

GEOMETRICAL AND MECHANICAL/BUILDING DRAWING

SUBJECT 9196 – JUNE 2011

PAPER 1

GENERAL COMMENTS

The standard of work presented by the candidates was average, with linework and drawing conversions being adhered to. Constructions were clearly shown in most of the candidates' work. It is important to note that where specific answers are required, the degree of accuracy is not perfect. The tolerance for accuracy should be very minimal if it is taken into account at all. Candidates are advised to number the solutions and label diagrams clearly where it is called for.

QUESTION 1

Most candidates failed to interpret this question well, hence they were solving for reactions instead of forces in the members. Triangles of forces should be applied to this question.

QUESTION 2

Well done by all the candidates, the principle of laws of mechanisms was well outlined.

QUESTION 3

The concept of graphical integration was well understood by the majority of the candidature. It is, however, important to stress the fact that figures with hollow parts need to be integrated to the horizontal base first.

QUESTION 4

Not well done, most candidates failed to establish the inclined plane first which was necessary for the establishment of the traces.

QUESTION 5

Well done by the majority of the candidates. The concept of shortest perpendicular distance was confused for the shortest horizontal distance in some few cases.

QUESTION 6

Well done, but a few candidates lost marks due to failure to figure out the lowest point on their solutions.

QUESTION 7

The concept of overhanging reactions was missed by all the candidates, hence failure to come up with accurate reactions and wrong force diagrams. The bending moment diagram should always start on the hinge point where the line of action for the reaction is certain.

QUESTION 8

Fairly done, however, candidates missed on establishing the line of intersection on the second auxiliary view which leads to the dihedral angle.

QUESTION 9

Not popular with the candidates. The concept of auxiliary views needs to be applied to this question after the establishment of a plan.