

COURSE CODE: 18MSIBT115

COURSE NAME: GLP & BIO INSTRUMENTATION

COURSE CREDITS: 03

MAX. MARKS: 35

MAX. TIME: 2 HR

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1. Answer/Explain the followings.

[2x6=12] [COV]

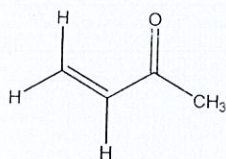
- Coupling constant
- Broad band proton decoupled ¹³C Spectra
- CD Spectroscopy and its application
- Main goals of GLP
- Magnetic shielding
- Types of mass spectrometer

Q2. a) Discuss basic instrumentation and components of High performance liquid chromatography. Explain theory behind chromatographic separation in HPLC. [5]

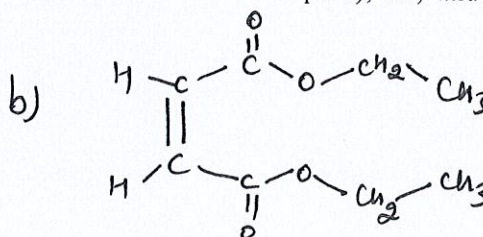
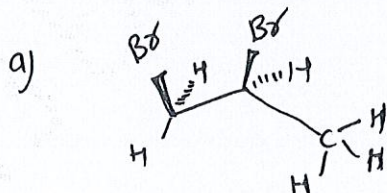
b) Explain ESR with suitable example. [3][COIV]

Q2 Answer the following questions. [COVI]

a) Analyse the spin-spin coupling seen in the ¹H NMR spectrum of vinyl acetate among protons on the double bond. [4]



b) Predict and draw ¹H NMR, ¹³C (off resonance and Proton decoupled), IR, and Mass spectrum of following compounds. [8]



c) How can you differentiate the following compounds on the basis of ¹³C spectroscopy [3]

