

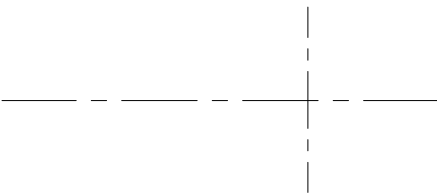
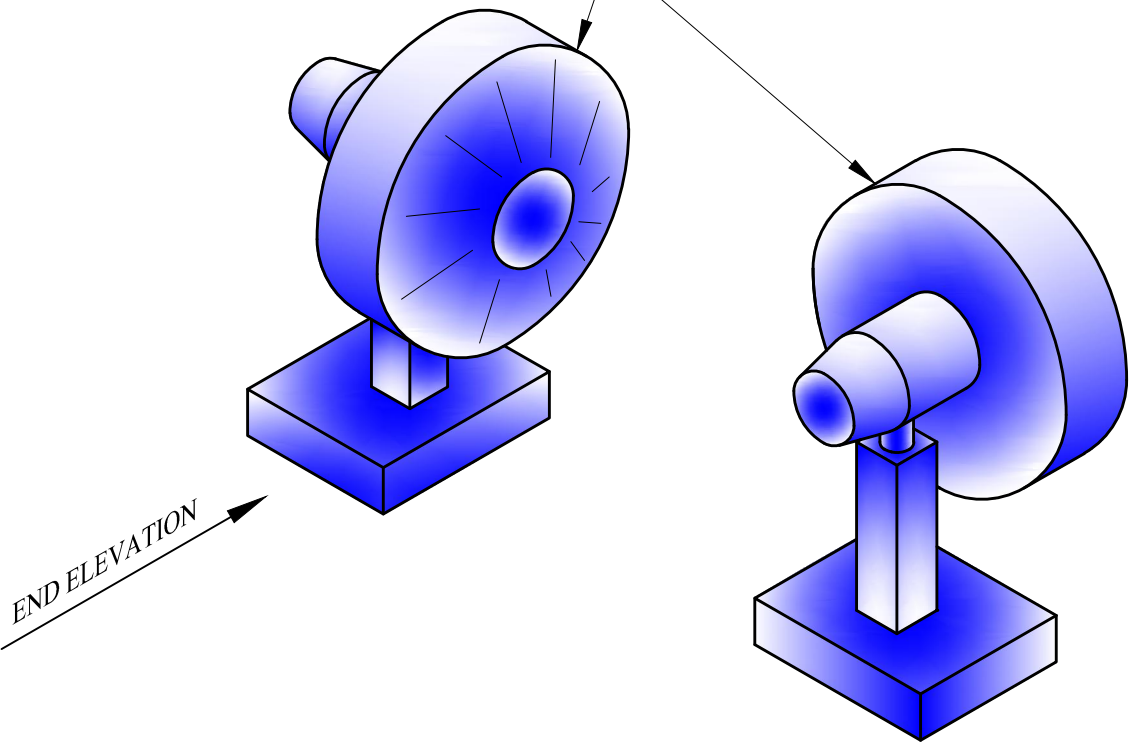
QUESTION No. 1

Two pictorial views and two orthographic views of a desk fan are shown. For drawing purposes, the protective shield is covered and the fan blades are not visible.

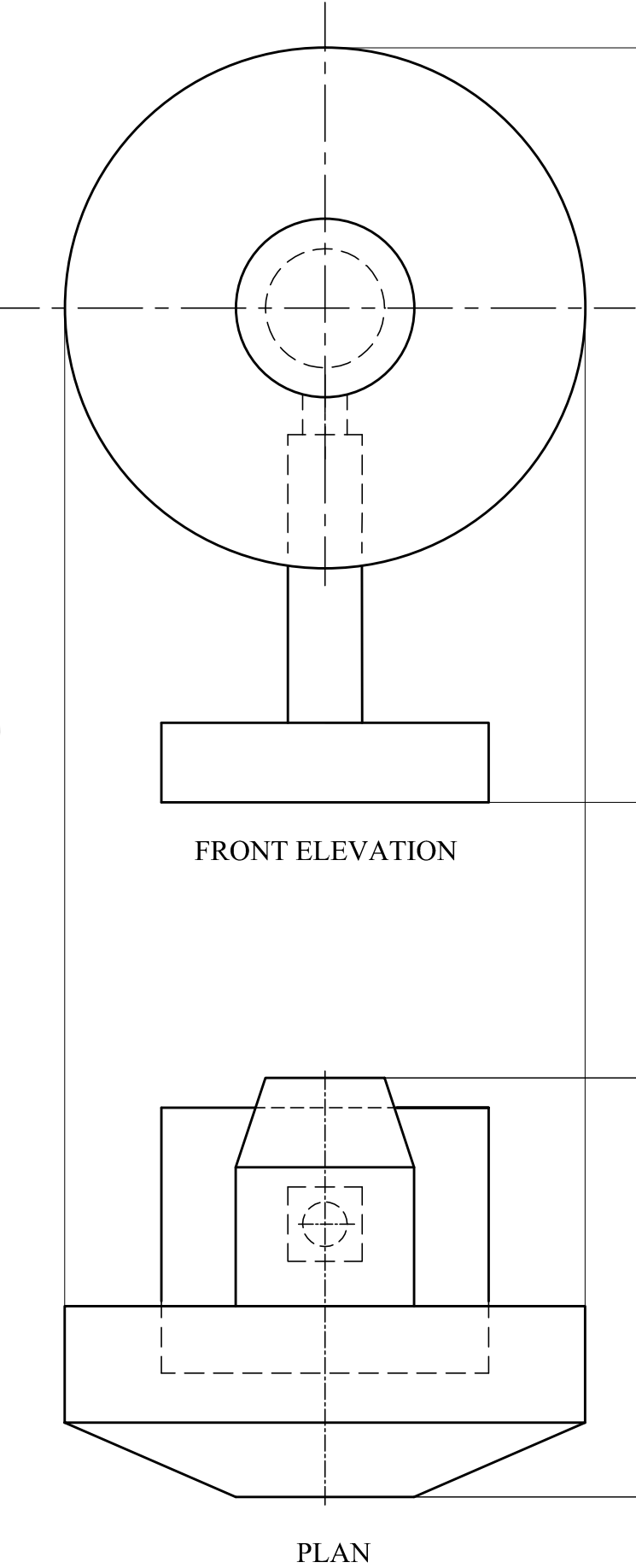
- (a) By projecting lines from the front elevation and plan, draw an end elevation of the fan as indicated by the arrow.
(b) Draw the symbol of projection used.

18 marks

FAN PROTECTIVE SHIELD (COVERED)



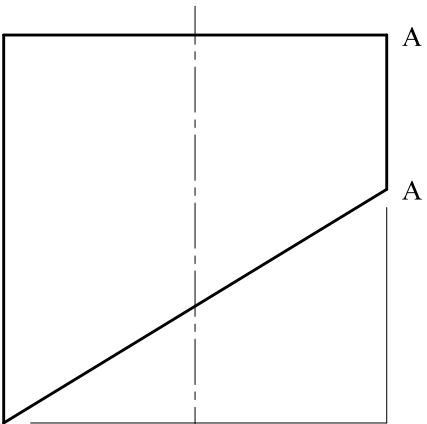
SYMBOL OF PROJECTION



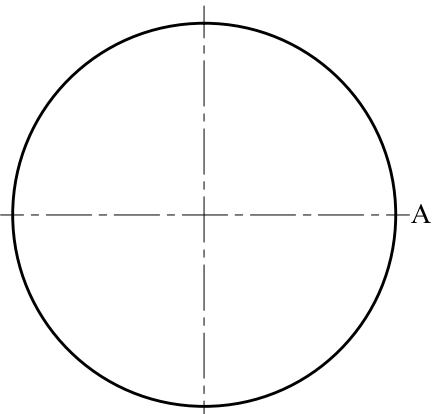
QUESTION No. 2

A round canopy used to collect fumes from a fireplace, is connected to three cylindrical pipes. A front elevation and a plan of pipe X are drawn below. Using the given start lines below, draw the **development** of the pipe assuming the joint to be along AA.

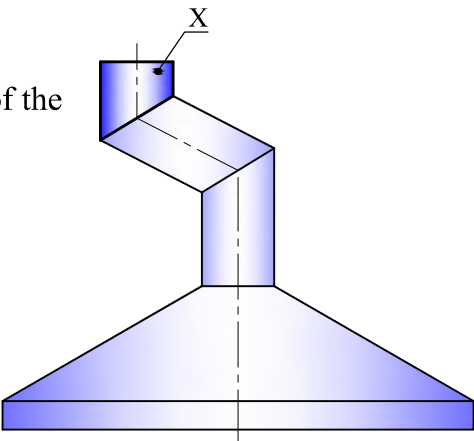
14 marks



FRONT ELEVATION



PLAN

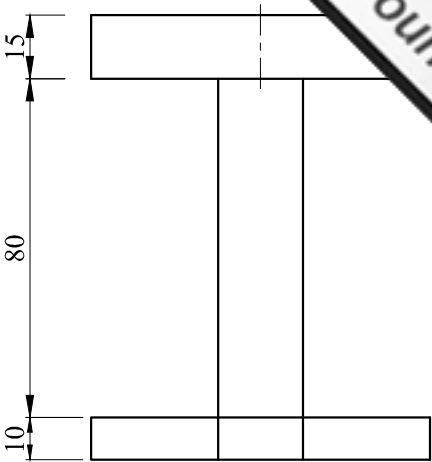
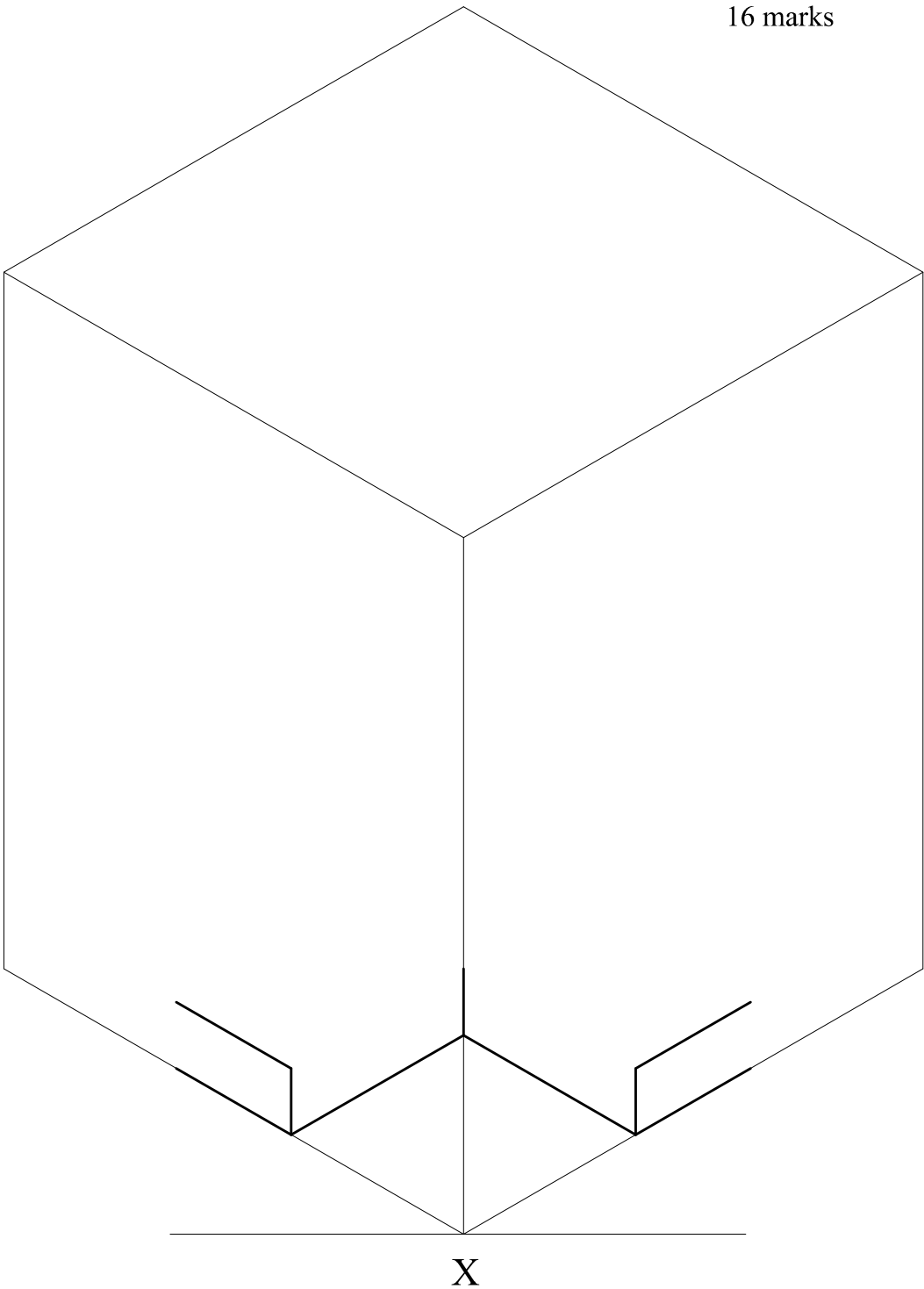


DEVELOPMENT

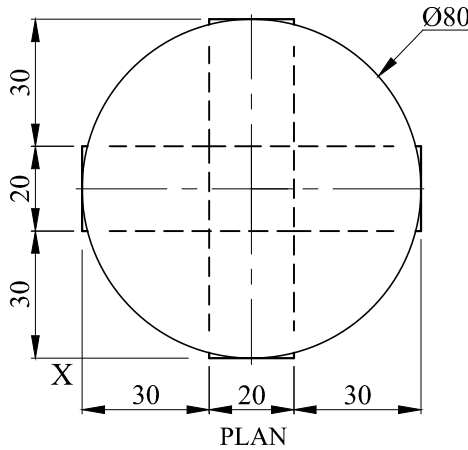
QUESTION No. 3

Two orthographic views of a table with a circular top are shown. Within the given crate, draw an **isometric projection** of the table, putting point X as the lowest corner. Part of the base of the table is already drawn.

16 marks



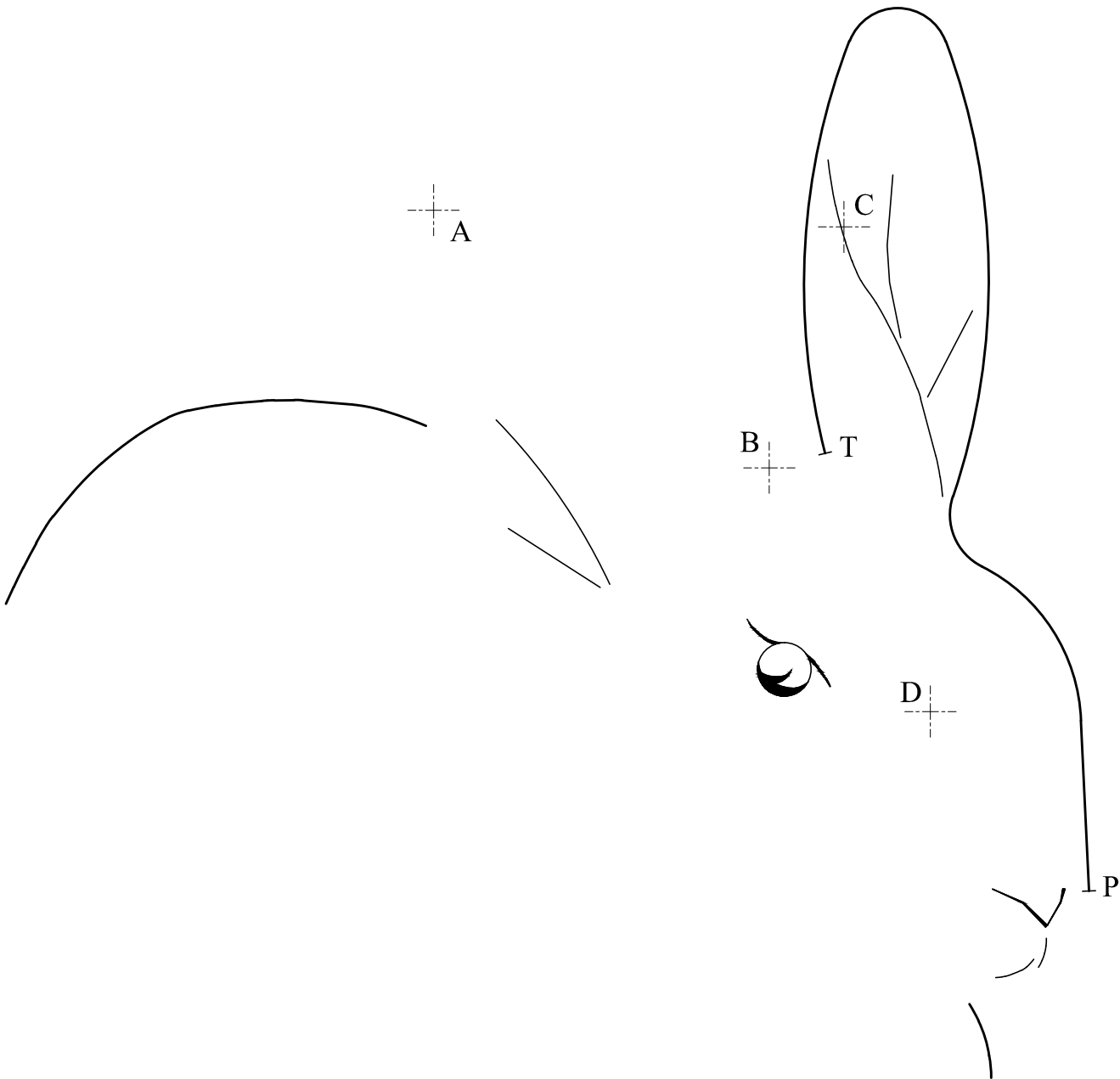
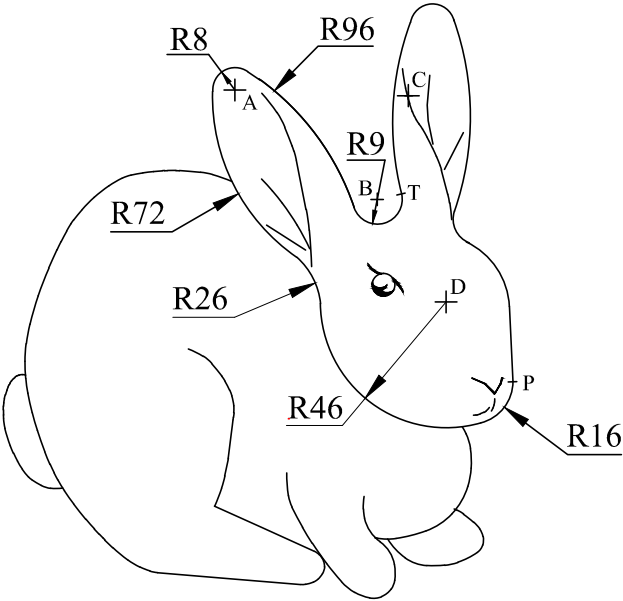
FRONT ELEVATION



PLAN

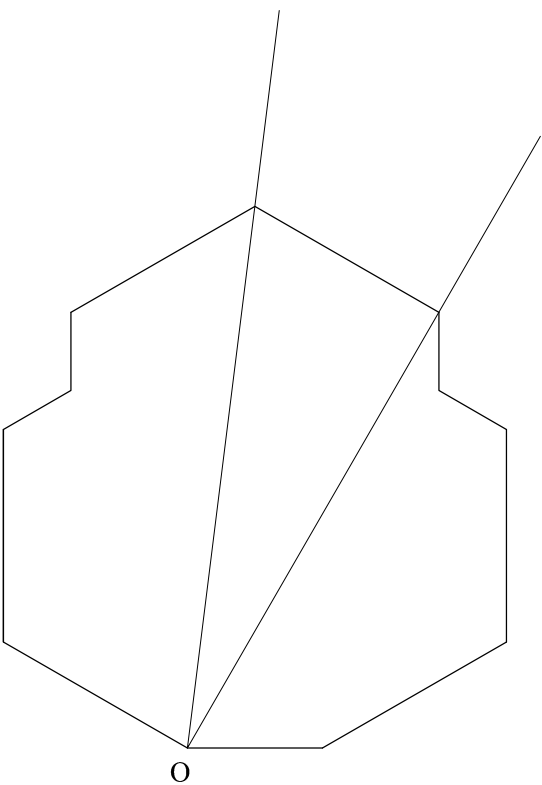
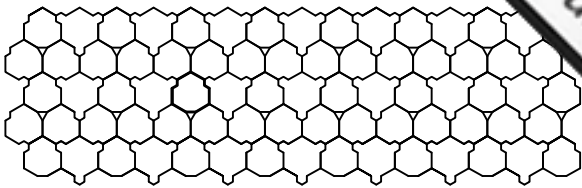
QUESTION No. 4

A dimensioned profile of a rabbit and an incomplete version of the head are given. Starting from the given centres A, B, C and D, construct geometrically the remaining part of the rabbit head, showing all construction used to find the centres of the arcs. Also mark the points of tangency. Notes: C is the centre of the arc of radius 72mm. T and P are points of tangency. 14 marks



QUESTION No. 5

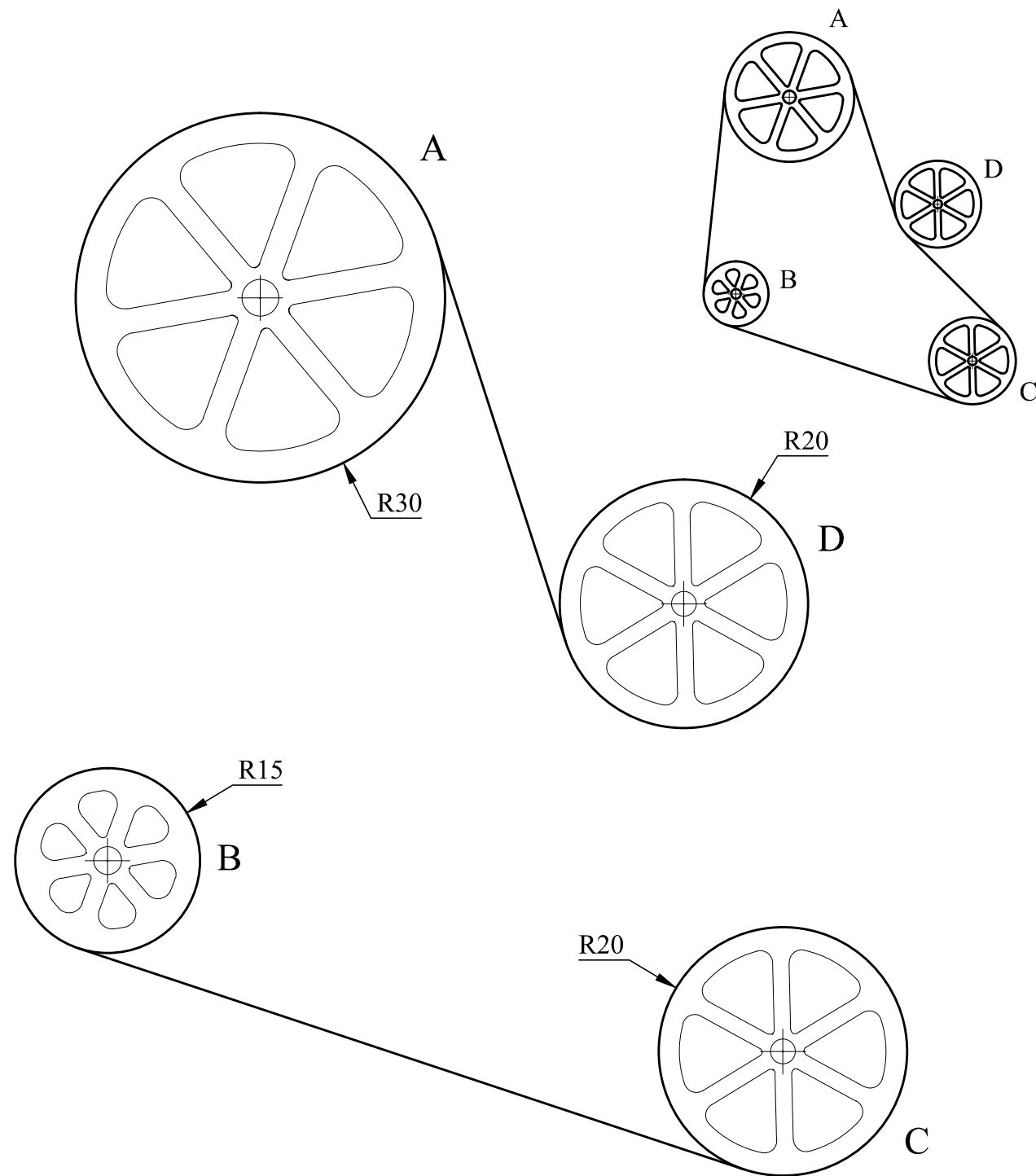
A lace design is made up of a large number of similar patterns joined together. Enlarge the pattern given below by a ratio of 5:4, taking radial lines from O. Two radial lines are already drawn. 12 marks



QUESTION No. 6

A number of pulleys are driven by a belt as shown. Two parts of the belt shown below are missing. The part of the belt between pulleys A and B forms a common (external) tangent between two unequal circles. The part between C and D forms a transverse (internal) tangent between two equal circles. Complete the drawing below by constructing the two tangents.

14 marks



QUESTION No. 7

Using the two circles given at the bottom, draw the eight-pointed star based on the construction shown below. Colour or shade your drawing. All construction lines must be left shown.

12 marks

