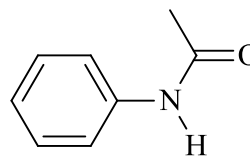
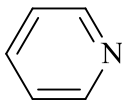
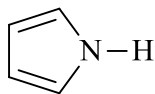
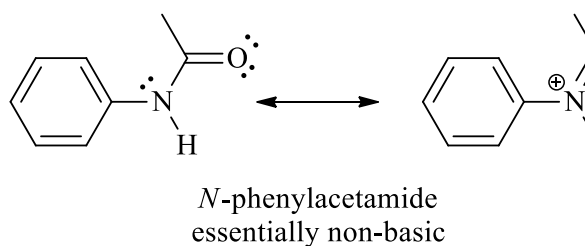
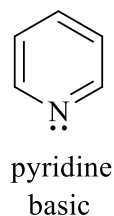
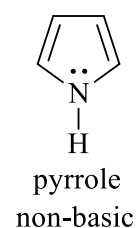
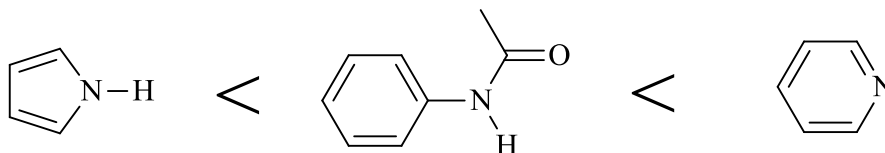


- Rank the following compounds in order of base strength and explain your reasoning. You may use diagrams to assist your explanation.

3



Order of base strength is:



Pyridine is the most basic as the lone pair of electrons on nitrogen is available to bond with H^+ .

Pyrrole is the least basic as the “lone pair” of electrons on nitrogen is part of the aromatic π -electron system and is delocalised around the ring. It is not available for bonding with H^+ ions.

***N*-Phenylacetamide is essentially non-basic as the lone pair of electrons is involved in resonance forms (including delocalisation of the positive charge into the aromatic ring, which is not shown).**