

## LIST OF THEOREMS AND PROOFS TO KNOW FOR EXAMS<sup>33</sup>

I want you to know the proofs of the following results.

- (1) Pareto under quasi-linear preferences: Proposition 2.
- (2) Properties of WE: Lemma 2.
- (3) The structure of the proof of the Existence Theorem 4: without the details, I want you to understand how to construct the correspondence and what is the role of the fixed-point theorem.
- (4) FWT: Theorem 6.
- (5) The structure of the proof of the SWT Theorem 8: without the details, with the construction of sets  $X^*$  and  $Y^*$ , and what is the role of the separating hyperplane theorem.
- (6) WE is in the core: Theorem 9.
- (7) Part 2  $\Rightarrow$  1 (Radner to Arrow-Debreu) of Proposition 3 .
- (8) Convex games have nonempty core: Proposition 4.
- (9) Stability of men-proposing algorithm: Theorem 13.
- (10) Optimality of men-proposing algorithm: Theorem 14
- (11) Rural hospital theorem: Theorem 16
- (12) If a TU matching is stable then it maximizes welfare : The first part of Theorem 19
- (13) Assortative TU matching: Theorem 21.

You are also responsible for (understanding and being able to use) all the definitions and statements of all other results (that we discussed during the class) as well as problem sets.

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