

TECHNICAL GRAPHICS

SUBJECT 7049

PAPER 4

GENERAL COMMENTS

The majority of the candidates attempted the building option. Overall the quality of work was poor compared to the previous year. Also higher marks were scored in the building option.

COMMENTS ON INDIVIDUAL SECTIONS

1 DESIGN BRIEF

All candidates attempted this part of the project.

- a) Candidates were able to identify and copy the given specifications.
- b) Very few candidates ignored the given specifications and introduced a totally new set of specifications.

2 INVESTIGATIONS

The investigations were done from a wide range of sources.

- a) Building option investigation ideas lacked clarity as most of them only showed the external appearance of the structure without showing distribution of rooms.
- b) Some candidates went on to investigate some unnecessary things that are part of buildings which were not addressing ideas in specifications.
- c) Investigations in the engineering option were relevant and mainly centered on the function of the design.

3 ANALYSIS OF RESEARCH IDEAS

- a) All candidates produced analysis of research ideas.
- b) Analysis by some candidates did not refer to given specifications i.e they were not based on specifications in the design brief.
- c) Advantages and disadvantages given in the analysis were not justified in most cases.

4 POSSIBLE SOLUTIONS.

- a) All candidates attempted this part of the project and most of them did well.
- b) Possible solutions were presented in different pictorial forms and in the building option, a floor plan was drawn.

5 ANALYSIS OF POSSIBLE SOLUTIONS.

- a) Analysis of possible solutions was done, however some analysis was not related to specifications.
- b) Some candidates introduced totally different specifications ignoring those given in the design brief.

6 DEVELOPMENT OF CHOSEN SOLUTION.

- a) Choice of solution was clearly indicated in various ways.
- b) Justification of choice was not done in some cases and where it was done, the justification did not relate to given specifications.
- c) Refinement of chosen solution was attempted by all candidates who did both options.
- d) Justification of refinements was not clearly done and did not relate to specifications.
- e) Refinements in the engineering option were not very clear.
- f) Most candidates produced a development model which was not to scale, but however some produced a scaled development model.
- g) A number of candidates did not produce the development model.

7 EXPERIMENTS ON DEVELOPMENT MODEL.

- a) This part of the project was poorly done by most candidates.
- b) It was noted that candidates came up with written experiments even if they did not have the mock up (development model) on which the proposed experiments were done.

- c) In some cases experiments described tests on the models which were not related to given specifications.
- d) Some candidates tested strength of materials used in making the model which were not linked to the specifications in the design brief.

8 EVALUATION OF DEVELOPMENT MODEL

- a) All candidates attempted this section.
- b) Most of the candidates concentrated on explaining the suitability of using a particular material in making the model or why a particular material was not suitable for making models.
- c) Evaluation did not relate to the performance of the design in relation to the requirements of the specifications given in the project proposal.
- d) Evaluations of mock ups did not have recommendations and justifications for improvement of the design.

9 WORKING DRAWING.

- a) This part of the project was poorly done by the majority of the candidates.
- b) Drawings did not show adequate detail like missing sectional views in both options.
- c) Proper drawing principles were not followed, areas like; drawing title, dimensioning, use of proper drawing conventions, projection symbols and printing were not given proper attention.

10 GRAPHIC ILLUSTRATION TECHNIQUES

- a) Candidates displayed knowledge of a wide range of drawing projections, however only a few candidates displayed knowledge of varied graphic illustrations like; graphs, rendering, tables and flow charts.

11 PRODUCTION / MANUFACTURE REQUIREMENTS

- a) Few candidates showed production requirements.
- b) Some candidates (about a third) gave production requirements for the model and not the final project.
- c) Most of the candidates did costing. The costing ranged from accurate commercially produced bills to rough estimates.

12 QUALITY OF MODEL

- a) All candidates produced models for their designs.
- b) Quality of models was poor in shaping, joining and finishing.

13 EVALUATION OF OWN SOLUTION

- a) Most of the candidates did not do experiments on the final model to determine its performance in relation to specification requirements. In this regard, candidates just wrote experiments that had no relationship to the requirements of the question.
- b) Comments on the evaluation did not relate to the specifications hence recommendations made were not improving the design for which the project was done.