Name: Class: Mark:

1. Look at the following algorithm.

1. A 🡨 0
2. First 🡨 TRUE
3. MoreItems 🡨 TRUE
4. WHILE MoreItems
5. OUPTPUT "Enter item or -1 to end"
6. INPUT Item
7. IF Item = "-1"
8. THEN
9. MoreItems 🡨 FALSE
10. ELSE
11. IF First
12. THEN
13. A 🡨 Item
14. ELSE
15. First 🡨 FALSE
16. IF Item < A
17. THEN
18. A 🡨 Item
19. ENDIF
20. ENDIF
21. ENDIF
22. ENDWHILE

(a) Give the name of the 🡨 symbol used in line 1. [1]

(b) Which lines of code will be run if the user enters "-1" the first time they are asked to enter something? [2]

(c) The values of variables at the start of the program are:

 A: 0
First: TRUE

 In the first iteration, the user enters the number 15.

 State the values of the variables once the first iteration has completed. [2]

 A:

 First:

(d) On the second iteration the user enters the number 7.

 State the value of variable A at the end of the second iteration. [1]

(e) Name the purpose of the algorithm. [1]

2. (a) What would be the state of the following list after each of the first four passes in a Bubble sort, sorting into ascending sequence?

 65, 34, 28, 68, 52, 21 [4]

(b) How many passes will be made through the list used in part (a) using the
Bubble sort algorithm in order to sort it? [1]

[Total 12 marks]