Question 3:

The image to the right shows a bird watching house. In order to reach it you must climb a helical stairs.
   a. Construct one pitch of the helical stairs below, from point R to point S.
   b. Complete the steps as shown in the small drawing on the right.
Marks will be awarded for neatness and accuracy.
(15 marks)

Question 4:

The image below shows a computer operated door used to allow lions to exit their den. The door is currently closed, and slides to the right to open. Link AB connects to the door at point A, and to a disc at point B. Draw the locus of point D as disc C rotates for one complete revolution.

Marks will be awarded for neatness and accuracy.
(15 marks)

Question 5:

The image below shows a scaled plan view of a penguin area. You need to:
   a. Calculate the area by means of geometric methods.
   b. Convert the area to a square.
   c. Write down the length of one side of the square. _______ mm

Marks will be awarded for neatness and accuracy. (10 marks)