

# GEOMETRICAL AND MECHANICAL DRAWING

(Maximum Marks: 100)

(Time allowed: Three hours)

(Candidates are allowed additional 15 minutes for **only** reading the paper.  
They must NOT start writing during this time.)

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The intended marks for questions or parts of questions are given in brackets [ ].

A sheet of drawing paper size A2 (594 mm × 420 mm) is provided.

All dimensions are in millimetres.

Arcs of circles less than 4 mm radius may be drawn freehand.

All construction lines must be shown clearly.

Accuracy and good draughtsmanship are essential.

Letter your Name, Index Number and Unique Identification Number (UID) at the bottom right-hand corner of your paper in a title block 120 mm × 50 mm.

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Answer all Questions

## Question 1

Draw the three views of the given object (*Figure 1*) in correct projection.

**First or Third Angle:**

- (a) Front elevation in the direction of the arrow. [10]
- (b) The end elevation (side view). [10]
- (c) The plan (top view). [10]
- (d) Symbol of the method of projection you have chosen. [5]

## Question 2

*Figure 2* attached, shows the details of components of a roller assembly used for transmitting power. Assemble the parts as follows:

The roller (part 3, qty. 1) is placed in the middle of both the brackets (part 2, qty. 2). A spindle (part 4, qty. 1) passes through the central cavities of bracket (part 2, qty. 2) and the roller (part 3). Both the brackets are fitted with the base (part 1, qty. 1) by means of bolt (part 5, qty. 4).

- (a) Draw a full sectional view of the assembled components (along A – B). [30]
- (b) Draw the plan (top view) of the complete assembly omitting all the hidden details. [10]
- (c) Draw the side view of the assembly, omitting all the hidden details. [15]
- (d) Make a neat parts list for all the components, on the drawing sheet. [10]

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This Paper consists of 3 printed pages and 1 blank page.

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Figure 2 for Question 2

