

O Level Geometrical and Mechanical Drawing (7040)

When is the examination available?

This syllabus is available for examination in June and November until 2004, after which it will be available in November only.

Which of the two question papers is the most important; Plane & Solid Geometry or Engineering Drawing?

Both of the question papers are equally weighted, so equal amounts of teaching time should be dedicated to the two areas.

What equipment do students need for the course?

The course of study will require the use of a drawing board, tee-square and drawing instruments i.e. set squares, compasses, protractor, a metric scale rule (1:1, 1:2, 1:5, and 1:10 scales) and pencils of appropriate hardness values.

What sort of paper is required for the examination?

Centres must provide candidates with one piece of A2 size good-quality cartridge paper. Very thin detail or shiny photographic card is not suitable.

The examination questions are designed to fit on to both sides of a single sheet of A2 paper; therefore it is important that the correct size of paper is provided. This is especially true in Paper 2 because candidates who are issued with A3 sheets cannot position all the views required for Question 2 onto a single side, these views are therefore drawn on different sheets or sides and not properly projected. Centres are advised that such scripts only score for the best view, the other views being discarded for examination purposes.

Should students show their construction lines?

Construction lines are useful for the marker to see the thought process that the candidate was pursuing. Therefore, it is essential for students to show their construction lines.

Can any lines be drawn without showing construction lines?

It is most important that strictly geometrical methods are used and that all construction lines are clearly shown. However, lines that are parallel, perpendicular or inclined at angles of 30°, 45° or 60° to other lines may be drawn using set squares. Protractors and adjustable squares must not be used for the division of angles during examinations.

Are candidates required to dimension their solutions?

Unless otherwise stated, solutions are to be drawn full size and no dimensions are required. Considerable time is lost by candidates adding dimensions where they are not required or placing dimensions on all views.

Are all of the diagrams drawn to scale on the question papers?

Very few of the diagrams are drawn to scale for two reasons. First, the physical size of the question paper is limiting and second one of the skills being tested is the interpretation of scale.

Should candidates be able to use an isometric scale?

Isometric drawings do not require the use of an isometric scale. Candidates should not use an isometric scale in examination work, but centres may wish to make them aware of its use.

Which drawing conventions should be followed?

Tuition in respect of engineering drawing should follow the recommendations contained in BS308 Parts 1 and 2 Engineering Drawing Practice Students Edition or PP7308 Engineering Drawing Practice for Schools and Colleges.