# Knowledge Assessment

**Event: 1 of 2**

# Trainer & Assessor Marking Guide

## Criteria

### Unit code, name and release number

MEM09002B - Interpret technical drawing (1)

### Qualification/Course code, name and release number

MEM30205 - Certificate III in Engineering - Mechanical Trade (3)

Version: 1.0

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*IMRS SkillsPoint*

*Block B Level 1*

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This assessment can be found in the: [Learning Bank](https://share.tafensw.edu.au/share/access/searching.do?doc=%3Cxml%2F%3E&in=P7ac4831b-430a-4b8d-8b56-f7b32ed5b9cf&q=&type=standard&sort=rank&dr=AFTER)

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## Assessment instructions

Table 1.0 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Instructions for the trainer and assessor** | This is a written assessment and will be assessing the student on their knowledge of the unit. **The assessment is closed book.**  This assessment is in 4 parts:   1. Multiple choice questions 2. True or False questions 3. Short answer questions 4. Appendix containing reference drawings (**Remove appendix if required**)   Model answers, sample responses or a criteria for each question are provided below.  Use these to support your judgement when determining a satisfactory result.  The student’s response to each question must contain the information indicated in this marking guide in order for their response to be correct. However, if a student provides information other than indicated below, and in the professional opinion of the assessor it is appropriate and meets the intent of the question, it may be considered correct.  The assessment feedback page must be signed by both the student and the assessor so the student displays that they have received, understood and accepted the feedback.  Complete the assessment feedback to the student and ensure you have taken a copy of the assessment prior to it being returned to the student.  Ensure the students name appears on the bottom of each page of the submitted assessment. |
| **About this marking guide** | The student’s response to each question must contain the information indicated in this marking guide in order for their response to be correct.  All questions must be answered correctly in order to satisfactorily complete this assessment event.  Assessors will need to make a judgement call as to whether each answer/response meets the criteria based upon the:   * Rules of Evidence:   + Validity – does the answer address the assessment question and does the evidence reflect the four dimensions of competency?   + Sufficiency – is the answer sufficient in terms of length and depth?   + Currency – has the work been done so recently as to be current?   + Authenticity – is this work the student’s own authentic work? * Principles of Assessment:   + Fairness – individual student’s needs are considered in the assessment process   + Flexibility – assessment is flexible to the individual student   + Validity – any assessment decision is justified, based on the evidence of performance of the student   + Reliability – evidence presented for assessment is consistently interpreted and assessment results are comparable irrespective of the assessor conducting the assessment * Dimensions of competency   + Task skills   + Task Management Skills   + Contingency Planning Skills   + Job Role Environment Skills |
| **Student must provide** | Calculator, pens, pencils, eraser |
| **Assessor must provide** | Knowledge assessment  Drawings may be printed on A3 sheets if required |
| **Due date/time allowed** | TBC / One hour |

## Part 1: Multiple choice

Read the question and each answer carefully. Put an X in the table next to your chosen answer.

1. The General Notes shown below indicate typical specifications. What unit of measurement is used for ‘All machine sizes’?

Table 2 multiple choice

|  |  |  |
| --- | --- | --- |
| General Notes | Answer choices | Put X next to your answer |
|  | 1. Micrometres |  |
| 1. Millimetres | **X** |
| 1. Metres |  |
| 1. Centimetres |  |

1. What does the abbreviation U.N.O mean in the GENERAL NOTES above?

Table 3 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Unless Known Otherwise |  |
| 1. Unit Number Otherwise |  |
| 1. Unless Not Otherwise |  |
| 1. Unless Noted Otherwise | **X** |

***Refer to ‘Drawing 09204-T5-1’ (Appendix 1) and answer the following questions***

1. How many **items** make up the stair assembly?

Table 4 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 1 item |  |
| 1. 2 items |  |
| 1. 7 items | **X** |
| 1. 4 items |  |

1. How many parts (QTY) in total are required for a complete stair assembly?

Table 5 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 1 part |  |
| 1. 2 parts |  |
| 1. 16 parts |  |
| 1. 23 parts | **X** |

5. The total mass of the Hand railing is:

Table 6 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 224.465 kg |  |
| 1. 49.758 kg |  |
| 1. 47.958 kg | **X** |
| 1. 45. 958 kg |  |

***Refer to ‘Drawing 09204-T5-2’ (Appendix 2) and answer the following questions***

1. All structural welds full penetration bevel or butt welds conform to what Australian Standard

Table 7 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. AS 1657 |  |
| 1. AS 1554-1-SP | **X** |
| 1. AS 1554-1-GP |  |
| 1. AS 1250 – 8.8/TS |  |

1. What size masonry anchors bolt the stairwell to the concrete wall?

Table 8 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. M16 | **X** |
| 1. M18 |  |
| 1. M6 |  |
| 1. M12 |  |

1. How many masonry anchors bolt the stairwell to the concrete structure?

Table 9 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 6 | **X** |
| 1. 16 |  |
| 1. 18 |  |
| 1. 12 |  |

***Refer to ‘Drawing 09204-T5-3’ (Appendix 3) and answer the following questions***

1. What type of material are the stair treads made from?

Table 10 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Diamond plate 6 long |  |
| 1. 200 PFC |  |
| 1. 300 PFC |  |
| 1. Diamond plate 6 thick | **X** |

1. What is the height of the Stair Assembly from the ground level to the top platform?

Table 11 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 2316 |  |
| 1. 1105 |  |
| 1. 3630.5 |  |
| 1. 2492 | **X** |

1. What is the Rise of each stair tread?

Table 12 multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 264 |  |
| 1. 178 | **X** |
| 1. 187 |  |
| 1. 246 |  |

1. From the pictorial drawing shown below left select the correct view names:

Table 13 multiple choice

|  |  |  |
| --- | --- | --- |
| Pictorial (Below) and Multiple Views in Third Angle Projection. | Answer Choices | Put X next to your answer |
|  |  |  |
|  | a) Front View |  |
| b) Top View |  |
| c) Left Side View | **X** |
| d) Right Side View |  |
|  | a) Front View |  |
| b) Top View | **X** |
| c) Left Side View |  |
| d) Right Side View |  |
|  | a) Front View | **X** |
| b) Top View |  |
| c) Left Side View |  |
| d) Right Side View |  |

1. Which document is the reference for Australian drawing standards in engineering?

Table 14 multiple choice

|  |  |
| --- | --- |
| **Answer choices** | **Put X next to your answer** |
| 1. AS1100 | **X** |
| 1. AS1554 GP |  |
| 1. AS1554 SP |  |
| 1. Engineering Australia Code of Practice (C.O.P) |  |

## Part 2: True or false

Read the question and then write **True** or **False** in the space provided.

Table 1 True or false

| Question | Symbol | Write *True* or *False* |
| --- | --- | --- |
| 1. The symbol shown right represents diameter |  | **TRUE** |
| 2. The symbol shown right represents 1st Angle Projection |  | **FALSE** |
| 3. The symbol shown right is a Datum Identification |  | **TRUE** |
| 4. The symbol shown right indicates a taper |  | **TRUE** |
| 1. The symbol shown right indicates a Centreline |  | **TRUE** |
| 1. The symbol shown right indicates a machined surface |  | **TRUE** |
| 1. The line shown right is a dimension line |  | **TRUE** |
| 1. The symbol shown right indicates a weld |  | **TRUE** |

## Part 3: Short answer

Read the question carefully. Your answer should be no longer than 50 (fifty) words.

***Refer to the ‘Bracket Detail Drawing’ (Appendix 4) and answer the following questions***

1. What are the overall dimensions of the object?
2. Total Length = 100mm
3. Total Height = 36 + 20 = 56mm
4. Total Width = R20 x 2 = 40mm
5. How many holes are shown on the drawing?

Total number of holes = 3

1. What are the diameters of the largest and smallest holes shown?
2. Largest hole diameter = 16mm
3. Smallest hole diameter = 12mm
4. What are the sloping lines called in SECTION AA?

Cross-hatching

1. What is the distance from the left hand edge of the bracket to the centreline of the first hole?

(100-55)/2 = 22.5mm

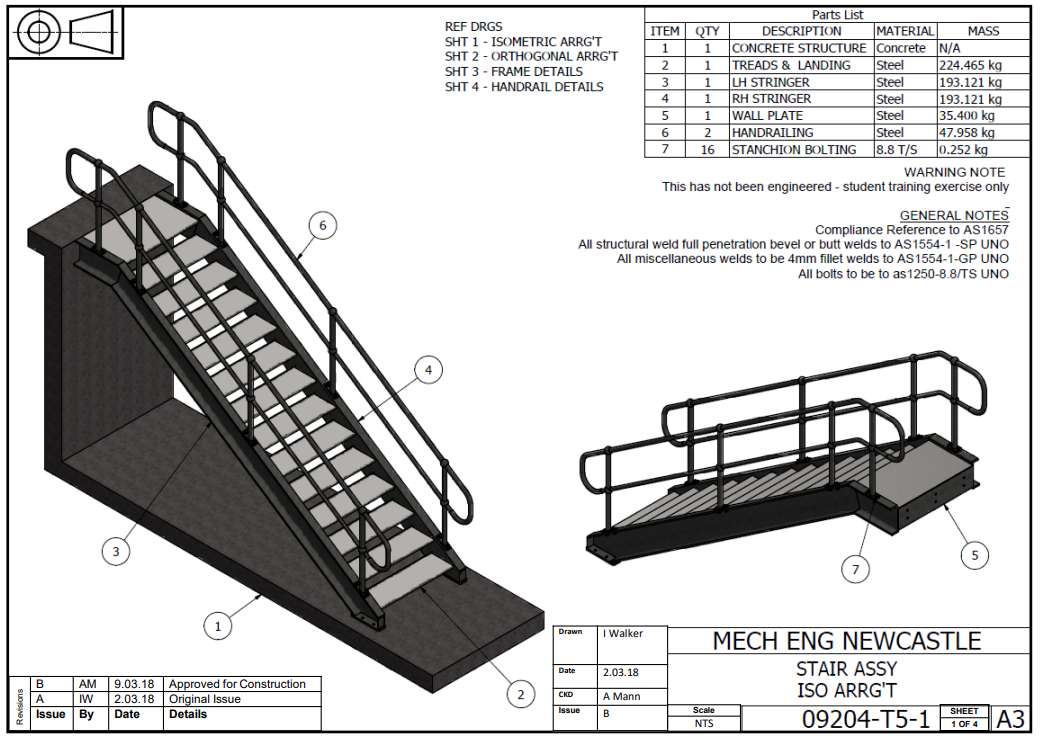
1. **Select word or phrases** from the following group and insert them in the correct place on table 1.0 below:

Radius, Not to scale, Inside Diameter, Across Flats, Diameter, Right Hand, Centre Line, Counterbore, Minimum, Left Hand, Drawing, International Standards Organisation, Maximum, Diameter

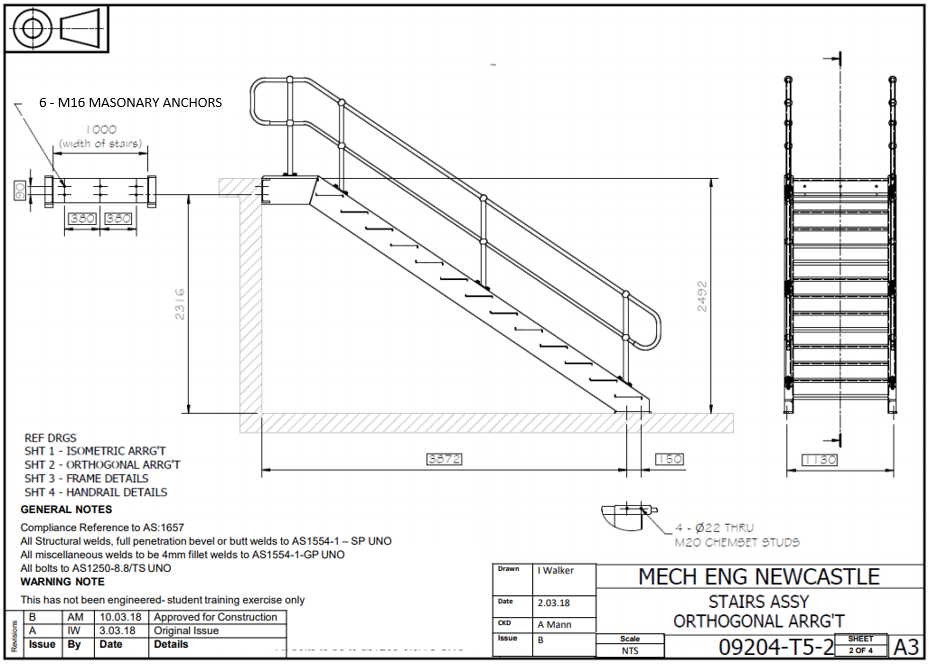
Table 1.0 Short answer

|  |  |
| --- | --- |
| **Abbreviation** | **Meaning** |
| A/F | **Across Flats** |
| CL | **Centre Line** |
| DIA | **Diameter** |
| DWG | **Drawing** |
| I.D. | **Inside Diameter** |
| ISO | **International Standards Organisation** |
| LH | **Left Hand** |
| MAX | **Maximum** |
| MIN | **Minimum** |
| N.T.S | **Not to scale** |
| φ | **Diameter** |
| R | **Radius** |
| RH | **Right Hand** |
| CB | **Counterbore** |

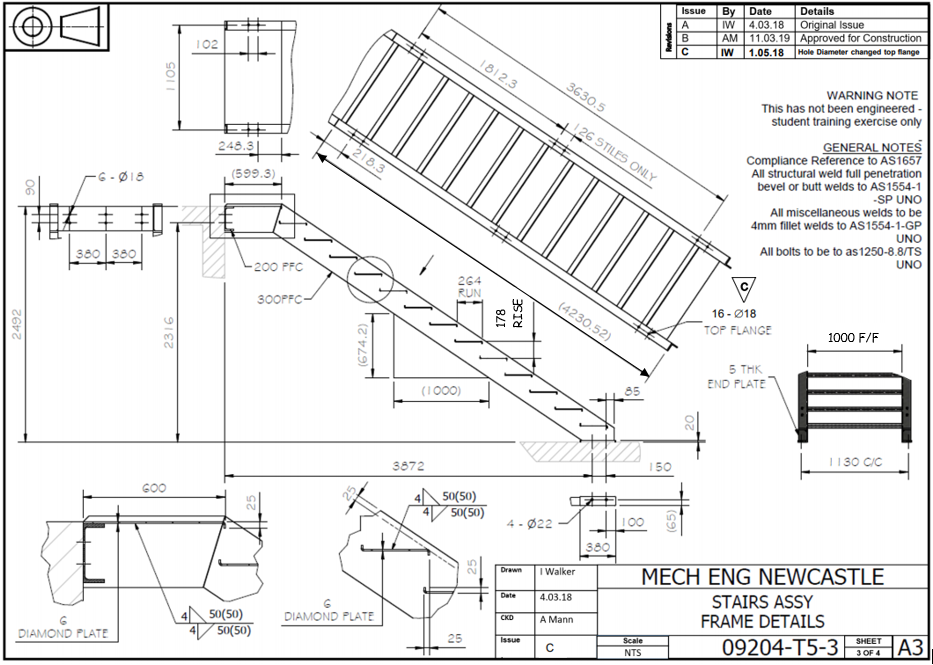
**APPENDIX 1**



**APPENDIX 2**



**APPENDIX 3**



**APPENDIX 4**

