Department of Computer Science, N.U.I. Maynooth
CS151 – Discrete Structures 1
Class Test 1
Thursday 27 October 2005, 13:00

Instructions:
1. Remove all notes, books, blank paper, and electronic devices from your desk. Blank paper will be provided if you need it.
2. Write your name, student number, and course below
3. Write <u>yes</u> or <u>no</u> in each of the spaces provided (check both sides of page)
4. You have 30 minutes for this test. Hand this script to the invigilator before you leave and make sure to sign the attendance sheet when you do so. This will verify that you actually handed up a script if for some reason it goes missing.

Name: _____

Student number: _____

Course (Arts, CSSE, Finance, Venture Mgt., Music Tech., etc.): _____

The following truth table is used to prove that the logical statement Not (A And B) is equivalent to (Not A) Or (Not B). There are several missing entries.

Row	A	B	A AND B	Not (A AND B)	Not A	Not B	(Not A) OR (Not B)
1	F	F	F	T	T	T	T
2	T	T	T	F	F	F	F
3	T	F	F	T	F		
4	F	T	F	T	T		

1. Should the blanks in row 3 contain symbols T and T in that order (yes or no)?

Answer: _____

2. Should the blanks in row 4 contain symbols F and F in that order (yes or no)?

Answer: _____

The following truth table is used to prove that the logical statement If A then B is equivalent to if (Not B) then (Not A). There are several missing entries.

	A	B	If A then B	Not A	Not B	If (Not B) then (Not A)
1	T	T				
2	T	F				
3	F	T				
4	F	F				

3. Should the blanks in row 1 contain the symbols F F F F in that order (yes or no)?

Answer: _____

4. Should the blanks in row 2 contain the symbols T F T T in that order (yes or no)?

Answer: _____

5. Should the blanks in row 3 contain the symbols T T T F in that order (yes or no)?

Answer: _____

6. Should the blanks in row 4 contain the symbols T T T F in that order (yes or no)?

Answer: _____

The following truth table is used to prove that the logical statement Not (A Or B) is equivalent to (Not A) And (Not B). There are several missing entries.

	A	B	A OR B	Not (A OR B)	Not A	Not B	(Not A) AND (Not B)
1			T	F			F
2			T	F			F
3			T	F			F
4			F	T			T

7. Should the blanks in row 1 be F T T F in that order (yes or no)?

Answer: _____

8. Should the blanks in row 2 be F F F F in that order (yes or no)?

Answer: _____

9. Should the blanks in row 3 be T F F T in that order (yes or no)?

Answer: _____

10. Should the blanks in row 4 be T T F F in that order (yes or no)?

Answer: _____

You should use the remainder of this page for rough work (if needed)