Name: \_\_\_\_\_

Directions: Show all work. No credit for answers without work.

1. [5 points] Find a maximum matching in the following bipartite graph and a set  $S \subseteq X$  whose deficiency proves the matching is maximal.



2. [5 points] Given a set  $\{1, 2, 3, 4, 5\}$  of men and a set  $\{a, b, c, d, e\}$  of women with the following preference lists, find a stable matching.

