

6. How will you identify the following on the basis of IR and NMR Spectroscopy ?
- (a) Acetone and Ethanol
- (b) Ethyl amine and Acetaldehyde.
7. What are Grignard reagents ? Discuss structure, preparation and types of reaction given by Grignard reagents.
8. Discuss acidic nature of sulphonic acid.

SECTION—C

9. (a) What is TMS ?
- (b) Discuss applications of UV spectroscopy.
- (c) What do you mean by functional group region and fingerprint region in IR spectroscopy ?
- (d) Give chemical reactions of organolithium compounds.
- (e) Give chemical reactions of thioethers.

Roll No.

Total No. of Pages : 2

PC 11472-NH

CS/2111
ORGANIC CHEMISTRY—II
Semester- V

Time Allowed : Three Hours]

[Maximum Marks : 26

Note :- Candidates are required to attempt *two* questions (4 marks each) selecting *two* each from Sections A and B. Section C is compulsory (2 marks each question).

SECTION—A

1. Discuss theory, principle and applications of NMR spectroscopy.
2. Write a note on :
 - (a) Spin spin splitting
 - (b) Shielded and deshielded protons.
3. Derive and explain Beer's Law.
4. (a) Discuss various types of electronic transition with example.
(b) What do you understand by red and blue shift ?

SECTION—B

5. (a) Explain in plane and out of plane bending vibrations.
(b) When does a molecule absorb infrared light ?