	Roll No.:
Total No. of Questions: 5]	[Total No. of Printed Pages: 1

## W-3269(A)

# M.Sc. (Fourth Semester) Examination, (Second Chance) June-2020 CHEMISTRY

Paper - MCH-604

### **Heterocyclic Chemistry**

Time: Three Hours
Maximum Marks: 85

Minimum Pass Marks: 29

**Note:** Attempt **all** questions.

#### **Unit-I**

- Q.1. Explain the following:
  - i) Brief account of empirical and delocalization resonance energy.
  - ii) Criteria of Aromaticity.

#### **Unit-II**

Q.2. Describe hydrogen bonding and intermolecular nucleophilic electrophilic interactions.

#### **Unit-III**

Q.3. Discuss chemistry Benzothiophene.

#### **Unit-IV**

- Q.4. Give synthesis and applications of following:
  - i) Pyrone and Pyrillium salt.
  - ii) Benzopyrillium salts.

#### **Unit-V**

- Q.5. Write synthesis and applications of following:
  - i) Heterocyclic compounds of Boron.
  - ii) Heterocyclic compounds of Antimony.

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