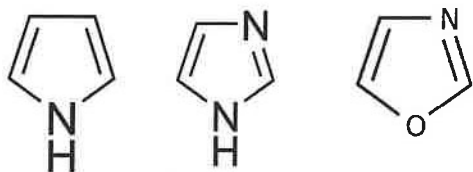


### List of Questions

- 1) Describe a possible application of liquid chromatography.
- 2) UV/Vis spectroscopy for the characterisation and quantification of a molecule.
- 3) What is the isoelectric point of an amino acid?
- 4) Kinetics and thermodynamics of cyclization reactions.
- 5) Compare properties of pyrrole, imidazole and oxazole



- 6) Briefly describe the steps from isolation to the determination of the structure for an organic compound.
- 7) Free radical polymerization: general aspects and mechanism of reaction.
- 8) Molecular structural parameters that affect the glass transition temperature of polymers.
- 9) Describe one or more examples of synthetic polymers, by highlighting the structure-property relationships.
- 10) Electrochemical corrosion of metals.
- 11) Describe a property of material surfaces as a function of a specific application.
- 12) Metal oxides with amphoteric behavior: definition and general properties.
- 13) Describe one or more spectroscopic techniques for determining the geometry of a molecule
- 14) The molecular partition function and its relation to thermodynamic properties.
- 15) Describe a computational protocol to simulate the IR spectrum of a molecule.

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