Preface

The primary functions of a lubricant are reduction the friction and wear between two moving surfaces in relative motion, heat removal and contaminant suspension etc. Apart from these, there are additional functions for automotive and industrial purposes. Lubricant is generally a combination of lubricating oil and an additive package (up to 30%). Additives either improve the existing properties of lubricating oil or bring in some new properties. They are composed of large variety of chemicals depending on specific properties required to introduce. From last few years demands for multifunctional additives have increased noticeably. In the present work the author has synthesised some multifunctional additives for lube oil and has evaluated their additive performance in different base oils. In Part I, the polymeric additives has been synthesized from poly acrylate and are blended with liquid crystals. Their additive performance has been evaluated in different base oils. In Part II, Synthesis, characterization and performance evaluation of vegetable oil based polymeric additives has been reported. Synthesis, characterization and performance evaluation of some nanoparticles blended polyacrylate additives has been reported in Part III of the thesis.