FRO-III, Problems of the Week N° 9 2019 Professor Nicolai Cramer

1. Yohimbine is a natural pharmacologically active indole alkaloid and an OTC dietary supplement.

Synthetically, it can be prepared from tryptamine A and compound B in a single pot procedure. Provide the mechanism of the transformation. What is the name of the reaction?

Additional Exercise How would a proposed synthesis forchlorfenuron (a plant growth regulator) work? What are the structures of **D**, **E** and the individual intermediates? Hint: The synthesis of **E** requires rearrangements and, Grignard reactions)