CHAPTER-VII
SUMMARY
The thesis with a brief introduction on the toxicity of detergents and phenolic toxicants brings out the present state of knowledge relating to impact on freshwater fishes and their responses to detergent and phenolic toxicants. The results obtained on the toxic effects of some detergents and phenolic toxicants to *Oreochromis mossambicus* and *Cyprinus carpio* are summarised.

1) The increasing order of toxicity for *O. mossambicus* was found to be

\[
\text{PhenoK} \prec \text{p-cresol} \prec \text{SDS} \prec \text{Triton X-100} \prec \text{SLS.}
\]

2) In case of *C. carpio*, the increasing order of toxicity was found to be

\[
\text{PhenoK} \prec \text{p-cresol} \prec \text{SDS} \prec \text{SLS} \prec \text{Triton X-100.}
\]

3) Alterations in the rate of oxygen consumption on exposure to acute and sublethal levels as evidenced by mucus secretion and hemorrhage through the gills and pectoral fins.

4) Oxygen uptake by fish under detergents and phenolic toxicant stress can be considered as an indicator of intensity and metabolism.

5) Behavioural changes as evidenced by surfacing, gulping of air, irregular opercular movements and loss of equilibrium.

6) Alterations in the tissue glycogen and protein content were evident at lethal and sublethal level exposure.

7) Aquatic animals such as freshwater fish have considerable potential in biological monitoring of environmental pollution.

8) Lethal and sublethal levels of toxicants inflict stress on the mechanism of the fish, which is required for maintaining healthy physiological state.
9) Symptoms of detergents and phenolic toxicants poisoning to freshwater fish are identical for the said toxicants.

10) Preference and avoidance of detergent and phenolic plumes exists and certain detergents and phenolic toxicants lure the fishes to the toxic environment.

11) Freshwater fishes are the end consumers in the aquatic food chain and thus can be monitored as an indicator of detergent and phenolic enrichment.