## Quiz 4

1. Consider the following preference schedule, with comparison graph on the right, and answer the ensuing questions.

| 1 | 2 | 1 | 1 | 2 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $D$ | $D$ | $D$ | $A$ | $B$ | $C$ |
| $A$ | $B$ | $C$ | $B$ | $C$ | $A$ |
| $B$ | $C$ | $A$ | $C$ | $A$ | $B$ |
| $C$ | $A$ | $B$ | $D$ | $D$ | $D$ |


(a) List all primitive dominating sets for this example (1pt each).

$$
\begin{aligned}
\mathscr{D}_{A} & = \\
\mathscr{D}_{B} & = \\
\mathscr{D}_{C} & = \\
\mathscr{D}_{D} & =
\end{aligned}
$$

(b) Are there any other dominating sets for this example? Circle one (1 pt): Yes No
(c) What is the Smith set? (1 pt)
$S=$ $\qquad$
(d) What is the winner set for plurality? (1 pt)
$W_{P}=$ $\qquad$
2. Circle T if the claim is true, F if the claim is false. (1pt each)
(a) If $X$ is a Condorcet candidate, then $X$ is a Smith winner.
(b) If $X$ is a Majority candidate, then $X$ is a Smith winner.

T F
(c) If $X$ is a plurality winner, then $X$ is a Smith winner.

T F

