

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

QUIZ 3

DATE: 6/12/97

NAME: _____

ST #: _____

QUESTION 1

Let $A = \{a, b, c, d, e\}$ and let $R = \{(a, a), (a, c), (a, e), (b, d), (c, a), (d, c), (d, d), (e, a), (a, c)\}$ relation on A . Use Warshall's algorithm to compute the transitive closure of R .

QUESTION 2

Let f be a function from A to B . Determine whether function f is one to one and whether it is onto.

$A = \mathbb{R}$, $B = \{x \mid x \text{ is a real and } x \geq 0\}$; $f(a) = a^2$

QUESTION 3

Let $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$ Compute the product $(3, 5, 7, 8) \circ (1, 3, 2)$

QUESTION 4

Let $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$. Write the following permutation as product of transpositions.
 $(2, 1, 4, 5, 8, 6)$.