higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

DRAWING OFFICE PROCEDURES AND TECHNIQUES

(First paper)

NQF LEVEL 3

27 November 2023

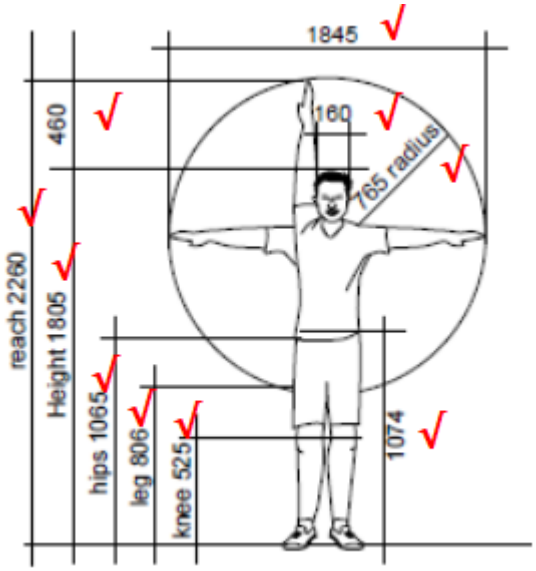
This marking guideline consists of 6 pages.

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QUESTION 1: PLANNING AND DESIGN SPECIFICATIONS

1.1 Anthropometrics (2)

1.2



(½ mark for each label and TWO marks for the drawing.) (7)

1.3 1.3.1 True
1.3.2 True

(2 × 1) (2)

1.4
- Span
- Cubit
- Hand
- Foot

(4)

1.5 1.5.1 Average✓ value of a group of numbers.✓

1.5.2 Slanting,✓ declining from the vertical or horizontal.✓

1.5.3 Outer boundary,✓ the circumference or outline of an enclosed area.✓

1.5.4 Relationship between the measurements on a page✓ and the measurements of the physical object represented.✓

1.5.5 Measurement or dimension downward, backward, or inward✓ to determine how deep an object is.✓

(5 × 2) (10)

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QUESTION 2: DRAWING OFFICE ORGANISATION

2.1 2.1.1 True
2.1.2 True
(2 × 1) (2)

2.2
- Chief draughtsperson
- Senior design draughtsperson
- Design draughtsperson
- Detail draughtsperson
- Senior draughtsperson checker (Any 2 × 1) (2)

2.3
- Internal organisation
- External organisation (2)

2.4
- Administrative functions, such as human resources✓ and finance.✓
- Production issues, such as the manufacture of goods✓ and products based on the drawings supplied.✓
- Logistical issues, such as the sourcing of raw material for the production lines✓ and the distribution of finished products.✓ (Any 2 × 2) (4)

2.5



(ONE mark for each of the labels and ONE mark for the drawing.) (10)
[20]

QUESTION 3: HEALTH AND SAFETY FOR A DRAUGHTSPERSON

3.1 A condition in which the core temperature of the body✓ drops below✓ that required for normal metabolism✓ and bodily functions.✓ (4)

3.2
- Occupational health
- Occupational safety
- Occupational hygiene
- Environmental management
- Quality management
- Behaviour-based safety
- HIV and AIDS management in the workplace
- Social responsibility programmes
- Sustainability (Any 4 × 1) (4)

3.3
- Safety issues are relevant in any workplace, even those that do not involve hazardous machinery, materials or environments. This applies to any office, not just to a drawing office.
- In particular, safety is important on any worksite that a draughtsperson visits or enters.
- Ensure the all shavings have been cleaned from the floor and thrown away in bins. The bins must be emptied so that there are always clean bins in the workshop. (3)

3.4
- Employees must take all reasonable care to avoid injury to themselves and other people.✓ Reasonable care means the wearing or using of any type of safety clothing or equipment that has been provided for safety in the workplace.✓
- Floors and work areas must be kept clean and tidy.✓ Always follow safe working procedures.✓
- Employees must cooperate with the employer to promote a safe and healthy working environment.✓ To achieve these conditions, obey regulations, such as ‘No smoking’ or ‘No entry’ notices.✓
- Immediately report situations or procedures that could cause accidents or defects and faults in equipment.✓ The employer’s safety policies must be obeyed.✓
- Employees must not interfere with, or misuse, any item that has been provided in the interest of health, safety or welfare.✓ This includes items such as machine guards, fire extinguishers, first aid equipment or warning signs.✓ (Any 4 × 2) (8)

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3.5 Approved coveralls
Safety footwear
Eye protection
Safety helmets
Respirators
Gloves and gauntlets
Ear protection
Hats and caps (Any 3 × 1) (3)

3.6 3.6.1 

3.6.2 

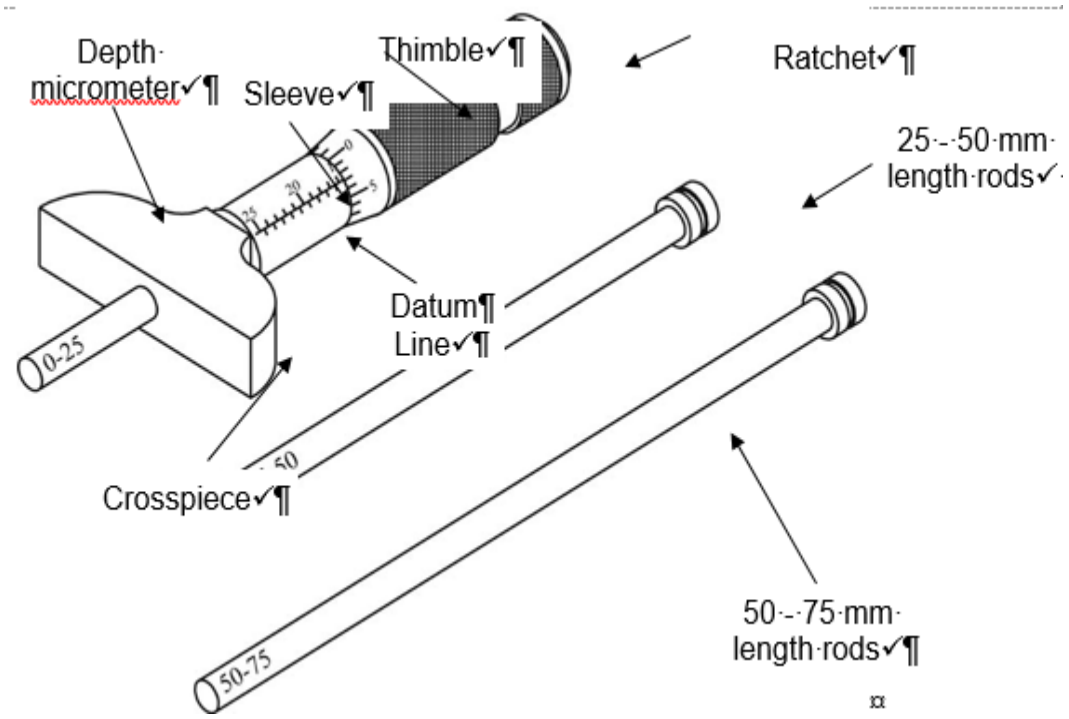
3.6.3 

3.6.4 

(4 × 2) (8)
[30]

QUESTION 4: MEASURING INSTRUMENTS AND EQUIPMENT

4.1



(EIGHT marks for labelling of depth micrometre and THREE marks for drawings.) (11)

4.2
- A depth micrometre used to measure the depth of an object with precision and accuracy✓ with least count of 0,01 mm.✓
- The measuring span is 25 mm just like in micrometre,✓ but this can be changed by fitting one of two interchangeable rods✓for measuring deeper holes.✓ (5)

4.3
- The operating principle of the depth micrometre is the same✓ as that of the inside and outside micrometre.✓
- However, the scales are reversed,✓ so that the numbering on the sleeve and thimble graduations is in the opposite direction✓ to those on the outside and inside micrometre.✓ (5)

4.4
- The depths of holes
- Slots
- Recesses
- The distance of stepped faces from each other (4)

[25]

TOTAL: 100

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