

**KING FAHF UNIVERIST OF PETROLEM & MINERALS
ICS DEPT.
ICS 251 FOUNDATION OF COMPUTER SCIENCE
SECTION 1**

QUIZ 2

DATE:11/10/97

NAME: _____

ST #: _____

QUESTION 1

Find the greatest common divisor d of the integers a and b , and write d as $sa + tb$.

$a = 45$ $b = 33$.

QUESTION 2

Find the least common multiple d of the integers. $a = 72$, $b = 108$.

QUESTION 3

Define the following:

a) A tautology:

a) A contradiction:

QUESTION 4

Prove that the following is a tautology: $((p \rightarrow q) \wedge (q \rightarrow r)) \rightarrow (p \rightarrow r)$

QUESTION 5

Without using the truth table, prove that $\sim(p \leftrightarrow q) \equiv ((p \wedge \sim q) \vee (q \wedge \sim p))$.