V. CONCLUSIONS
CONCLUSION

The present investigation had been carried out to assess the favourable and unfavourable effects of certain commonly used pesticides on three Chlorophycean microalgae namely *Chlorella ellipsoidea*, Gerneck, *Chlorococcum humicola*, (Naeg.) Rabenhorst and *Scenedesmus bijuga*, (Turp.) Lagerheim, under controlled laboratory conditions. The pesticides selected for the study were an organochlorine insecticide endosulfan, an organophosphorus insecticide ekalux, a herbicide fenoxone, a fungicide indofil and a biopesticide nimbex. The following conclusions were derived from the results of the study.

- Ekalux the organophosphorus insecticide was found to be more toxic to the treated microalgae than the other selected pesticides.
• Femoxone, the hormone-type herbicide used widely in weed control, proved to be the least toxic and it had only an immediate adverse effect on the growth parameters of tested algae.

• The alga Scenedesmus bijuga, (Turp.) Lagerheim was found to be less tolerant to the pesticides, as it showed more reduction in the growth and other related parameters, compared to Chlorella ellipsoidea, Gerneck, and Chlorococcum humicola, (Naeg.) Rabenhorst.

• The lower concentrations of all the pesticides stimulated growth in Chlorococcum humicola, (Naeg.) Rabenhorst, and Chlorella ellipsoidea, Gerneck exhibited the same trend except in the case of indofil.

• The higher concentrations of the pesticides under study inhibited the growth and primary production of treated algae, with the reduction percentages increasing along with increase in concentrations.

• The three microalgae showed varied responses to different pesticide treated and their responses tend to change with the time of exposure.

• The 96hr EC$_{50}$ values determined, proved that productivity of the algae was more affected than the cell numbers when the pesticides were applied.