates lost marks by omitting their own added specifications.

RESEARCH IDEAS

Most of the researches presented by candidates were relevant to the design brief.

Building Option: Candidates identified good resource ideas. However some of the plans which were mainly downloaded from the internet were double storey structures which presented a challenge to the candidates who then could not come up with double storey designs in their solutions. Some candidates lost marks as they presented only pictorial illustrations that had no complementary floor plans to show room distribution for clarity.

Engineering: This required candidates to research on knockdown or adjustable devices; however, researches by candidates showed only goal posts; the aspects of knockdown or adjustability were not clear in most of the candidates' researches.

POSSIBLE SOLUTIONS

Good sketches of possible solutions were produced. Only a few candidates produced irrelevant possible solutions by either omitting some of the key specifications in their solutions or leaving out the pictorial views in the building option.

ANALYSIS

Analysis by candidates was not addressing requirements of the specifications; candidates simply stated plain statements like: it is safe without elaborating: why it is safe. Analysis of solutions lacked justification.

CHOICE

Choice of best solution was shown by either a tick or labelling the chosen solution. In some instances, candidates did not give justification for their choice.

REFINEMENTS

The majority of the candidates put refinements on their solutions; however, in some cases, candidates did not give reasons for modifications. Candidates who did not modify and did not give reasons why refinements were not necessary. Refinements by some candidates were inclusions put on the solution that had no relationship with the given specifications on the design brief.

DEVELOPMENT MODEL

Most of the candidates produced development models showing refinements, with only a small section of the candidates not doing so. For those who had no development models, experiments on development model and evaluations were as irrelevant as the experiments but had no basis.

Engineering Option: Development models did not show the knockdown/adjustability mechanism but showed rigid posts.

In the building option, candidates did not clearly show rooms by either labeling or showing fittings associated with each room.

EXPERIMENTS/TEST ON DEVELOPMENT MODEL

Candidates were expected to carry out experiments on development models based on functionality and specifications. About seventy percent (70%) of the candidates attempted this area. Those that attempted the area presented the experiment in written form. Some were not related to specifications like testing on materials used to make the mock up, in some cases the experiments would be too exaggerated to relate to the mock up as they appeared to have been 'cooked up' without a proper test run.

EVALUATION OF DEVELOPMENT MODEL

Most of the candidates evaluated their mock ups. Comments were sometimes not related to specifications making them irrelevant. Some evaluations had no recommendations, but instead, showed what candidates encountered in making the mock up. Results of the tests were not used in the evaluation.

WORKING DRAWINGS

This section was well done by most of the candidates. Working drawings showed enough detail especially in the building option. Candidates lost marks from inaccurate presentation of drawings in relation to the scale used. Functional dimensions were not shown in some cases. Almost half the candidates did not write the correct title of the drawing.

Parts Lists: Prepared as a bill of quantities in building, but those who attempted the engineering did not present a parts lists as per requirements of engineering drawing.

Projection symbols: Projection symbols were incorrectly drawn in the engineering option and students not correctly identifying views in the building option.

Printing: Labels and dimensions on diagrams were not properly done. Candidates did not use correct size of letters and figures in properly drawn guidelines to write uniform letters and figures.

GRAPHIC COMMUNICATION TECHNIQUES

Most of the candidates did well in this section. Charts, pictures and graphs were prominent.

Projections: Some candidates used one type of projection throughout the project. In some cases the pictorial presentation was not clearly shown. The projection used should be distinct from others.

FINAL SOLUTION

Candidates did very well on costing and the models produced were of good quality. When determining cost of the object candidates are expected to show the cost built up instead of a single figure.

EVALUATION OF OWN SOLUTION

Most candidates performed experiments on their models. Comments made were related to specifications except for a few that were not. Candidates made recommendations for modifications of their designs and very few candidates who did not give recommendations for modifications gave reasons for not having done so.

FOLIO PRESENTATION

The majority of the candidates presented their work neatly in A3 folios with contents pages tallying with page numbers in the folio. A small number of candidates either omitted the contents page or left the pages not numbered.