1963

1. (*a*) State four properties of a parallelogram.

(*b*) Using ruler and compass only, construct a parallelogram 8 sq. ins. in area, having an angle 60° and one side 2″.

[16 marks.]

2. (*a*) Show how to draw a perpendicular to a line from a point outside it, using ruler and compass only.

(*b*) Show that the perpendicular drawn to a chord from the centre of a circle bisects the chord.

[16 marks.]

3. ABC and ABD are isosceles triangles on the same base AB and on the same side of it, the triangle ABC being larger than the triangle ABD.

(*a*) Show that the line CD bisects the angle ACB.

(*b*) Show that CD produced bisects the base AB at right angles.

[17 marks.]

4. Describe the circle passing through the vertices of the triangle whose sides are 5 cm., 12 cm., and 13 cm. Find the area of the triangle.

[17 marks.]

5. Two straight lines APB and CPD cut at the point P making an angle 135° with each other. Find four points that are 1″ from each of the lines.

[17 marks.]

6. How many degrees in each angle of a regular 6-sided figure? (The angles are all equal.)

Give the reason for your answer.

[17 marks]