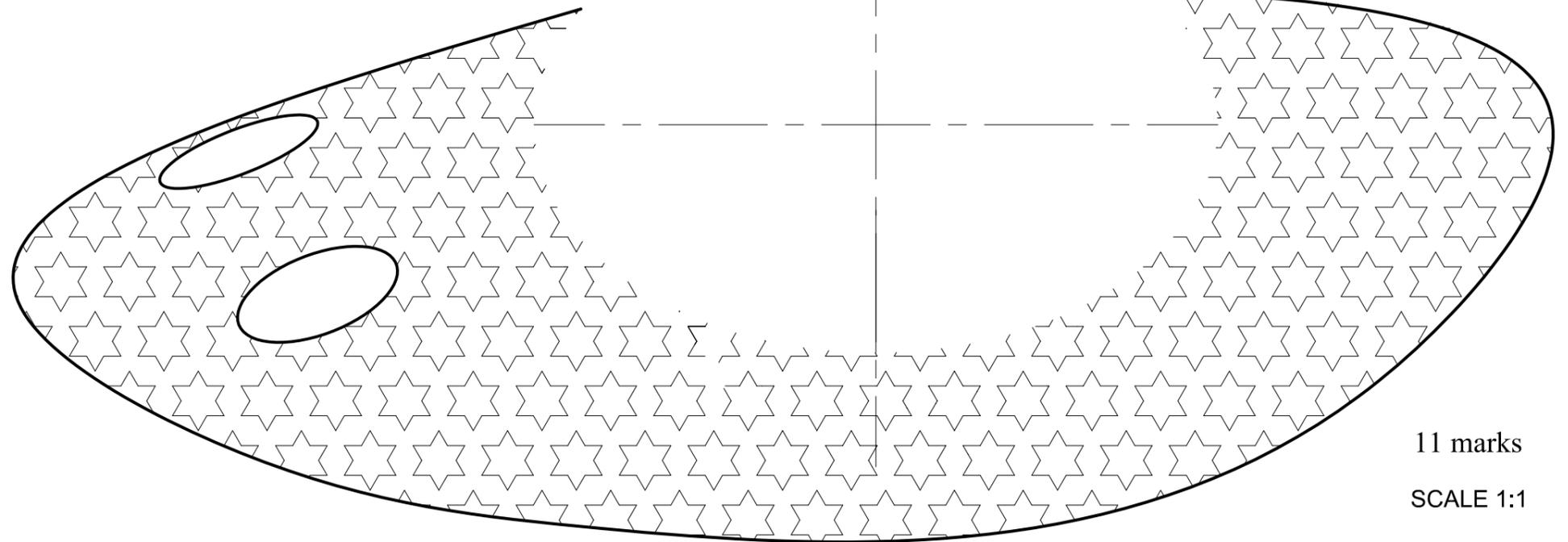
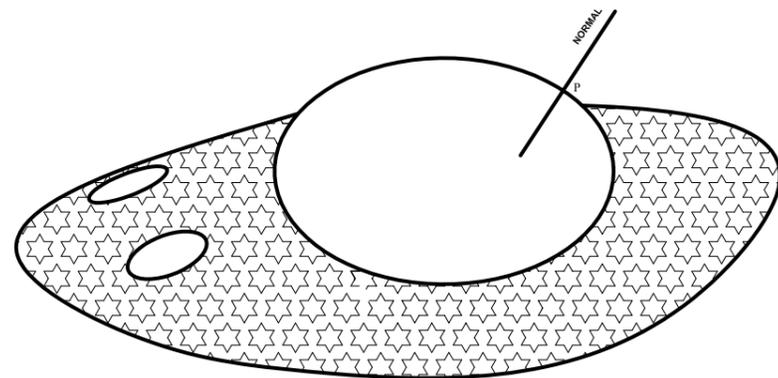


Working sheet
Question 1

The drawing shows a spacecraft used for exploration.
Draw the ellipse with a Major axis of 120 mm and a Minor axis of 80 mm. Construct Normal at point P.

Show all Constructions.

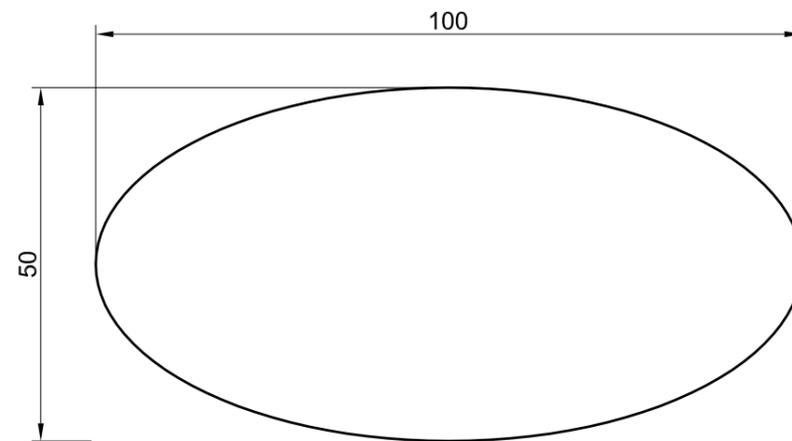


11 marks
SCALE 1:1

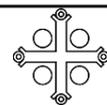
Working sheet
Question 2

An ellipse is given below.
Calculate the Area of the figure using the mid-ordinate method.

Show all construction to obtain the equal divisions and show the working to find the area.



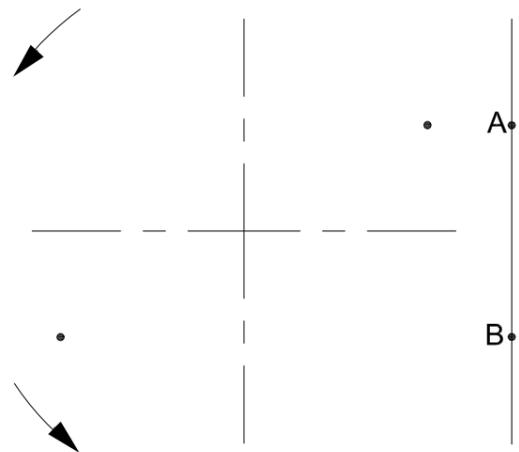
10 marks
SCALE 1:1



Working sheet
Question 3

Draw two left hand Helices given the diameter of 60 mm and a pitch of 108 mm.

The starting points are from A and B respectively, include all hidden lines.

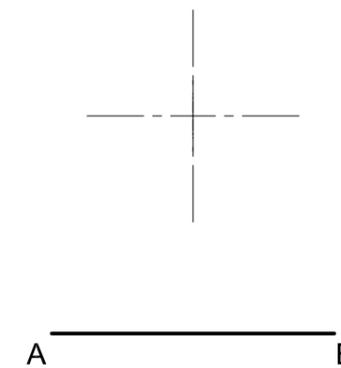
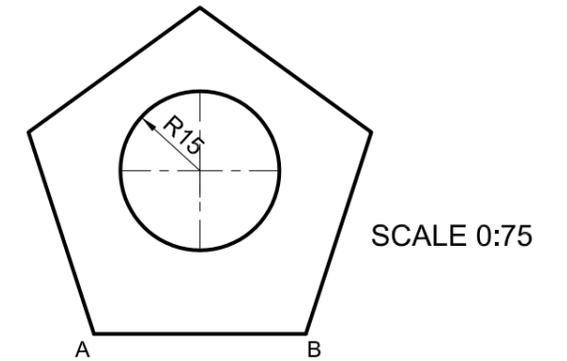


13 marks
SCALE 1:1

Working sheet
Question 4

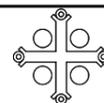
Enlarge the figure of a Pentagon with base AB 40 mm to Ratio of 2:3
Take pole at 'A'

Show all construction lines.



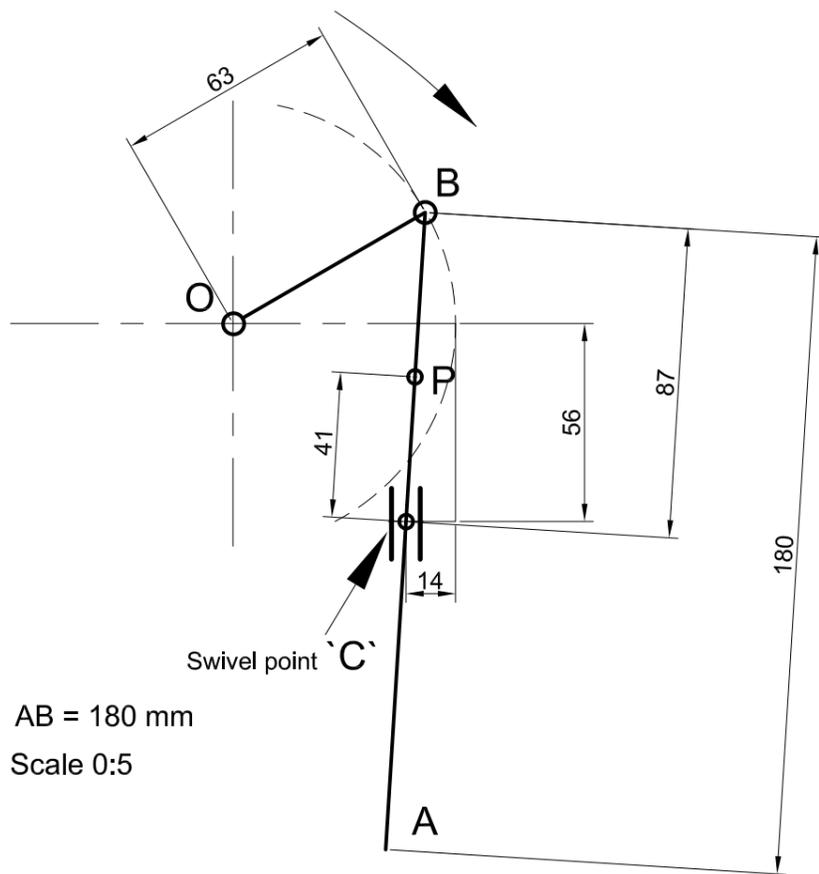
AB = 40 mm
Radius of 15 mm

13 marks
SCALE 1:1



Working sheet
Question 5

In the following Mechanism, the crank OB rotates around fixed point O. Connecting rod AB is constrained to slide through swivel point 'C'. Draw the mechanism and plot the locus of point 'P' as the crank rotates through 1 revolution.



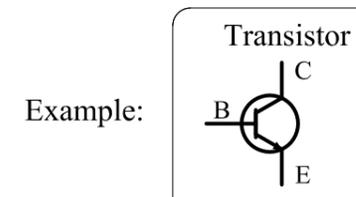
AB = 180 mm
Scale 0:5

16 marks
SCALE 1:1

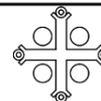
Working sheet
Question 6

Below is a list of components used in Electronics.

Fill in the missing part.

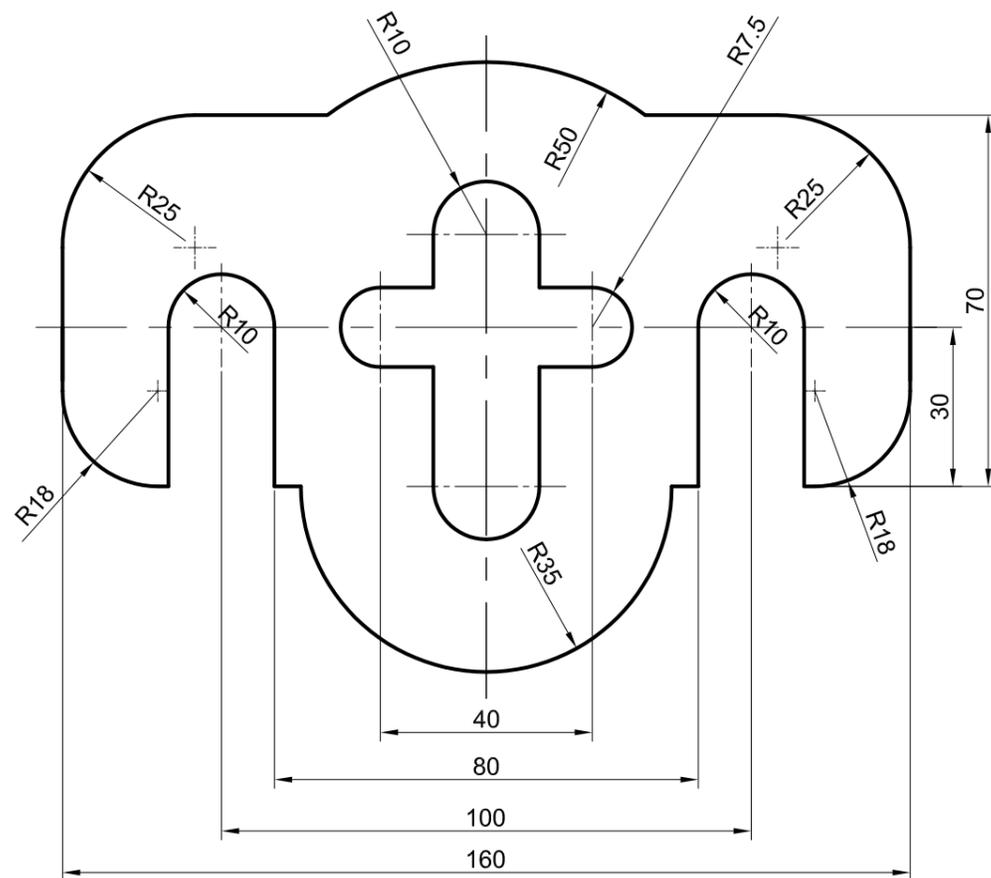


① 	② Earth	③
④ Fuse	⑤ Aerial	⑥
⑦ 	⑧ 	5 marks SCALE 1:1
⑨ Diode	⑩ Transformer	

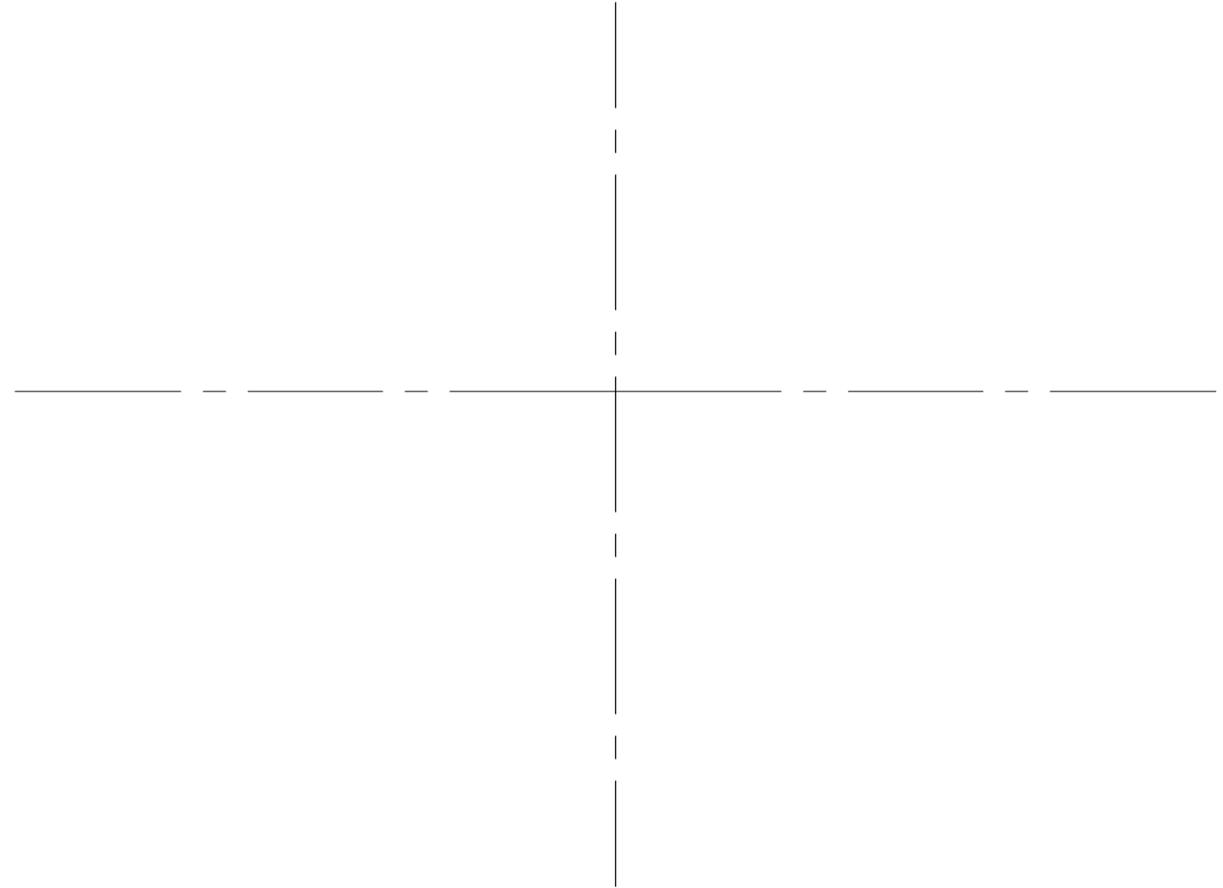


Working sheet
Question 7

Draw full size the Brake Cable Compensation Clip.
Show construction for finding radius of 18 mm and radius of 25 mm.



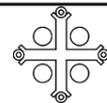
SCALE 0:75



12 marks

SCALE 1:1

Sheet 4 of 5



Name:

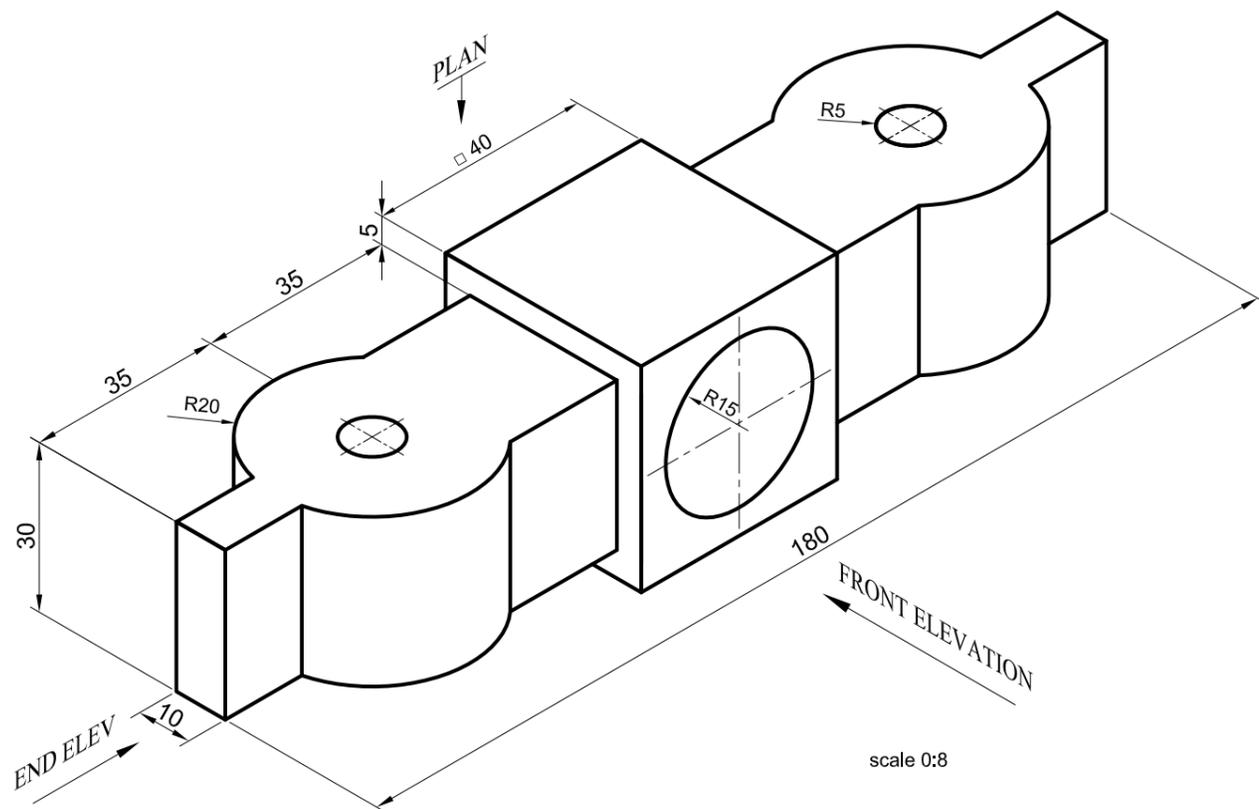
Class:

Working sheet
Question 8

The figure show a pictorial view of a Mounting Rubber.
Draw full size in 3rd Angle Projection

- a) A plan
- b) A front elevation
- c) An end elevation
- d) Show scale and orthographic symbol of angle used
- e) Include all hidden lines

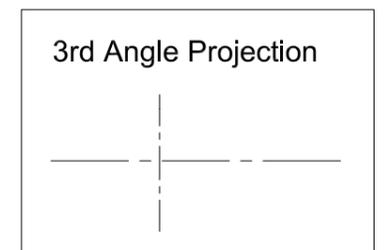
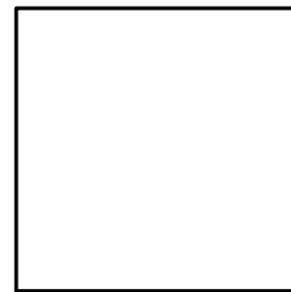
All dimensions are in mm



END

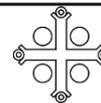
PLAN

FRONT



20 marks

Sheet 5 of 5



Name:

Class: