

M.Sc. Semester - 3 (CBCS) Examination

Oct/Nov. - 2017

HETEROCYCLIC CHEMISTRY (CORE)

Time: 2:30 Hours

Marks: 70

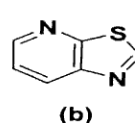
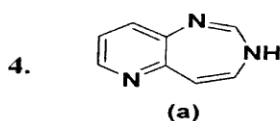
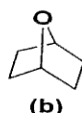
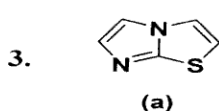
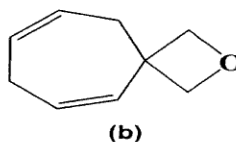
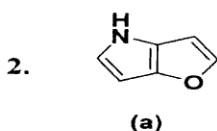
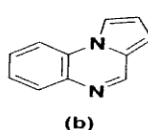
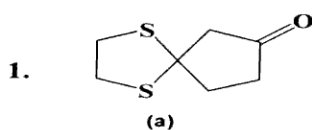
Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

Que-1. Answer any Seven of the following ten questions.

(14)

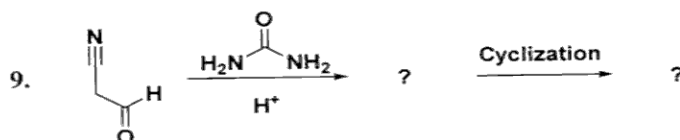
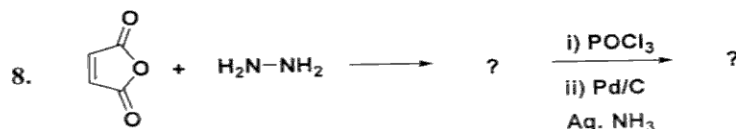
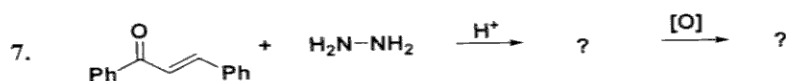
Give IUPAC nomenclature of the following hetero cycles.



5. Why electrophilic attack occur at position-2 in pyrrole?

6. Why pyridine is more basic than pyrrole?

Complete the following chemical reactions:



Que-2. Answer any Two of the following three questions. (14)

1. Describe the chemical reactivity of Pyrazole.
2. Discuss preparation and properties of Aziridine.
3. Describe physical properties and three preparation of benzofuran.

Que-3. Answer the following questions. (14)

1. Describe preparation and properties of Pyridazine.
2. Write any three synthesis of (i) Oxiran (ii) Thietane.

OR

Que-3. Answer the following questions. (14)

1. Give three synthesis of (a) Diazirine (b) Indolizine.
2. Explain chemical reactivity of Thianaphthene.

Que-4. Answer any Two of the following three questions. (14)

1. Give any three synthesis of Diazepine.
2. Enlist any three synthesis of Triazole.
3. Write at least three synthesis of Pyrimidine.

Que-5. Answer any Two of the following four questions. (14)

Give at least three syntheses each of following heterocycles.

- | | |
|------------------|-----------------|
| 1. (a) Thiepine | (b) Isoxazole |
| 2. (a) Carbazole | (b) Thiazole |
| 3. (a) 2-pyrone | (b) Quinoxaline |
| 4. (a) Oxetane | (b) Quinoline |
