higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

T710(E)(M22)T
APRIL EXAMINATION

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY DRAWING OFFICE PRACTICE

GENERAL DRAUGHTING

(8090194)

22 March 2013 (X-Paper)
09:00–13:00

REQUIREMENTS: ONE sheet A2-drawing paper

CLOSED-BOOK EXAMINATION

This question paper consists of 7 pages.

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE: MULTI-DISCIPLINARY
DRAWING OFFICE PRACTICE
GENERAL DRAUGHTING
TIME: 4 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Use both sides of the drawing paper.
5. A balanced layout is very important.
6. A 15-mm border must be drawn around the drawing sheet (on both sides).
7. ALL drawing work, including candidate information, must be done in pencil.
8. ALL the drawings must comply with the SABS 0111–1990.
9. Where no dimensions are given, use your own discretion and draw it in good proportion to the drawing.
10. Write neatly and legibly.

QUESTION 1: LOCI

FIGURE 1 shows a circular disc. The disc has a diameter of 50 mm. The disc rolls along the contour in a clockwise direction. Construct the locus of point 'P' if the disc rolls from point 'A' to point 'B' without slipping.

Show ALL the geometrical construction lines and numbering.

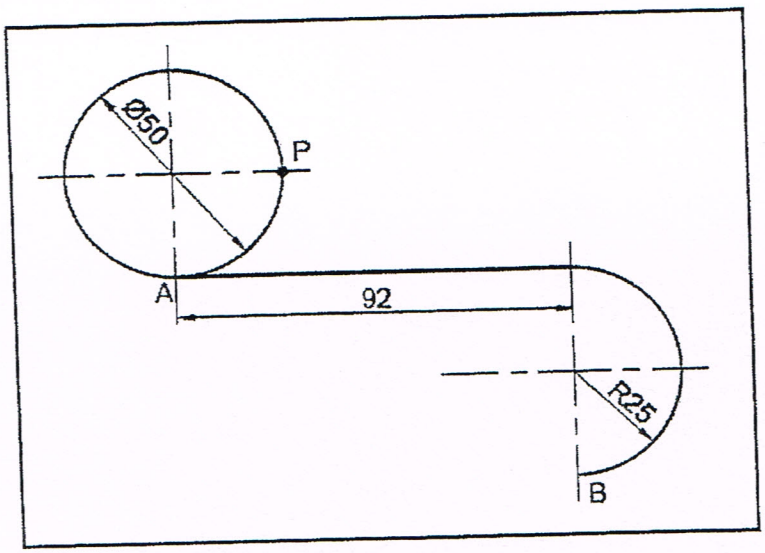

FIGURE 1 **[15]**

QUESTION 2: ORTHOGRAPHIC PROJECTION

FIGURE 2 shows a truncated cylinder which in turn rests on a truncated hexagonal prism, that has been penetrated by a hexagonal prismatic hole.

Draw to scale 1 : 1 according to first-angle orthographic projection the following views:

2.1 The given front view including the auxiliary view

2.2 A left view

2.3 A top view

Show ALL the hidden detail.

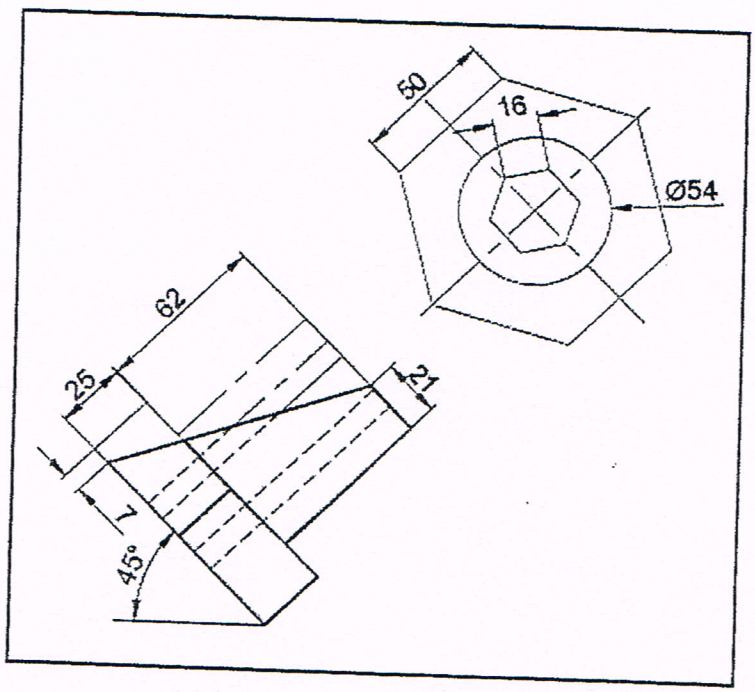

FIGURE 2

[25]

QUESTION 3: GEOMETRICAL CONSTRUCTIONS

FIGURE 3 shows a front view of a pump cover. Draw to scale 1 : 1 the front view of the pump cover. Insert any 10 dimensions. Print the following title and scale centrally beneath the view:

PUMP COVER
Scale 1 : 1

Show ALL the geometrical construction lines.

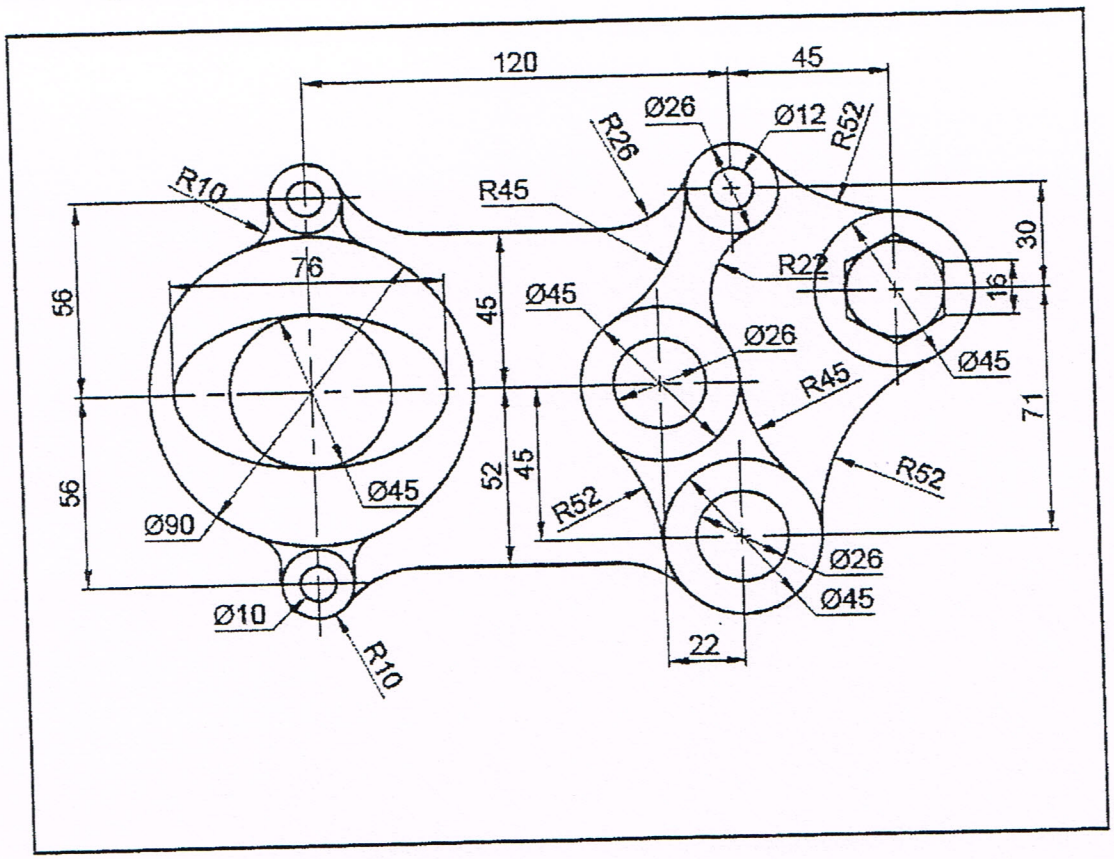

FIGURE 3

[25]

QUESTION 4: INTERPENETRATION CURVES

FIGURE 4 shows two views of a T-end. Draw, according to scale 1 : 1, the given front view and complete the curve of interpenetration.

Show ALL construction lines and hidden detail.

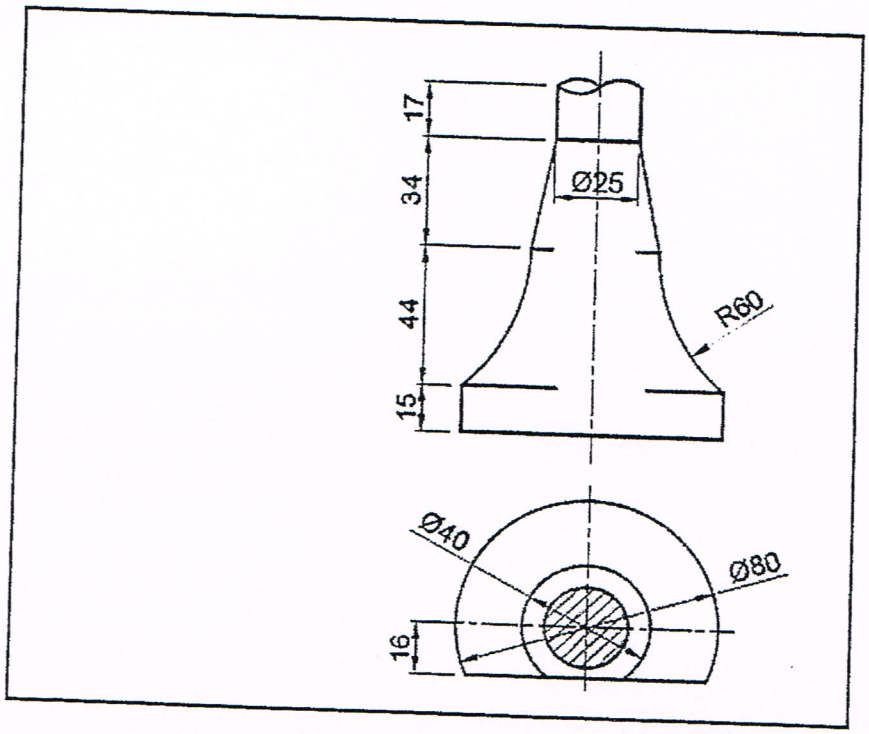

FIGURE 4

[15]

QUESTION 5: DEVELOPMENT

FIGURE 5 shows a front view of a chute.

Draw the following views according to scale 1 : 1:

5.1 The given views

5.2 Develop the surfaces of the cylindrical pipe and the cone.

Show ALL the projection lines and numbering.

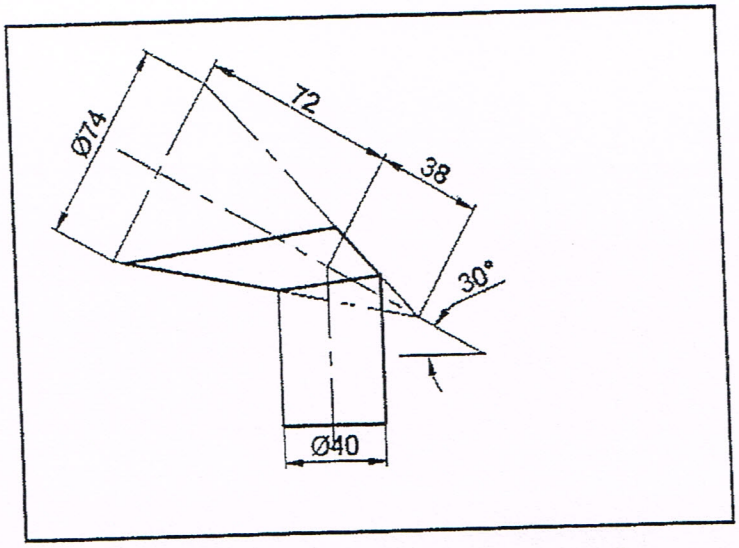

FIGURE 5 **[20]**

TOTAL: 100