

Assignment II  
CHE-304  
Sem V 2017  
Unit Test II

**UNIT –III (A) NMR Spectroscopy**

**Long Questions:**

1. Discuss about principle and instrumentation of NMR.
2. Why we use TMS as reference in NMR?
3. Explain briefly shielding and deshielding with an example.
4. Explain about factors affecting chemical shift in NMR.
  - (a) Electronegativity
  - (b) No. of halogen
  - (c) Types of compound
  - (d) Other effect
  - (e) Inductive effect
  - (f) Anisotropic effect
5. Explain about spin-spin coupling, peak multiplicity
6. Explain different types of coupling
7. Give the comparison between chemical shift and coupling constant (J)
8. Explain deuterium labeling and NMR spectra.
9. What are equivalent and non-equivalent protons? (Enantiomeric and Distereomeric)

**UNIT –III (B)**

Combined examples (As per Book)