Time : 01 Hour

Answer all questions.

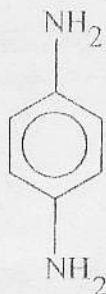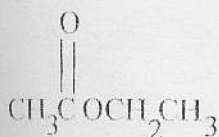1.(a) Using woodward-fiesher-scott rule calculate the λ_{max} value for each of the following compounds.
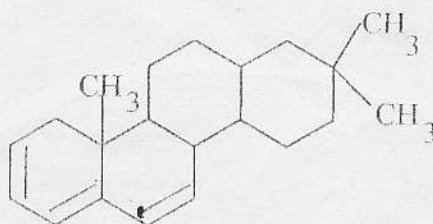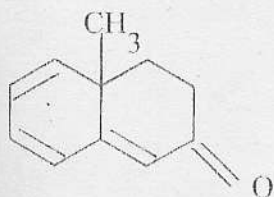
(b) Sketch the Proton NMR spectrum including the multiplet expected for each of the following compounds with TMS as a standard .Predict the approximate chemical shift in each of the spectra.

(c) The InfraRed spectrum of a compound $\underline{A}$ ($C_{10}H_{12}O_2$) showed strong absorptions at 1720 cm^{-1};1100 cm^{-1} 1320 cm^{-1} 1600 cm^{-1} ,690& 750 cm^{-1}. ^{1}H NMR spectrum of the compound A had signals at δ 7.9(m,2H), δ 7.5(m,3H) ,δ 5.2 (septet,1H) , δ1.4(d,6H). Interpret the spectral data and deduce the structure of the compound $\underline{A}$.

(d) Explain the term 'Mc.Lafferty rearrangement' with an example.