

## **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** | **:** | **TEST** |
| **TIME** | **:** | **2 HOURS** |
| **MARKS** | **:** | **50** |

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

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| **INSTRUCTIONS AND INFORMATION** |  |  |

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| 1. | MARKING KEY  A = Accuracy  M = Method |  |  |

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| **QUESTION 1** |  |  |

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| 1.1 | 1.1.1 | lay –out of the toothpicks for pattern 4    Pattern 4 | One mark for correct shape  One mark for the correct number of toothpicks | (2) |

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|  | 1.1.2 | The relationship is that you need 6 toothpicks for the first hexagon; thereafter you only need 5 match sticks for every additional hexagon.  OR  Start with 6 toothpicks and increase by 5 each time. | Correct explanation | (2) |

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|  | 1.1.3 | A  OR  A | Correct equation | (2) |

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|  | 1.1.4 | M  OR | Substitution  Correct Answer | (2) |

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| 1.2 | 1.2.1 | 5; 8; 11A | Correct Answers | (3) |

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|  | 1.2.2 | T30 = 3(30)+ 2  = 92A | Substitution  Correct Answer | (2) |

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|  | 1.2.3 | 257 = 3*n* + 2  255 = 3*nA*  85 = *nA*  T85 has a value of 257 | Substitution  Simplification  Correct Answer | (3)  **[16]** |

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| **QUESTION 2** |  |  |

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| 2.1 | 2.1.1 | |  |  |  |  |  | | --- | --- | --- | --- | --- | | Total cost | 250 | 325A | 350 | 425 | | Hours worked | 1 |  | 3A | or 4,5 | | Correct Answers | (4) |

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|  | 2.1.2 | The electrician will be paid R 212, 50 for 15 minutes. | conversion  Substitution  Correct Answer | (3) |

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| 2.2 | 2.2.1 | Write the two equations that represent this information.  Let *y* = alternative and *x* = Gospel.  Then *y* = 2*x* + 3 and *x* + *y* = 150. | Correct equations  Accept any variables) | (4) |

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|  | 2.2.2  Number of alternative CD’S | Number of gospel CD’S | 2 marks for each Correct graph | (4) |

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|  | 2.2.3 | Line drawn from the point of intersection of the two graphs perpendicular to the -axis  Just below 50 rock CD's. |  | (2) |

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|  | 2.2.4 | A  The gospel CD's are represented on the *x* axis. | Simplification  Correct answer | (3)  **[20]** |

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| **QUESTION 3** |  |  |

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| 3.1 | 3.1.1 |  | Correct answer | (1) |

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|  | 3.2.3 |  | Correct answer | (1) |

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| 3.2 | 3.2.1 |  | Correct answers | (2) |

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|  | 3.2.2 |  | Correct answers | (2) |

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|  | 3.2.3 | A | Correct answers | (2) |

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| 3.3 | A | Transpose  Simplification  Correct answer | (3) |

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| 3.4 | Solve the inequality and graph the solution.  A    2  1  0  3 | Simplification  Correct answer  Correct graph | (3)  **[14]** |

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