PREFACE
Interest in the present work was derived from the colossal amount of literature published during the years on the subject and also from the works carried out on radiation background in the department during those days. It appeared to us that though much has already been said and done in the field yet many more remains to be done for a more clear understanding of the biological effects of radiation and the problem of their protection. As chronic effects of radiation are matter of years, attention was geared towards the study on the immediate effects of acute radiation exposure. It has been observed that most of the deaths following acute exposure to radiation occur due to morbid involvement of the gastrointestinal tract giving rise to characteristic signs and symptoms, collectively known as intestinal syndrome. As such the present work has been planned to study the effects of radiation on intestine in its metabolic, functional and structural aspect instead of a simple survival study with the idea that more minute informations may be obtained in the attempt. The study on radio-protective effect was also done right at the organ level instead of the classical survival study on whole animal and thus a departure was made from the traditional approach to the problem. As protective agent hypothermia, which has the highest radio protective effect on record, was chosen.
All possible attempts have been made to make the presentation simple and the treatment exact. No attempt has been made to incorporate into the thesis work investigations not relevant to the present object. Due to the lack of facilities, relatively older methods had to be adopted, at least, on some occasion during the course of investigation, without, of course, losing the objective at hand. The above procedure, however, was pursued as it did not interfere with the investigations aimed at and also because of the fact that a more modern method, perhaps, was not really needed. However, no attempt has been made to prolong the thesis work unnecessarily and to run aimlessly after sophisticated technology in a vain attempt to elevate the standard of the thesis work.