

GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION

METALWORK SG
(First Paper: Drawings)

TIME: 3 hours

OCTOBER / NOVEMBER 2005
OKTOBER / NOVEMBER 2005

MARKS: 100

INSTRUCTIONS:

- Answer ALL questions on the answer sheets provided in Drawing Answer book 719-2X.
 - Staple your answer sheets in numerical order before handing in your Drawing Answer Book.
 - Write your examination number in the bottom left-hand corner of each answer sheet.
 - Use your own judgement where dimensions and / or details have been omitted.
 - All projection and construction lines must be shown.
 - Marks will be deducted for poor quality linework and inaccuracy.
-
-

QUESTION 1

Answer this question on Answer Sheet 1.

1.1 **Figure 1.1** shows THREE examples of welds.

Insert the correct welding symbols for:

- A – square butt weld
- B – single V butt weld
- C – fillet weld

(3)

1.2 **Figure 1.2** shows three views of a metal casting, of which one is incomplete. The drawing is in first-angle orthographic projection. Complete the incomplete view using instruments.

(5)

1.3 **Figure 1.3** shows a pictorial, half-sectional view of a machine part. Do not copy the view but draw, freehand and in good proportion, a front view as seen in the direction of the arrow in the space provided.

(8)

- 1.4 **Figure 1.4** shows a front view and partially completed top view of a truncated cylinder in first-angle orthographic projection. Project a true shape of the truncated area in the space provided. (4)
[20]

QUESTION 2

Answer this question on Answer Sheet 2.

Figure 2 on **Answer Sheet 2** shows the front view and auxiliary view of an octagonal prism with a square hole in first-angle orthographic projection. The solid is intersected by cutting plane **AA**.

Draw a sectioned top view.

[20]

QUESTION 3

Answer this question on Answer Sheet 3.

Figure 3 on **Answer Sheet 3** shows the front view and left view of a machine part in first-angle orthographic projection. Do not copy these views but draw to scale 1:1 an isometric view of the part. Make **A** the lowest point.

[20]

QUESTION 4

Answer this question on Answer Sheet 4.

- 4.1 **Figure 4.1** on **Answer Sheet 4** shows the front view of two cylinders of equal diameter intersecting each other at right angles. Draw the development of part **A** in the space provided. (10)

- 4.2 **Figure 4.2** on **Answer Sheet 4** shows the incomplete front view and top view of a hexagonal prism being intersected by another hexagonal prism. Complete the top view and project the curve / lines of interpenetration in the front view. (10)
[20]

QUESTION 5

Answer this question on Answer Sheet 5.

The figure shows the front, left and top views of a simple dwelling in first-angle orthographic projection. Draw to scale 1:1 a neat two-point perspective view of the dwelling.

NB. Wall thickness and hidden details are not required.

[20]

TOTAL: 100

END