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FOR OFFICIAL USE

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X033/301

NATIONAL TUESDAY, 27 MAY GRAPHIC
 QUALIFICATIONS 9.00 AM – 12.00 NOON COMMUNICATION
 2008 HIGHER

Question	Marks
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1	
2	
3	
4	
5	
6	
7	
Section A Total	

Fill in these boxes and read what is printed below.

Full name of centre				Town	
<input type="text"/>				<input type="text"/>	
Forename(s)				Surname	
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Date of birth		Scottish candidate number			Number of seat
Day	Month	Year	<input type="text"/>	<input type="text"/>	<input type="text"/>
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1 **140 Marks are allocated to this paper.** Section A = 40 marks
 Section B = 100 marks

- Candidates should attempt **all** questions in **Section A** and are advised to spend approximately 45 minutes on this section. A supplementary page is included at the end of **Section A** for use if extra space is required.
- Candidates should attempt questions 8, 9, 10 and **either** question 11 **or** question 12 in **Section B**.
- Read each question carefully before you answer.
- Written answers may be in **ink or pencil**.
- Drawings and sketches **must be in pencil**.
- Dimensions are given in millimetres or as stated.
- Orthographic drawings are in third angle projection.
- At the end of the examination** check that your name is on every sheet; put the sheets in correct numerical order; place this sheet on top of the others; join all sheets together by stapling at the top left-hand corner; before leaving the examination room, you must give these sheets to the invigilator (if you do not you may lose all the marks for this paper).

EITHER

OR

8	
9	
10	
11	
12	
Section B Total	

Total Marks A + B	
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A supplementary page is included at the end of Section A for use if extra space is required.

Marks

2. (a) An architect wishes to draw the **Floor Plan** of a house. He has a choice of two scales.

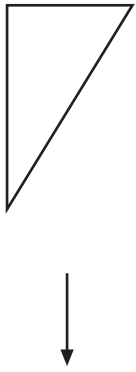
Scale 1 Scale 2

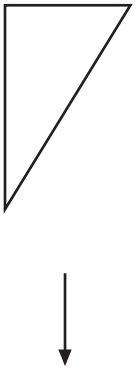
(i) State which **two** scales are the common scales for drawing a floor plan.

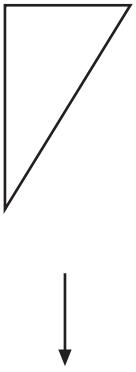
Reason 1

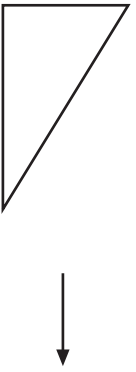
Reason 2

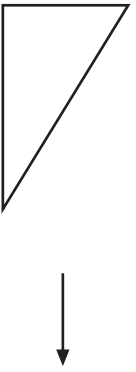
(b) Name each of the **British Standards symbols** shown on the graphic.


(i) Rotate (90°)  1

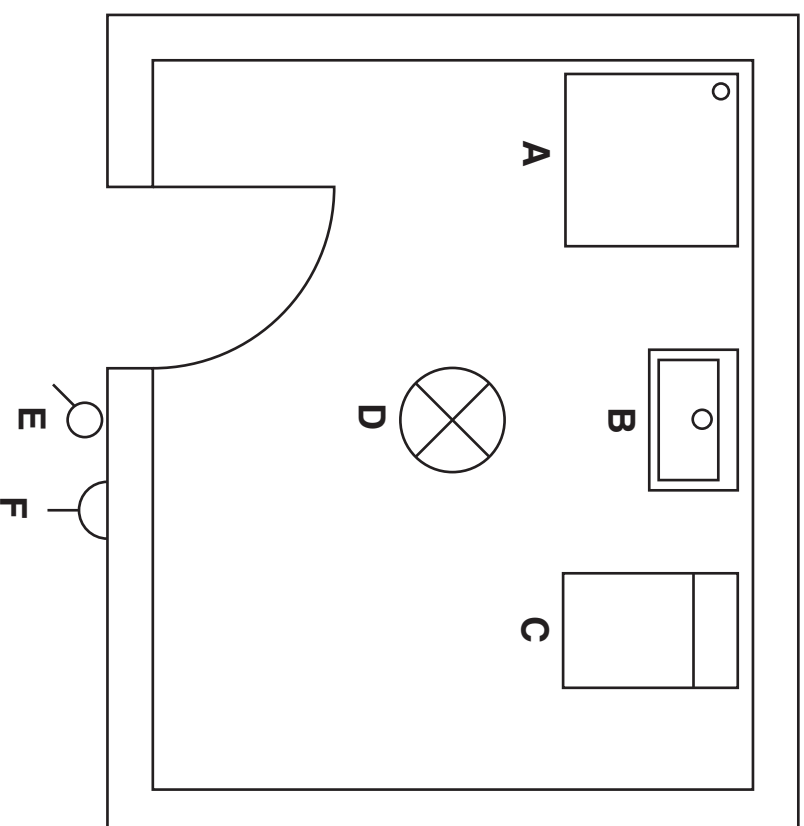
(ii) Scale (down)  1

(iii) Hatch  1

(iv) Copy  1

(v) Mirror  1

(vi) Zoom (out)  1



A 1

B 1

C 1

D 1

E 1

F 3

(b) State **two** benefits of using the CAD feature, **Library**.
Advantage 1

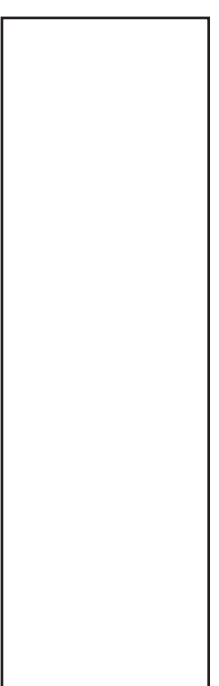
..... 1

Advantage 2

..... 1

(8)

(c) Two incomplete views of a hollow, thick-walled cylinder are shown. Sketch the **British Standards line types** for centre lines, hidden detail and cutting plane in the appropriate positions. (You may use a straight edge.)



ELEVATION



SECTION A-A

3
 (9)

3. (a) (i) Sketch a rectangle 40 mm × 30 mm in **landscape** format: include the capital letters ABC, to demonstrate the DTP effect, **reverse**.

SKETCH

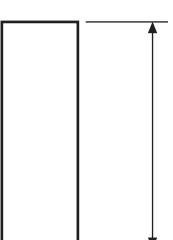
2

- (ii) Describe, by means of a sketch, the term **text wrap**.

1

1

- (ii) State **two** reasons why tolerances are an important feature in manufacturing.
- Reason 1
- Reason 2
- (iii) Show a horizontal linear dimension of 30 mm with a tolerance of +0.15 and -0.25 applied directly to the given graphic, using a recommended method.



1

(4)

- (b) Describe **each** of the following DTP terms, using a sketch if required.

SKETCH

1

Footer

1

Column rule

1

Gutter

1

Box

1

- (c) A DTP document is planned in stages. State the stage which follows **research**.

Stage

1

(8)

Construction industry

.....

1

(3)

5. Production drawings are used in the Consumer, Engineering and Construction industries. State a **different** example of a **Production** drawing applicable to each industry.

Consumer industry

.....

1

Engineering industry

.....

1

Marks

6. (a) What is the main purpose of a section?
.....
.....
.....
1
- (b) Sketch a simple revolved section.

SKETCH

2

- (c) Where shafts, bolts, nuts and screws are cut longitudinally, they normally remain unhatched.
State **two** other features within longitudinal sections which also are not normally hatched.

Feature 1

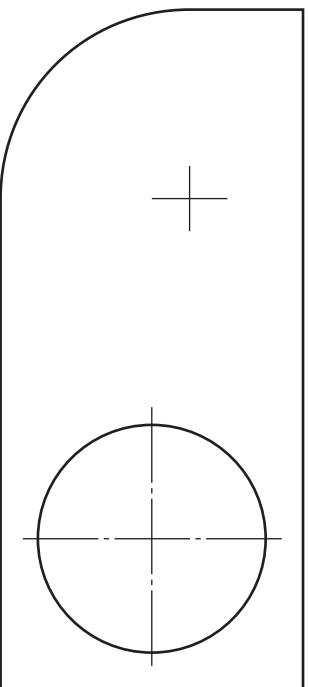
1

Feature 2

1

(5)

7. The component below is drawn to a scale of 1:10.
Dimension the drawing, using **British Standards**, to include:
- (i) the overall length; 1
 - (ii) the overall height; 1
 - (iii) the radius. 1



(3)

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The elevation and end elevation of a building are given.

Draw a measured 2-point perspective of the building.

The spectator point (SP), plane of projection (PP), ground line (GL) and plan to the same scale are given.

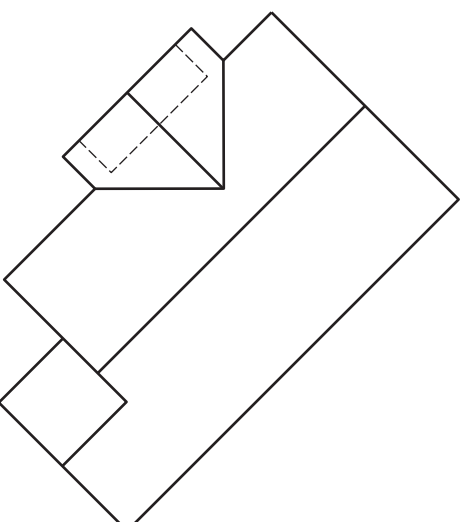
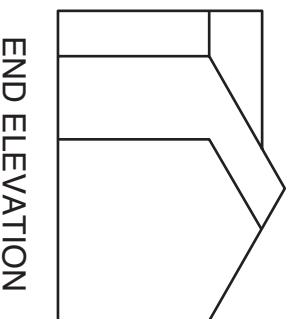
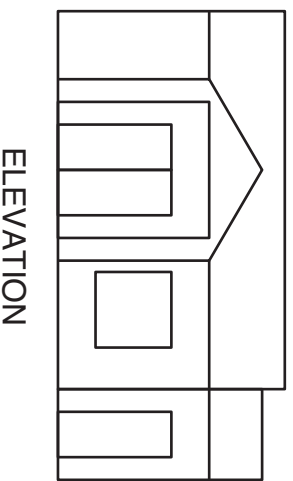
Do not show hidden detail.

(20 marks)

EL _____

GL _____

PP _____



a	
b	
c	
d	
e	
f	
g	
h	
i	
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k	
l	
m	
n	

[X033/301]

Candidate's Name _____

Section B

Orthographic views of a support bracket are shown.

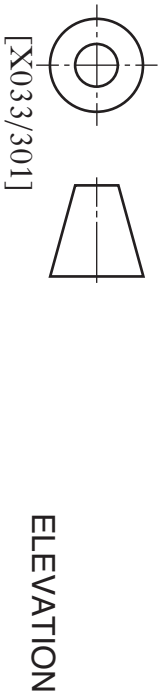
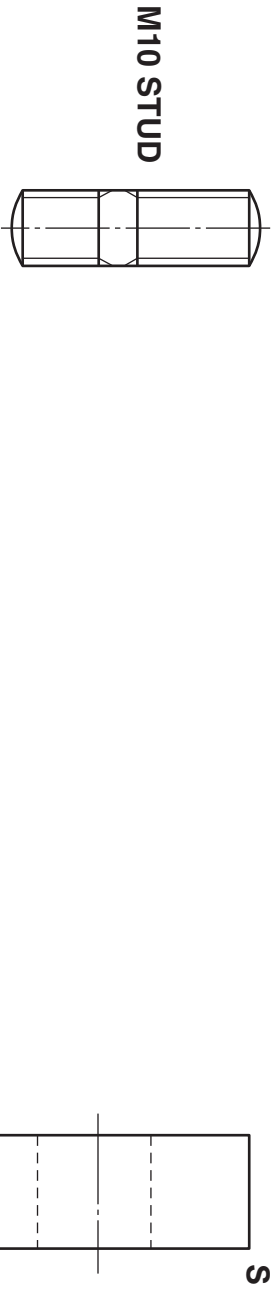
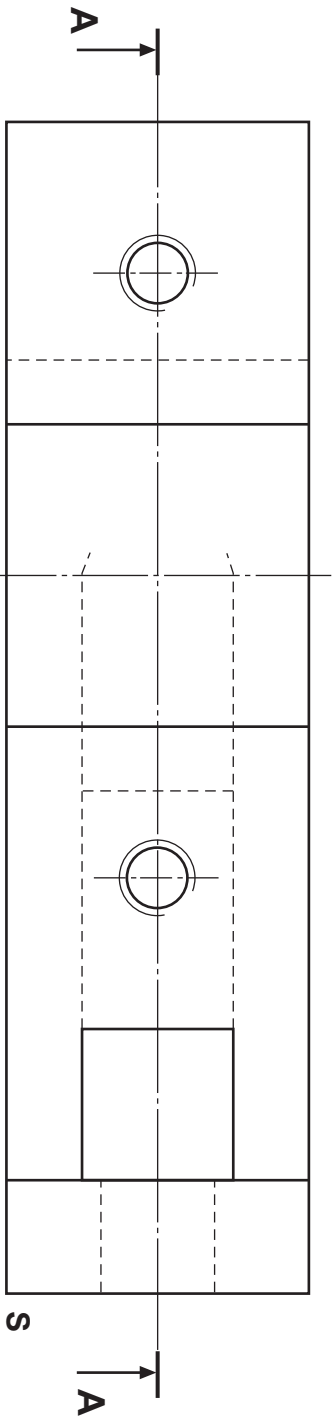
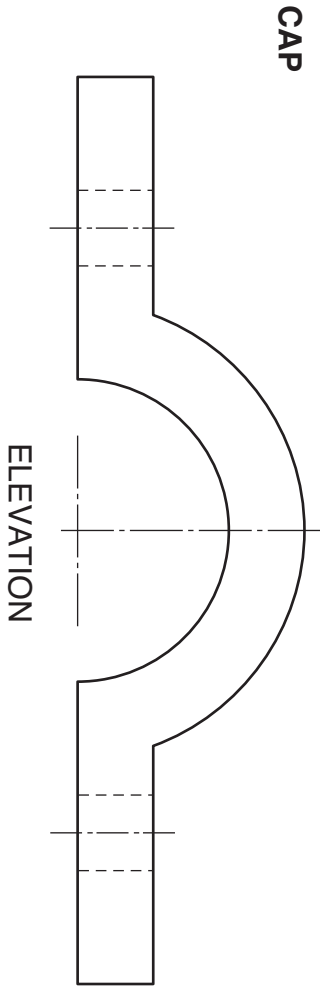
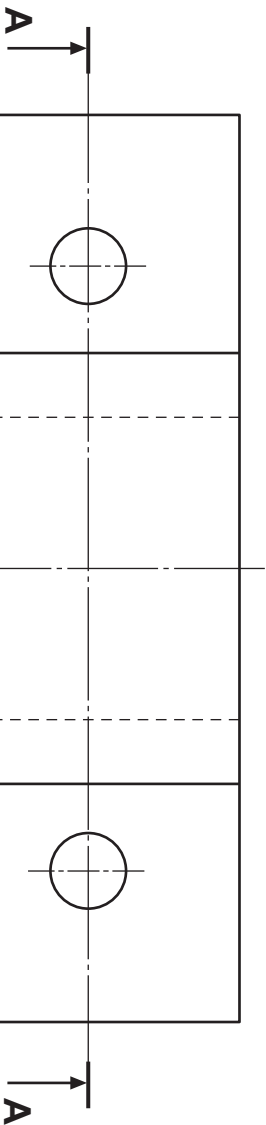
The bracket consists of a main body into which two studs are inserted, and a cap which is located over the studs. One stud is shown.

- Draw:** (a) the sectional elevation **A-A** of the assembled bracket with the one stud fully inserted. Use the start **O**.
 (b) the isometric view of the complete assembled bracket, omitting the studs. Use the starts. The two small holes should be located, but may be sketched.

Do not show hidden detail.

(30 marks)

S



SECTIONAL ELEVATION A-A

ISOMETRIC VIEW

a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	

Section B

The complete elevation, plan and incomplete end elevation of a sheet metal bird box are given.

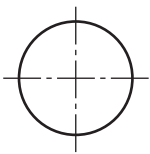
Draw, to the same scale and ignoring the thickness of the metal:

- (a) the complete end elevation. **Show all hidden detail.**
- (b) a complete auxiliary plan, showing the true shape of the sloping roof.

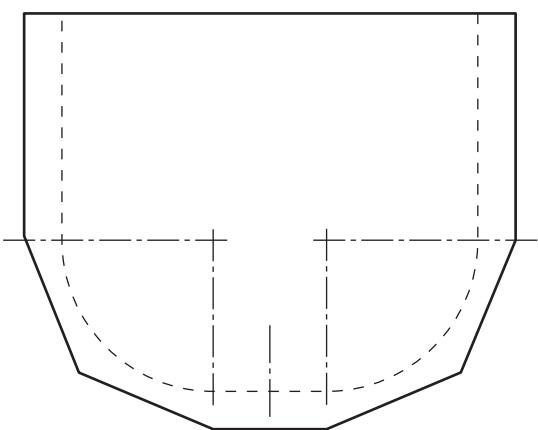
Do not show hidden detail.

- (c) a development of the box wall, including the back panel using the given start.

(30 marks)

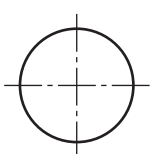


DEVELOPMENT

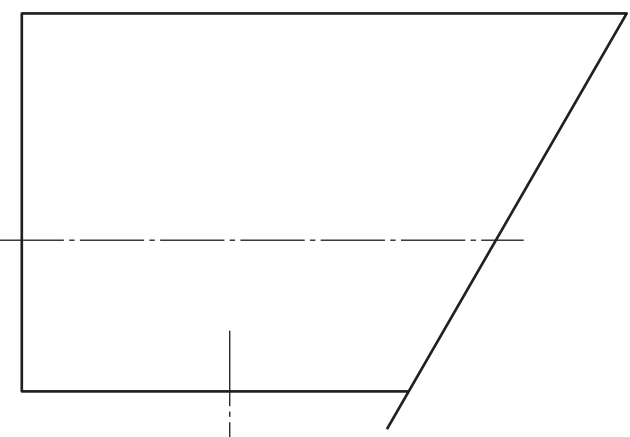


PLAN

AUXILIARY PLAN

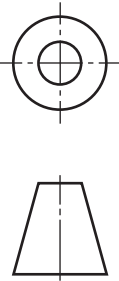


ELEVATION



END ELEVATION

a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	



The elevation and end elevation of a scoop are given. The handle is made from plastic and the body from thin metal.

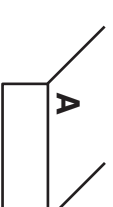
Draw:

- (a) the plan projected from the elevation. **Show hidden detail.**
- (b) to the same scale, a **cabinet oblique** view of the scoop using the given start **A**.

Do not show hidden detail. Lines at 45° should be drawn half full size.

Ignore the thickness of the metal.

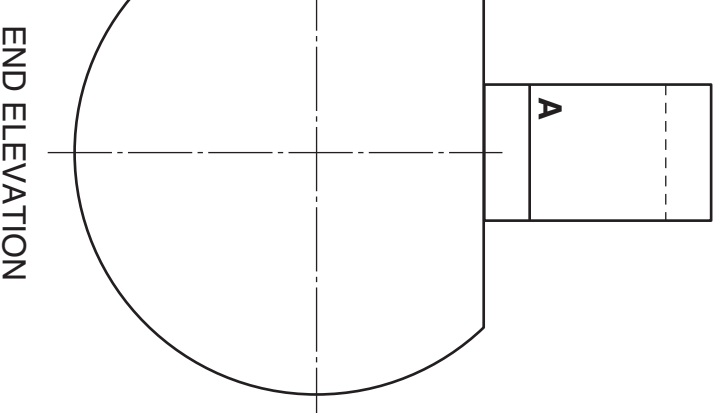
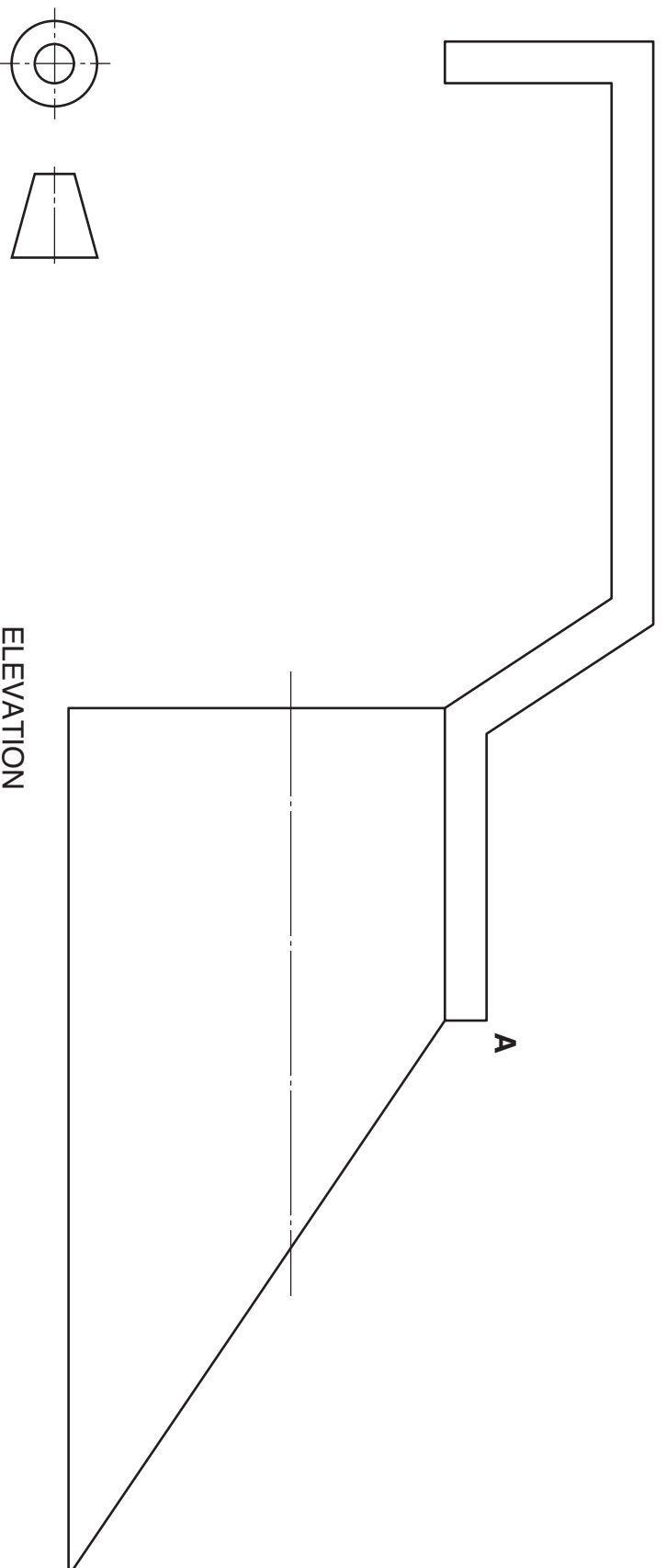
(20 marks)



a	
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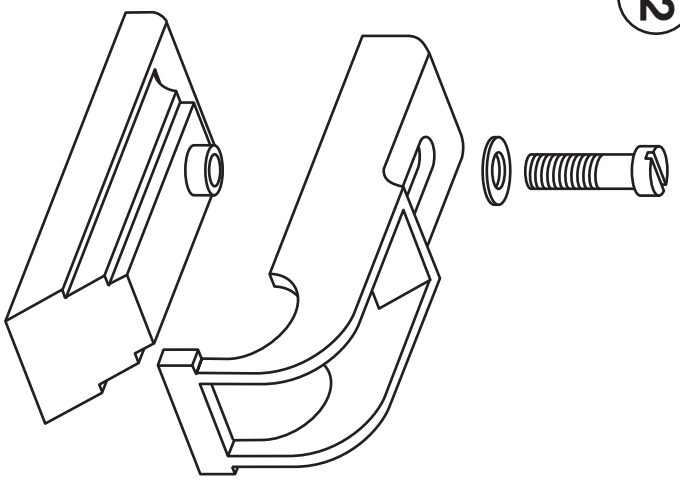
PLAN

OBLIQUE



ELEVATION

END ELEVATION



EXPLODED PICTORIAL VIEW

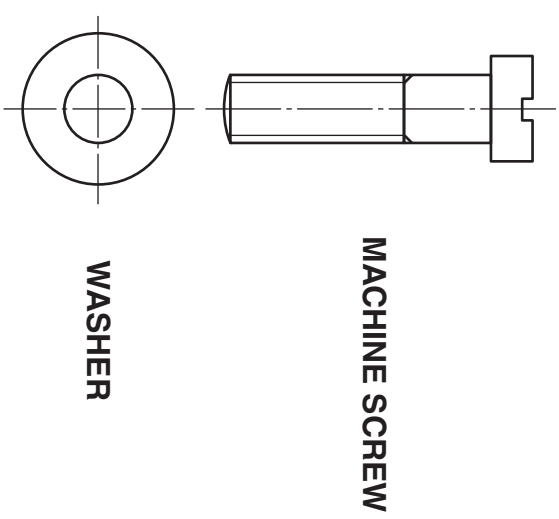
The plans and elevations of parts of a small plane are given along with an exploded pictorial view.

Draw, from the given elevation:

- (a) the plan of the assembled parts of the plane;
- (b) the sectional end elevation on **A-A** of the assembled parts of the plane.

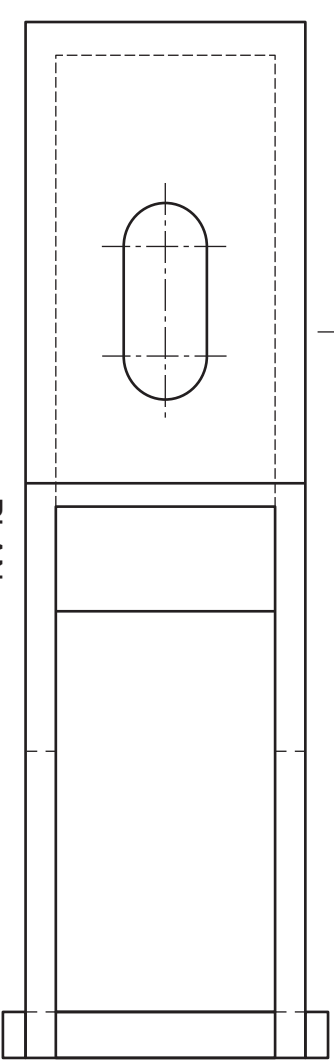
Do not show hidden detail.

(20 marks)



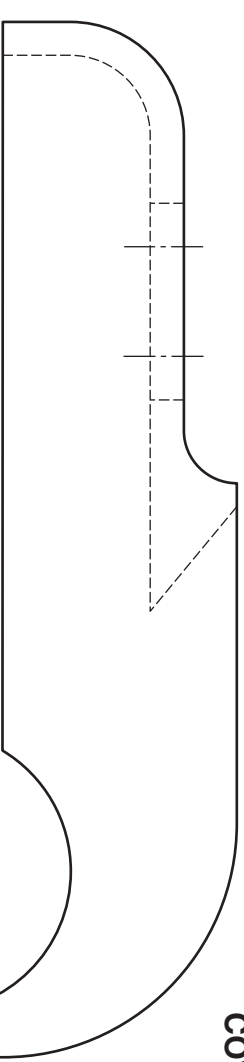
MACHINE SCREW

WASHER

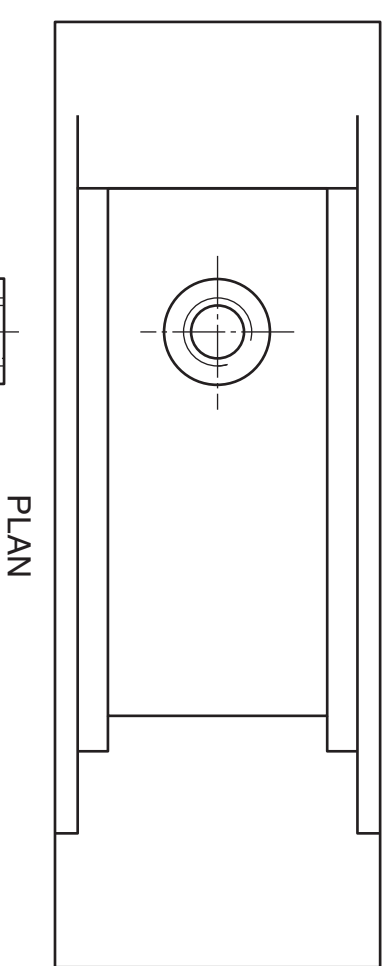


PLAN

COVER

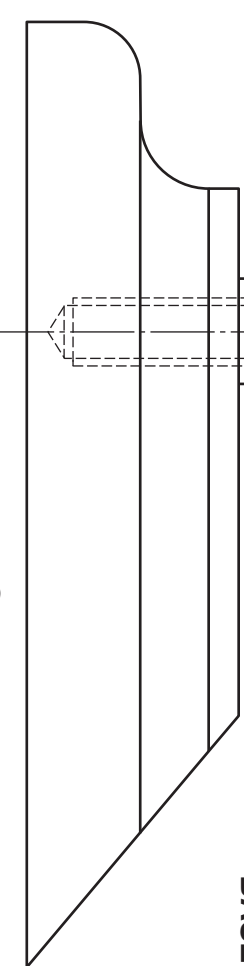


ELEVATION



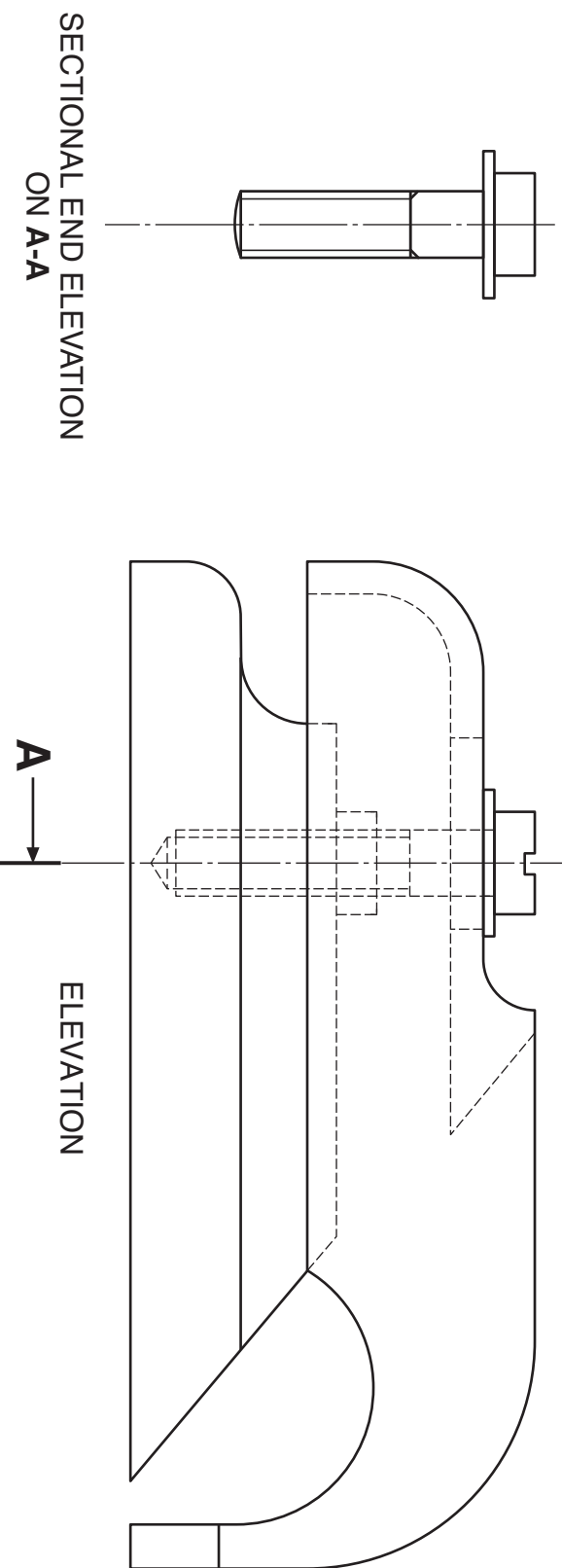
PLAN

BASE



ELEVATION

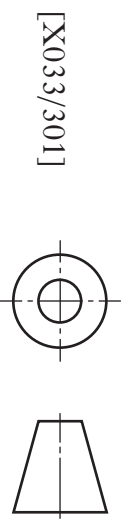
a	
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ELEVATION

PLAN

SECTIONAL END ELEVATION ON A-A



[X033/301]

[END OF QUESTION PAPER]

Candidate's Name _____

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