

Roll No.

Y – 3134(A)
M.Sc. (Fourth Semester) (SPECIAL) EXAMINATION, August 2021
(SECOND CHANCE)
CHEMISTRY
Paper–MCH-504
Application of Spectroscopy (Organic Chemistry)
Time : Three Hours

Maximum Marks : 85

Minimum Pass Marks : 29

Note : Attempt *all* questions.

1. Discuss ultraviolet bands for following compounds : 17
 - (a) Aromatic hydrocarbon
 - (b) Unsaturated carbonyl compounds.
2. Write notes on : 17
 - (i) Finger Print Region
 - (ii) Effect of H-bonding on vibrational frequencies.
3. Discuss the following : 17
 - (a) Spin-spin interaction
 - (b) Karplus curve variation of coupling constant.
4. Explain the following techniques : 17
 - (a) NOESY
 - (b) DEPT.
5. Write notes on (any *two*) : 17
 - (a) Retro Diel's Alder Reaction
 - (b) Nitrogen Rule
 - (c) Hemolytic and Heterolytic cleavage.

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