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| Questions | Suggestive Answers | Marks |
| 1 | SchoolComputer.ComputerID ← 1234  SchoolComputer.ComputerLocation ← Lab2 | 2 |
| **1(b)(i)** | DECLARE StudentID : ARRAY[1:20] OF INTEGER | 1 |
| 1(b)(ii) | DECLARE ComputerID : 1000 .. 1999 //  DECLARE ComputerID : INTEGER 1000 .. 1999 | 1 |
| 1(c) | Any three from  • Computer ID hashed to give address / home location  • Compared to ID stored at address / home location  • Nothing stored, output message ‘record not found’  • Record IDs equal, record is found  • Record IDs not equal, search overflow area / next record  • Until record found or whole area searched  • If no record found error message | 3 |
| 2(a)(i) | Composite  box  Non-composite  size / enumerated  REAL  STRING | 4 |
| 2(a)(ii) | size | 1 |
| 2(b) | myBox[1].volume ← medium  myBox[1].price ← 10.99  myBox[1].colour ← "red" |  |
| 3 | 2 marks for all 5 single lines correct  1 mark for 4 lines correct otherwise zero |  |
| 3b | Type Enumerated  Classification Non-composite | 2 |
| 3b11 | DECLARE session : timeOfDay  session ← afternoon | 2 |
| 4 | An algorithm | 1 |
|  | One mark for each data type | 4 |
| 4(b)(ii) | One mark for variable name, and one for reason  Variable: Temp  Reason: Name does not indicate what the variable is used for | 2 |
| 1(c) |  | 4 |
| 5(a) | One mark per description of appropriate sub-problem for given scenario.  Examples include:   Allows the user to search for films being shown // input name of film they want to see   Allows the user to search for available seats   Calculate cost of booking   Book a given number of seats for a particular screening | 3 |
| 5(b) | Function | 1 |
| 6 | Simple Solution:  DECLARE ThisInt, Count : INTEGER  Count  0  FOR ThisInt  100 TO 200  IF ThisInt MOD 10 = 7 THEN  OUTPUT ThisInt  Count  Count + 1  ENDIF  NEXT ThisInt  OUTPUT Count  Mark as follows:  1 Declare loop variable and counter as integers, counter initialised  2 Loop 100 to 200, no step defined  3 Test value in a loop  4 Output selected value and incrementing a counter in a loop  5 Output the counter, following a reasonable attempt, after the loop  Alternative Solution:  DECLARE ThisInt, Count : INTEGER  Count  0  FOR ThisInt  107 TO 197 STEP 10  OUTPUT ThisInt  Count  Count + 1  NEXT ThisInt  OUTPUT Count  Mark as follows:  1 Declare loop variable and counter as integers, , counter initialised  2 Loop (107 to 197)  3 STEP 10 or explicit increment if conditional loop used  4 Output each value and incrementing a counter in a loop  5 Output the counter, following a reasonable attempt, after the loop | 5 |
| 6(b) | Mark as follows:  1. ANY test of MySwitch = 1, 2 or 3  2. All three comparisons and corresponding assignments  3. OTHERWISE, or initial assignment of default value  4. Completely correct IF...THEN...ELSE...ENDIF syntax | 4 |
| 7 | One mark per row | 5 |
| 7(b)(i) | 1 mark for any two rows correct  1 mark for all rows correct |  |
|  | One mark from:   To terminate a (conditional) loop when a value has been found   When the variable can take only one of two possible values   (Accept by example): When a variable is recording when an action has been done e.g. Yes or No // light is on |  |
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