

# CSC165 QUIZ 1, THURSDAY MAY 26TH

Name:

Student number:

Examine the table below that associates employees with a gender and salary. Based on the table is the following claim true or false (justify your answer)?

Every female employee earning more than 55,000 is a male.

EMPLOYEE	GENDER	SALARY
Al	male	60,000
Betty	female	500
Carlos	male	40,000
Doug	male	30,000
Ellen	female	50,000
Flo	female	20,000

SAMPLE SOLUTION: A universally-quantified claim is false if and only if a counterexample exists. In the above claim, a counterexample would have to be a female employee earning more than 55,000 who is not male. Since examination of the table verifies that there are no female employees earning more than 55,000, no counter-example exists, so the claim is true.

MARKING SCHEME: 1 mark for saying that a counterexample is needed to make a universally-quantified claim false, 1 mark for verifying that for the above claim has no counterexample.