INSTRUCTIONS

(a) Answer any ten of the short answer questions in Section A (120 marks) using the spaces provided. All questions in Section A carry equal marks.

(b) Answer any four of the six questions in Section B (280 marks). All questions in Section B carry equal marks.

(c) Examination Number must be distinctly marked in the space provided above and on each sheet of paper used.

(d) All construction lines must be clearly shown.

(e) All measurements are in millimetres.

(f) Hand up this answer book (Section A) at the end of the examination.

For Examiner’s use only

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1. Shown is the elevation, plan and end view of a set of steps. **Insert** the lines omitted in the end view and in the plan.

2. Make a freehand pictorial sketch of the block in the space provided.

3. Identify the computer components shown at A and B, below.

   A = ____________________  B = ____________________
4. Convert the square to a **triangle** of equal area.

5. Construct a **tangent** to the ellipse at the point **P**. Show all constructions.

6. Three corners of the rectangle are filleted to a radius of 10mm. Fillet the corner **X** to a radius of 10mm, showing all constructions.
7 The elevation and plan of a door-stopper are shown. Complete the isometric view of the door-stopper on the grid provided.

8 Using the scale provided, measure and record the dimensions A and B.

A = ___________ B = ___________

9 Determine the area of the tiled pathway, which surrounds the fish pond, in square units.

1 square = 1 x 1 Unit.

Answer :—
10. The elevation and plan of a cone are shown. Project an auxiliary elevation, on the given $X_1 - Y_1$ line.

11. Using the grid provided, sketch the orthographic views indicated by the arrows.

12. Sketch the shadow cast by the solid when the light source is as shown by the arrow.
13 A link for a bicycle chain is shown. The centre for arc A is shown at O. Locate the points of contact, between arc A and circles B and C.

14 The figure shows the incomplete two point perspective outline of a podium. Complete the perspective outline, similar to the view shown at A.

15 The figure shows a magnetic compass. Use a protractor to measure and record the amount of anti-clockwise rotation from North to West.

Answer: -