



# higher education & training

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Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

## **MARKING GUIDELINE**

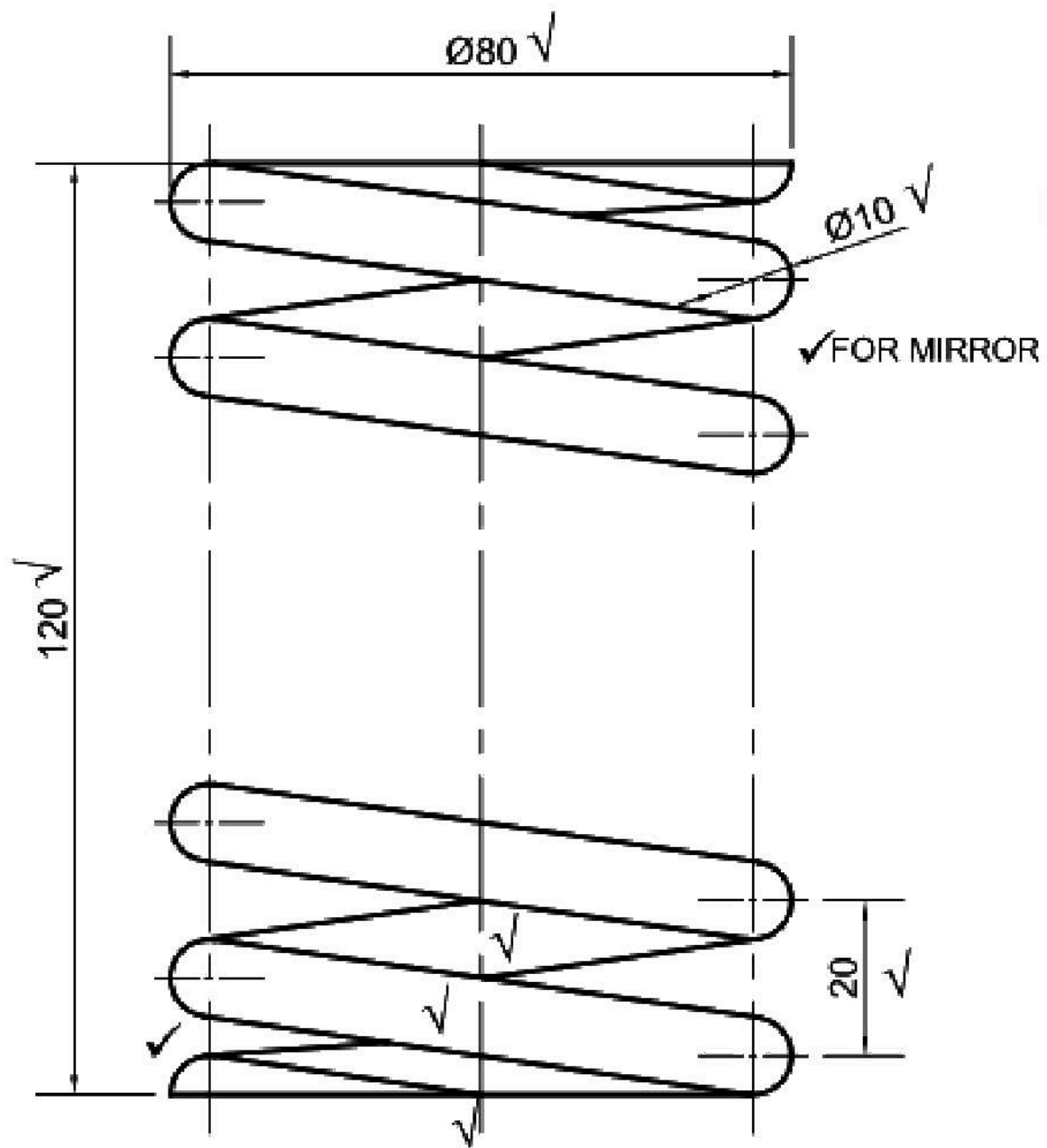
**NATIONAL CERTIFICATE:  
MULTIDISCIPLINARY DRAWING OFFICE PRACTICE**

**MECHANICAL DRAUGHTING**

**25 July 2024**

**This marking guideline consists of 7 pages.**

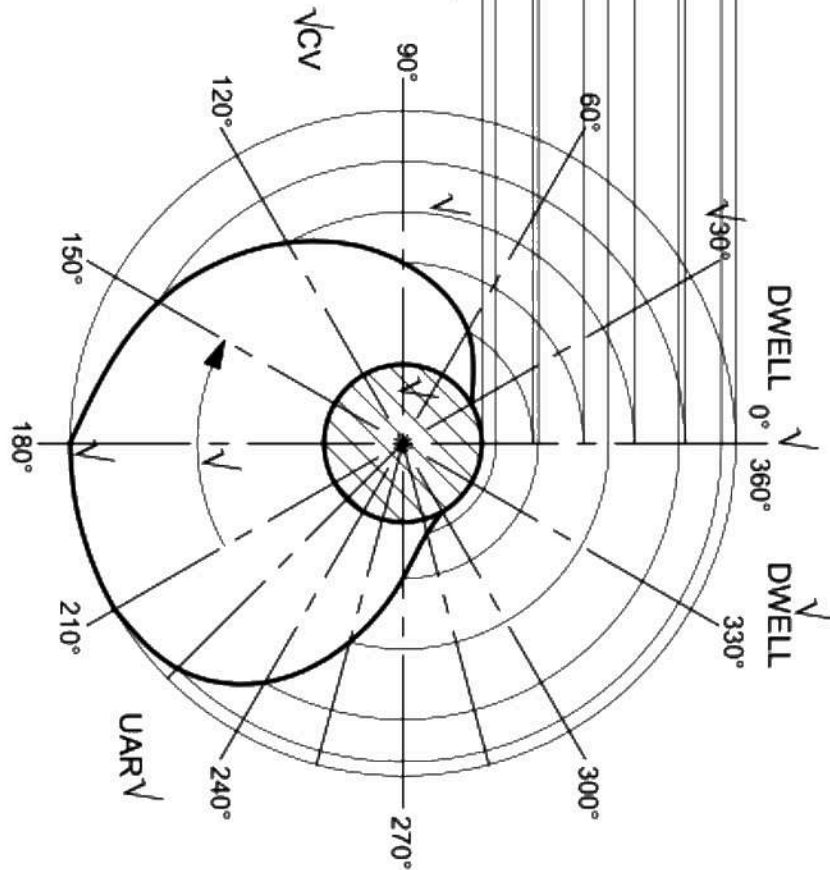
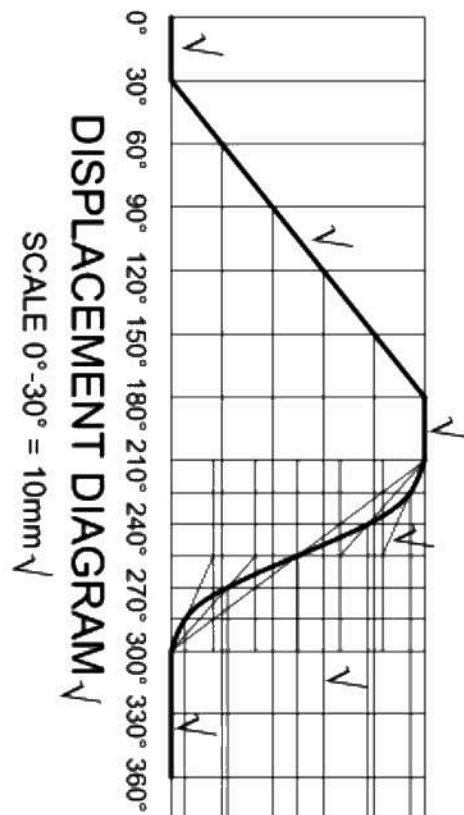
QUESTION 1: HELICAL SPRING



HELICAL SPRING ✓  
SCALE 1:1 ✓

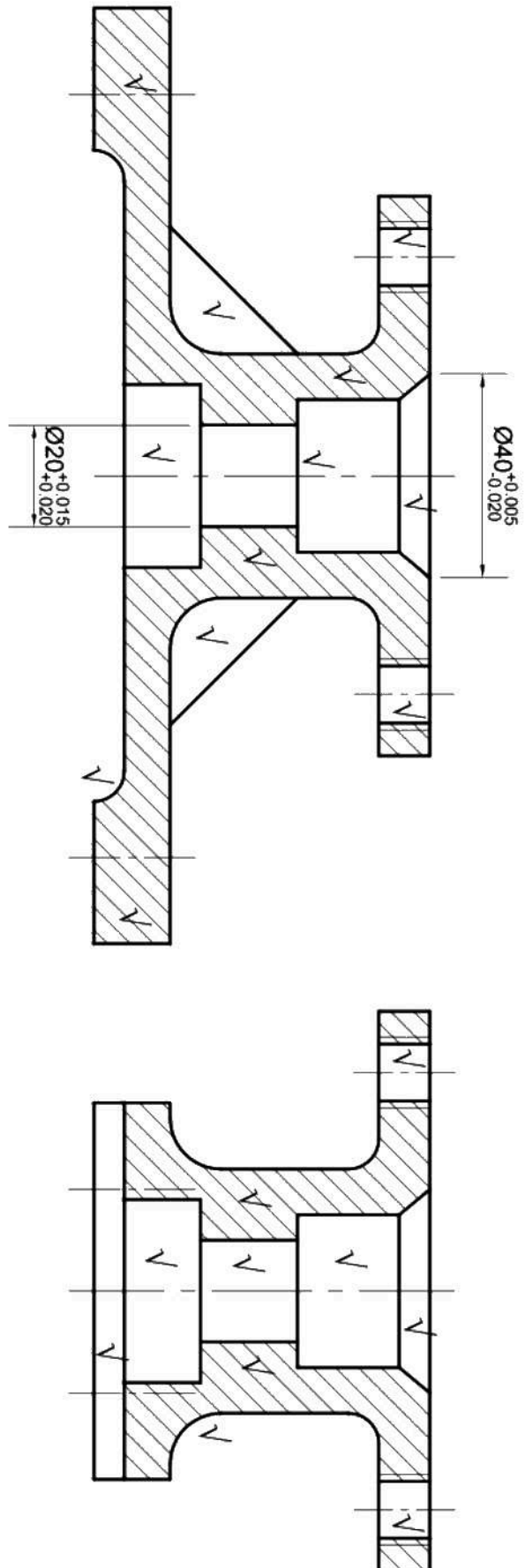
|                 |    |
|-----------------|----|
| CORRECTNESS     | 5  |
| DIMENSIONS      | 2  |
| TITLE AND SCALE | 1  |
| ACCURACY        | 2  |
|                 | 10 |

## QUESTION 2: DISC CAM

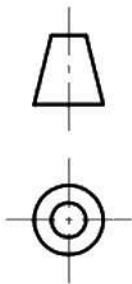


|                      |    |
|----------------------|----|
| DISPLACEMENT DIAGRAM | 4  |
| CAM PROFILE          | 5  |
| LINE WORK            | 2  |
| ACCURACY             | 3  |
| NO MIN. Ø SHOWN      | 1  |
|                      | 15 |

### QUESTION 3: SECTIONAL DRAWING



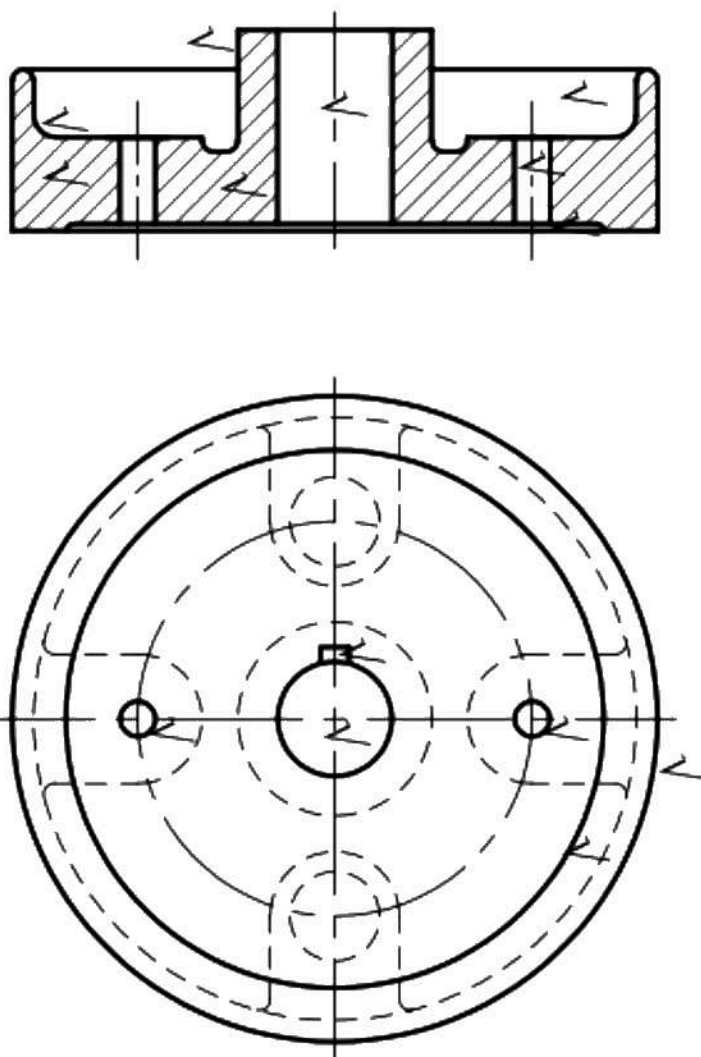
VERTICAL GUIDE  
SCALE 1:1



| CORRECTNESS         | FV | LV |
|---------------------|----|----|
| 6                   | 6  | 5  |
| LINE WORK           | 3  |    |
| ACCURACY            | 3  |    |
| TITLE AND SCALE     | 1  |    |
| DIMENSIONS AT A & B | 2  |    |
|                     | 20 |    |

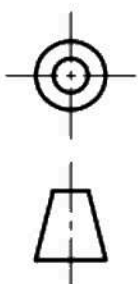
# QUESTION 4: DETAIL DRAWING

4.1



THE FLANGE (ITEM 1A)✓

SCALE 1:2✓

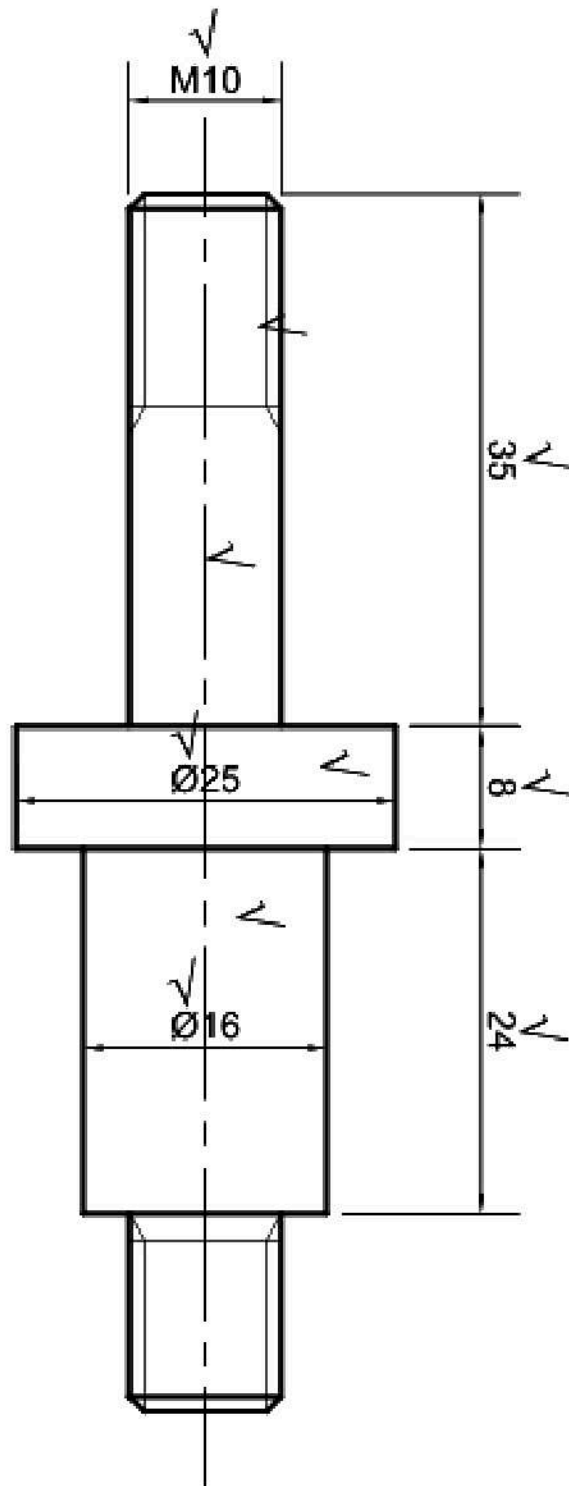


|                    |    |    |
|--------------------|----|----|
| CORRECTNESS        | FV | RV |
| LINE WORK          | 4  | 3  |
| ACCURACY           | 1  |    |
| TITLE AND SCALE    | 1  |    |
| HIDDEN DETAIL ONLY | 2  |    |
|                    | 12 |    |

(12)

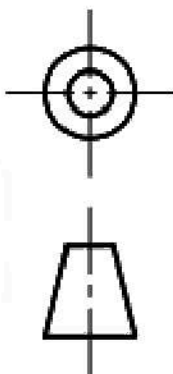
4.2

|                 |    |    |
|-----------------|----|----|
| CORRECTNESS     | FV | RV |
| LINE WORK       | 2  | 1  |
| ACCURACY        | 1  |    |
| TITLE AND SCALE | 1  |    |
| DIMENSIONS      | 2  |    |
|                 | 8  |    |



THE DRIVING PIN (ITEM 2)

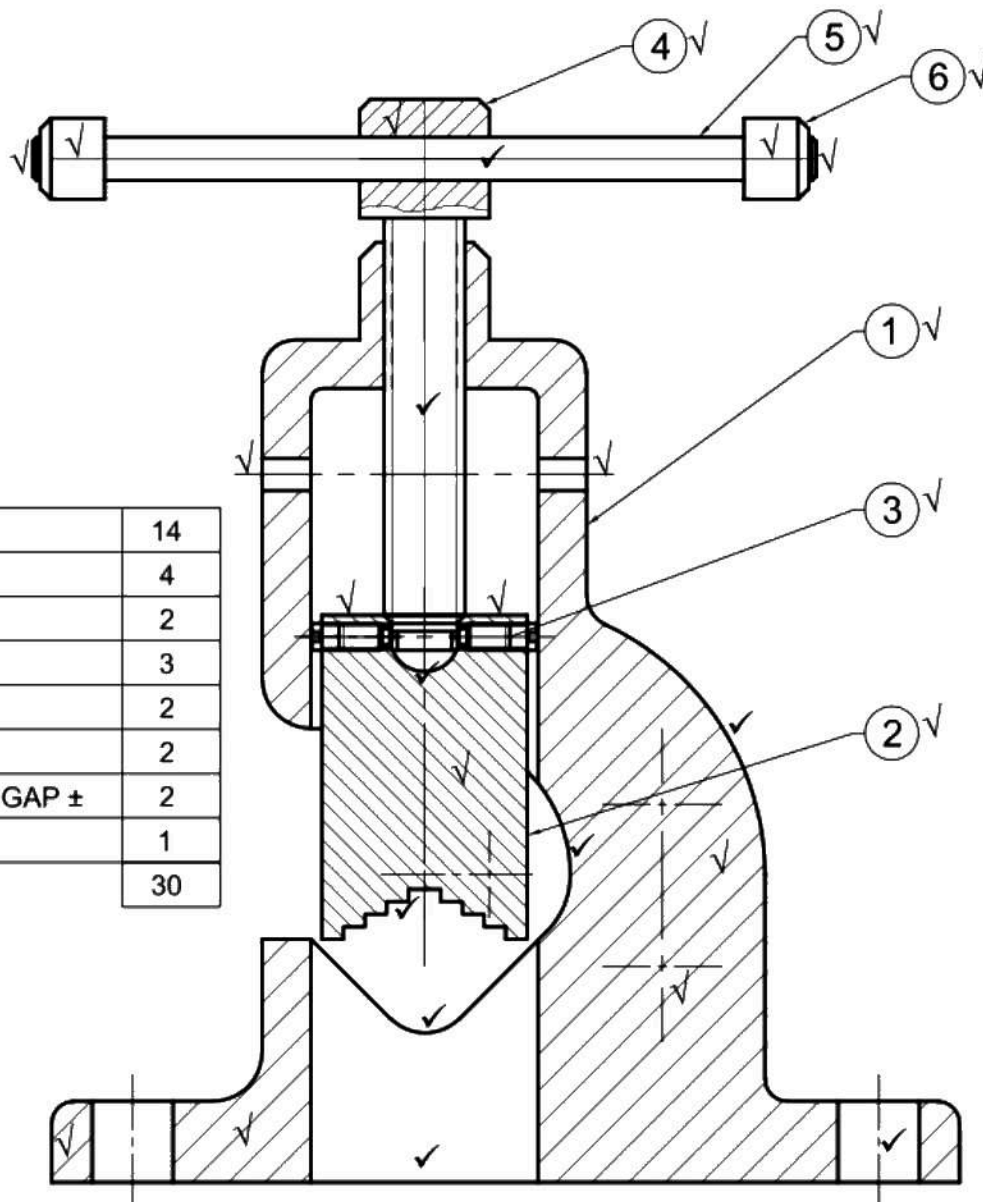
SCALE 2:1



(8)  
[20]

**QUESTION 5: ASSEMBLY DRAWING**

| ITEM   | NAME           | QTY   | MATERIAL     | REMARKS |
|--------|----------------|-------|--------------|---------|
| ITEM 1 | VICE BASE      | 1 OFF | CAST IRON    |         |
| ITEM 2 | MOVABLE JAW    | 1 OFF | CAST IRON    |         |
| ITEM 3 | SET SCREW ✓    | 2 OFF | MILD STEEL ✓ |         |
| ITEM 4 | SCREW ROD      | 1 OFF | MILD STEEL   |         |
| ITEM 5 | HANDLE BAR     | 1 OFF | MILD STEEL   |         |
| ITEM 6 | HANDLE BAR CAP | 2 OFF | MILD STEEL   |         |



PIPE VICE ✓

SCALE 1:1 ✓

|                     |    |
|---------------------|----|
| CORRECTNESS         | 14 |
| LINEWORK            | 4  |
| HATCHING            | 2  |
| ITEM NUMBERS        | 3  |
| ACCURACY            | 2  |
| PARTS LIST          | 2  |
| MOVABLE JAW - GAP ± | 2  |
| TITLE & SCALE       | 1  |
|                     | 30 |

[30]

Balanced layout and plotting for the COMPLETE ANSWER SHEET.

[5]

**TOTAL:**