

## **GENERAL EDUCATION AND TRAINING CERTIFICATE**

## **NQF LEVEL 1**

## **AET LEVEL 4 SITE-BASED ASSESSMENT**

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| **LEARNING AREA** | **:** | **MATHEMATICS AND MATHEMATICAL SCIENCES** |
| **CODE** | **:** | **MMSC4** |
| **TOOL** | **:** | **INVESTIGATION** |
| **TIME** | **:** | **3 HOURS** |
| **MARKS** | **:** | **50** |

**This assessment tool consists of 4 pages.**

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| **INSTRUCTIONS AND INFORMATION FOR THE TEACHER** |

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| 1. | This investigation is based on Unit standard ID 7464 and can be given while the Unit standard title is taught.  NB: AET facilitators must thoroughly deal with concepts of measurement in detail as this is relevant to the daily life’s situations of learners. |  |  |

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| **Activity 1: Cube Tank** |

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|  | 1.1.1 | Square | Correct answer | (1) |

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|  | 1.1.2 | A | Correct addition  Correct answer | (2) |

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|  | 1.1.3 | Area = | Correct substitution  Correct answer | (2) |

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|  | 1.2.1 | **Or**  Volume | Correct substitution  Correct answer  Correct units ( | (3) |

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|  | 1.2.2 |  | Correct conversion  Correct  Correct | (3) |

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|  | 1.2.3 | Recommended capacity | Correct multiplication of percentage and capacity of the tank  Correct rounding of answer | (3) |

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|  | 1.3.1 | 6 4  =24 panels | Correct multiplication  Correct answer  **Full marks for answer only** | (2) |

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|  | 1.3.2 | Area of a panel  TSA | Correct area of a panel  Correct multiplication  Correct answer | (3)  **[19]** |

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| **Activity 2 : A cylindrical water tank** |

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|  | 2.1.1 | 4,9 k | Correct changing of into | (1) |

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|  | 2.1.2 |  | Correct conversion  Correct answer | (2) |

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|  | 2.1.3 |  | Correct substitution  Correct answer | (2) |

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|  | 2.1.4 |  | Correct substitution  Correct  Correct answer | (3) |

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|  | 2.1.5 | Circumference | Correct substitution  Correct answer | (2) |

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|  | 2.2.1 | Area = circumference height  **Or**  Area | Correct substitution  Correct answer | (2) |

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|  | 2.2.2 | Area | Correct substitution  Correct answer | (2) |

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|  | 2.2.3 | Number of panels  panels | Correct substitution  Correct answer | (2) |

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|  | 2.3.1 |  | Correct substitution  Correct answer | (2) |

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|  | 2.3.2 |  | Correct conversion  Correct answer | (2) |

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|  | 2.3.3 | TSA | Correct addition  Correct answer | (2)  **[22]** |

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| **Activity 3 : The conclusion** |

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|  | 3.1.1 | Cost of cube tank  Cost of cylindrical tank | Correct manipulation  Correct cost of cube tank  Correct manipulation  Correct cost of cylindrical tank | (4) |

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|  | 3.1.2 | Maximum volume of cube tank  Maximum volume of cylindrical tank  the cylindrical tank offers the best value for money, because it has the biggest maximum volume and the least surface area whiles costing almost the same as cube tank | 1 mark for correct choice  2 marks for any relevant reason | (3) |

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|  | 3.1.3 | * Fixing leaking pipes * Watering the gardens at sunset * Harvesting rain water   Planting drought resistant plants | Any relevant reason | (2) |

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| **TOTAL:** |  | **50** |