



NBU-003-036401 Seat No. _____

M. Sc. (Pharmaceutical Organic Chemistry)

(Sem. IV) (CBCS) Examination

April / May - 2017

POC - 401 : Heterocyclic Chemistry

Faculty Code : 003

Subject Code : 036401

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

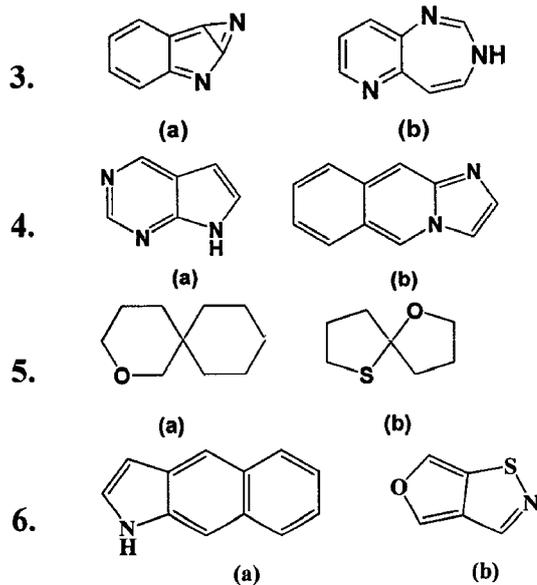
Instructions:

1. All Questions are compulsory & carries equal 14 marks
2. Draw suitable diagram / Scheme wherever necessary.

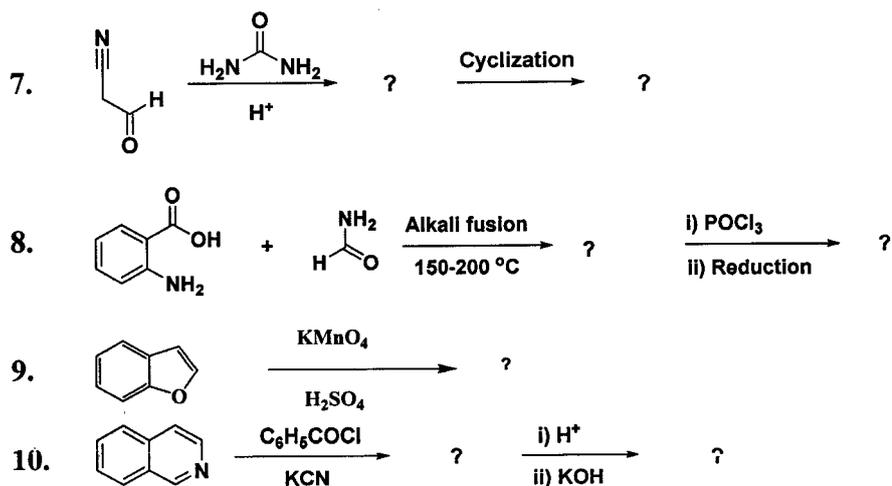
1 Answer any **seven** of the following ten questions. [14 Marks]

1. Why pyridine is more basic than pyrimidine?
2. Why electrophilic attack occur at position-2 in pyrrole?

Give IUPAC nomenclature of the following heterocyclic compounds.



Complete the following reactions.



2 Answer any two of the following three questions. [14 Marks]

1. Describe preparation and properties of Pyridine
2. Give three synthesis of benzodiazepine.
3. Explain chemical reactivity of Quinoline nucleus

3 Answer the following questions. [14 Marks]

1. Give three synthesis of (i) Isoindole (ii) Triazole
2. Explain chemical reactivity of pyrrole nucleus.

OR

3 Answer the following questions. [14 Marks]

1. Give three synthesis of (a) Oxirane (b) Thiazole
2. Explain chemical reactivity of Isoquinoline.

4 Answer any two of the following three questions. [14 Marks]

1. Give at least three synthesis of Thiadiazole
2. Give at least three synthesis of Dioxane
3. Describe the chemical reactivity of Pyrazole

5 Answer any two of the following four questions. [14 Marks]

Give at least three synthesis of following heterocyclic compounds:

1. (a) Azetidine (b) Oxirane
 2. (a) Isatin (b) Thiophene
 3. (a) Benzopyran-2-one (b) Quinoxaline
 4. (a) Furan (b) Benzopyran-4-one
-