

Nat 5: SDD Revision Questions

1. The program below stops when the user enters 0. The design could be improved to display a warning message if the total is greater than 75.

Use Pseudocode to show how this extra feature could be implemented. (3)

```
LINE 1. SET total TO 0
LINE2. RECEIVE destination FROM keyboard
LINE3. REPEAT
LINE 4.     RECEIVE distance FROM keyboard
LINE 5.     SET total TO total + distance
LINE 6. UNTIL distance =0
```

2. Identify the 3 variables used in the program above and state their data type (3)

3. Describe the 3 types of test data that should be used when testing a program. (3)

4. What is a Boolean variable? (1)

5. Using Pseudocode or a programming language of your choice, show how a program could check that a password entered by the user contains at least 7 characters. If it does it should display a message that it is valid. (3)

6. LINE 1. IF age >12 OR age <18 THEN
LINE2. SEND ["Can go to the disco"] TO DISPLAY
LINE3. END IF

When tested, the program contains an error. Explain the error in the program.

(1)

7. LINE1. RECEIVE L FROM keyboard
LINE2. RECEIVE B FROM keyboard
LINE 3 SET A TO L*B
LINE4. SEND[A] TO DISPLAY

Explain why the above code is not good practice.

(1)

8. Describe in detail what each line of code in the following program will do. (3)

```
age = inputbox ("Please key in your age.")
If age >= 17 then
    Txtdisplay.text = "Woo hoo you can now learn to drive a car!")
End if
```

9. In the program code in question 8 above identify the input, process and output commands. (3)

10. The program below is a game that invites the player to guess a number that the computer is "Thinking" of.

The player is asked to key in their guess, the computer will compare this with the number held in its memory (in this case 15), and will then display a message stating whether their guess is **lower** than the number.

There are **2 errors** in the code below.

Examine the coding **carefully line by line** and answer the question below;

```
computernumber = 15  
usersguess = inputbox ("Please key in your guess.")  
If usersguess > to 17 then  
    txtdisplay.text = "Your guess is lower than the number I'm thinking of.")  
End if
```

What are the two errors? (2)

11. Write a program that will ask the user to type in four test marks, each out of 20, calculate and display the total and average of the 4 marks. (Hint: use a Fixed Loop) (4)

12. Name and describe two pre-defined functions. (2)

13. Name a standard design notation that could be used to plan a solution to a problem. (1)

14. A user has been asked to enter "Y" or "N". Write Pseudocode to check whether the data entered is correct and, if not, ask for it to be entered again. (3)