The explosive growth of science and technology has increased human comforts by establishing more and more factories to produce newer and greater varieties of goods. The increase in broad spectrum of industrial belts, photochemical complexes, oil refineries, steel mills etc., ultimately resulted in environmental pollution by splitting out a number of poisonous waste substances into their surroundings. The phenomenon of environmental pollution is considered as old as the environment itself, but it has taken as alarming proportion only in recent years. Heavy metals are one of the resultants of these modern technologies emerged as major contributors to the problem of pollution.

All heavy metals are potentially harmful to most of the organisms, terrestrial as well as aquatic, at some level or other, and are reported to produce toxic effects (Lucky et al., 1975). Several reports have come to light in recent years explaining that heavy metals interfere with various metabolic aspects of an organism and cause death or sublethal pathology (Wobester, 1975; Spehar, 1978; Sastry and Gupta, 1978, 1979; Nammalwar, 1983; Ray 1984; Chandravathy and Reddy, 1994; Cervantes et al., 2001; Satyavathi, 2002).

Metals deposited in the aquatic environment may accumulate in the food chain and cause ecological damage and even form a threat to human health (Grimanis et al., 1978; Adams et al., 1992; Ermosele et al., 1995). Contamination of aquatic environment by heavy metals not only endangers the survival of organisms inhabiting that environment, but also leads to harmful effects on human beings when they consume the affected organisms. This is well established by the tragedy of 'Minimata' disease caused by the consumption of shellfish and finfish from Minimata, Bay in Japan, contaminated by mercury. Different heavy metals affect man at different levels. Lead could lead to the damage of brain, kidney, liver, stomach and intestine and also the nervous system (Satinder et al., 2004). Low-dose exposure to chromium cause adverse effects on the kidney (Jadwiga et al., 2002). Cadmium, a nephrotoxic
metal, has the tendency to accumulate in kidney. Arsenic accumulates in the liver, kidney, lungs and skin and is regarded as carcinogenic. Copper accumulates in the liver and is considered as a factor for anemia. Nickel accumulates in the spinal cord, brain, lungs and heart, and is regarded as factor for dermatitis and variety of cancers. The main source of these heavy metals causing abnormalities in human beings is the consumption of finfish and shell fish inhabiting in polluted aquatic environment (Parks et al., 1991; Rask and Metsala, 1991; Milwan Kee, 1997). Hence it is necessary to understand the various response patterns of them to toxic metals in order to analyse their abilities of survival and productivity, before connecting them to human health (Kiddee and McCoy, 1995). But such studies are limited and the reports are in consistant.

Fish represent an important component of aquatic life and serve as a staple food for human beings. In view of the limited knowledge available on the effects of heavy metals on various biochemical and histological aspects of freshwater fishes, the author in a humble way has chosen a small segment of this vast subject and studied the sublethal effects of lead and chromium on a few aspects of ions and associated ATPases, carbohydrate, protein and lipid metabolisms and histology of the freshwater fish, Cyprinus carpio, which is having a great commercial value.

The author feels that this work is only preliminary and further extensive studies are required to arrive at definitive conclusions. A rigid limitations in the availability of laboratory facilities and time for completion of work prevented the author from penetrating into the core of this investigation. Nevertheless, the author is hopeful of pursuing this work further.