ZIMBABWE

MINISTRY OF HIGHER AND TERTIARY EDUCATION, INNOVATION, SCIENCE AND TECHNOLOGY DEVELOPMENT

HIGHER EDUCATION EXAMINATIONS COUNCIL (HEXCO)

NATIONAL CERTIFICATE

IN

FABRICATION ENGINEERING

SUBJECT: Engineering Drawing **PAPER NO: 324/18/S03B**

DURATION: 3 Hours

NOVEMBER/ DECEMBER 2025 EXAMINATION

REQUIREMENTS

A3 Drawing papers, Drawing instruments, Drawing boards, Serialised cover pages.

INSTRUCTIONS TO CANDIDATE

1. **SECTION A: This section consists of two (2) questions. Answer one question only. Each question carries 30 marks.**
2. **SECTION B: This section consists of two (2) questions. Answer one question only. Each question carries 30 marks.**
3. **SECTION C: This section consists of two (2) questions. Answer one question only. Each question carries 40 marks.**
4. **Start the pattern development using the given seam.**
5. **Do not write your name on the drawing paper at the serialised cover.**
6. **Do not write anything on the question paper.**

This paper consists of 7 printed pages.

SECTION A

QUESTION 1

Fig Q1 shows a truncated right cone connected to the cylinder.

a) Draw the given view. (6 marks)

b) Produce the joint line. (9 marks)

c) Develop the pattern for the cone. (15 marks)

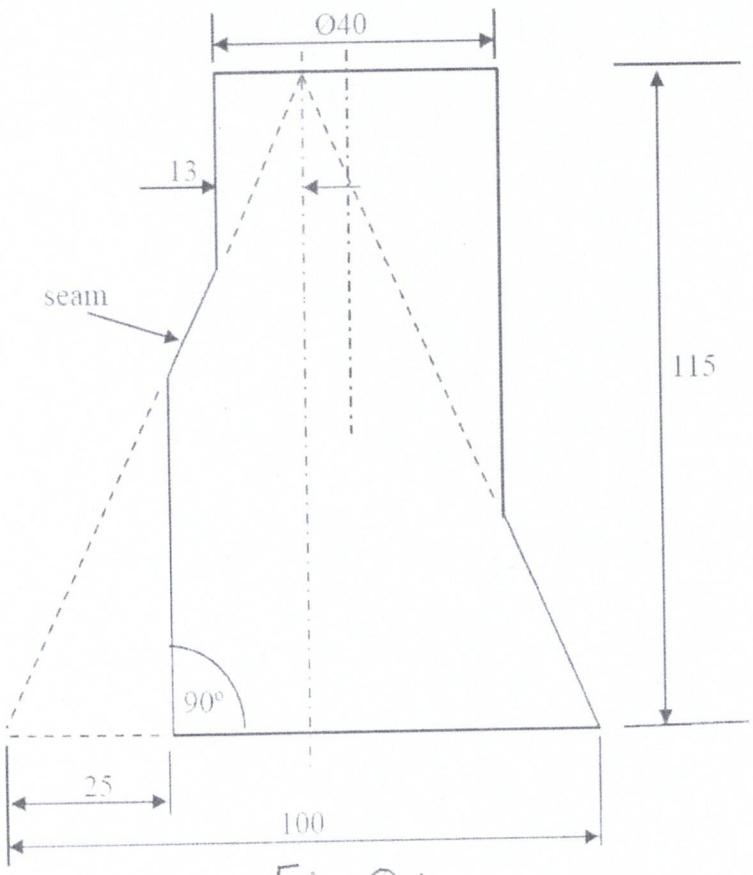

Fig Q1

QUESTION 2

Figure Q2 shows a truncated right cone intersected by a horizontal pipe.

a) Draw the given view. (6 marks)

b) Produce the joint line. (9 marks)

c) Develop the pattern for the cone. (15 marks)

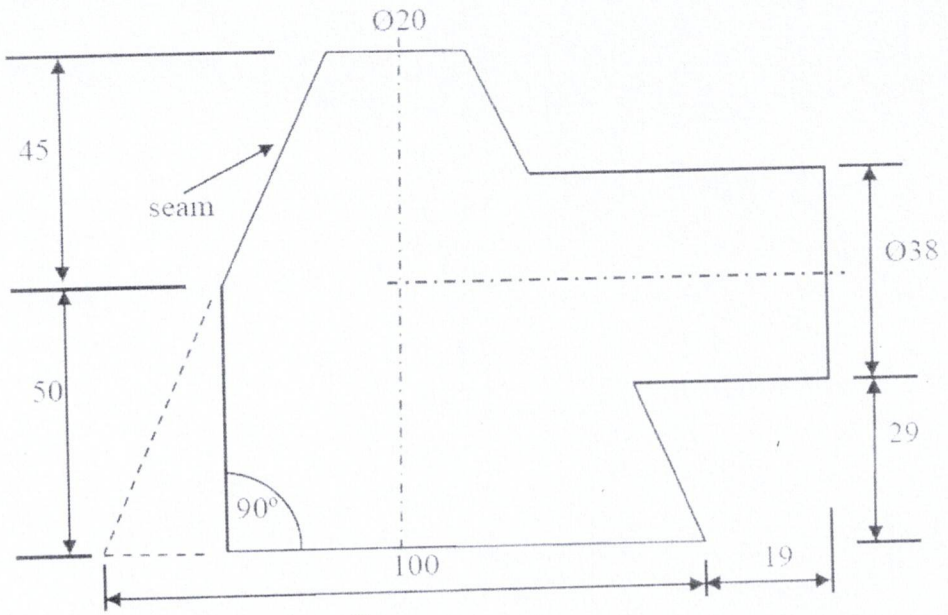

Fig Q2

SECTION B

QUESTION 3

Figure Q3 shows a lobster backbend connected to the main horizontal pipe.

a) Draw the given view. (6 marks)

b) Produce the joint line. (9 marks)

c) Develop the pattern for segment B. (15 marks)

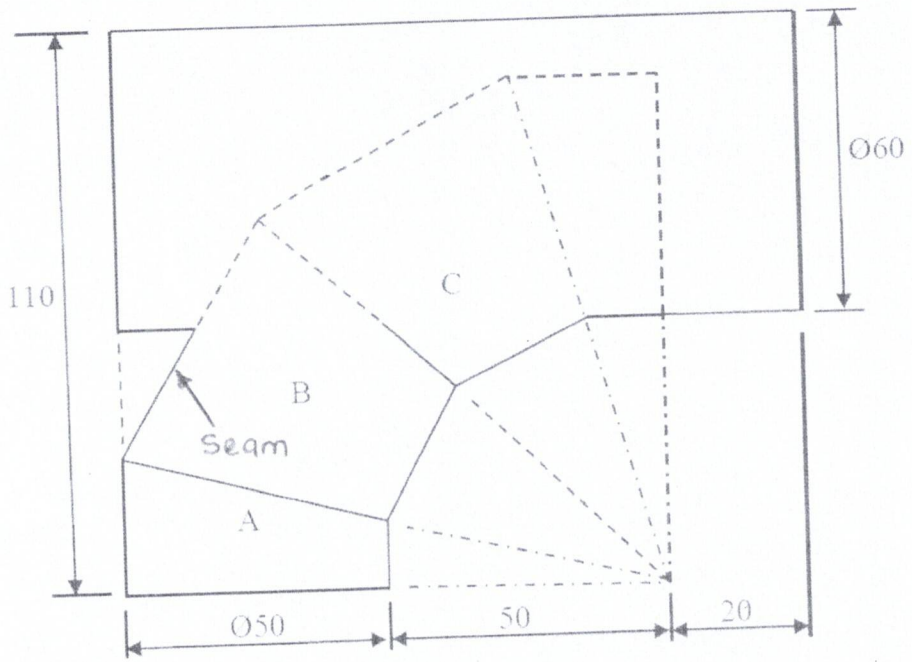

Fig Q3

QUESTION 4

Fig Q4 shows the connection of an inclined pipe to a square duct.

a) Draw the given views and complete the plan. (6 marks)

b) Produce the joint line. (9 marks)

c) Develop the pattern for the square duct. (15 marks)

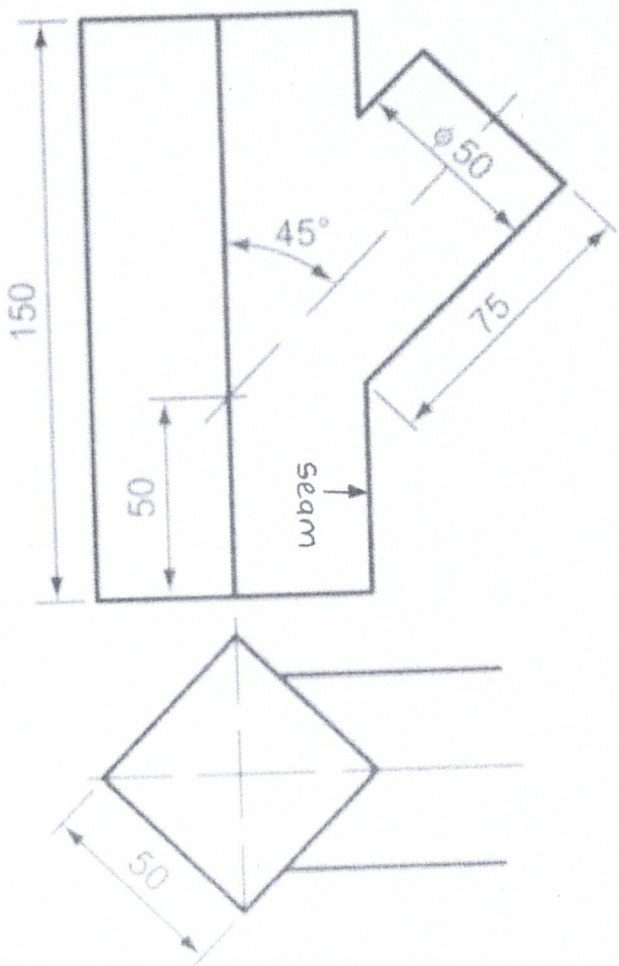

Fig Q4

SECTION C

QUESTION 5

Figure Q5 shows two (2) views of a twisted square to rectangle transformer.

a) Draw the given views and complete the folding lines. (15 marks)

b) Develop the pattern of the transformer. (25 marks)

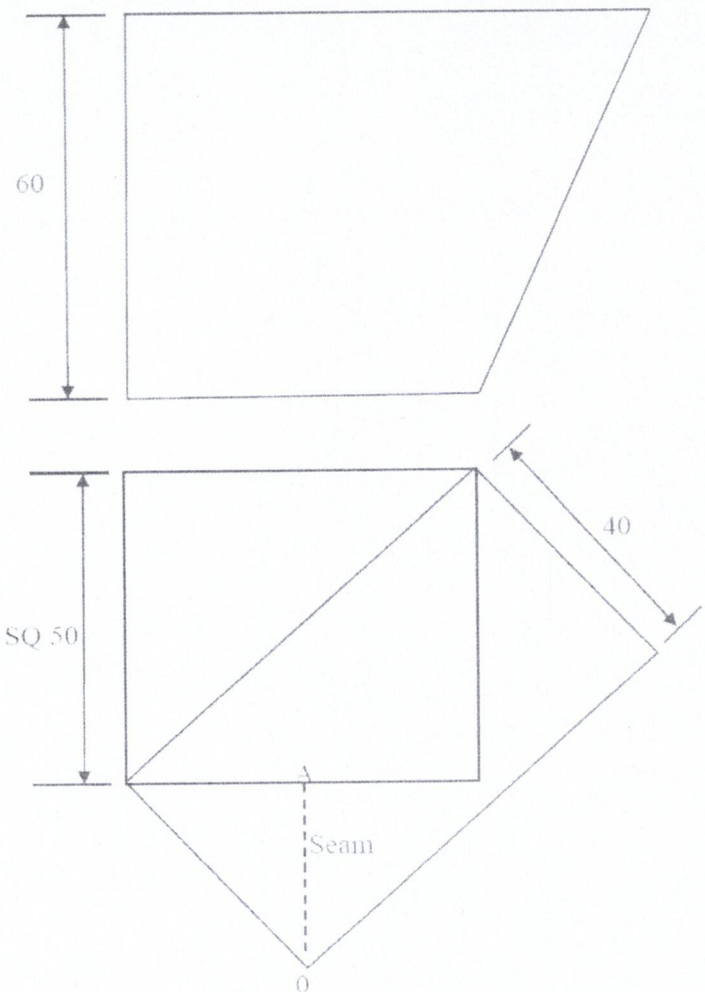

Fig Q5

QUESTION 6

Fig Q6 shows the front elevation and plan view of a sheet metal transition piece.

a) Draw the given views and complete the folding lines. (15 marks)

b) Develop the transition piece pattern. (25 marks)

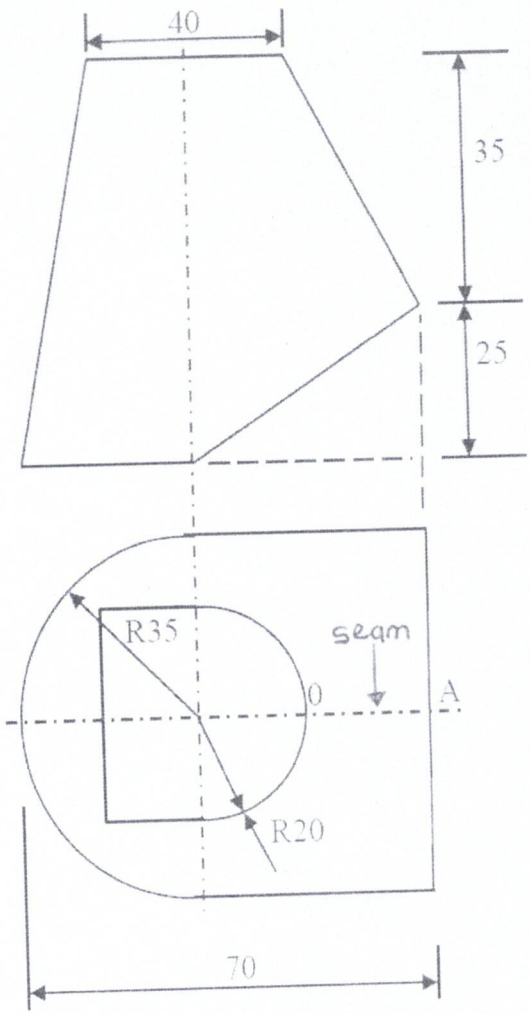

Fig Q6

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