Acknowledgement

I would like to thank everyone who supports me for completing my research work and fulfilled my thesis. I also express my gratitude to my colleagues and teachers for support me.

I am profoundly grateful to my respected guide Dr. Sandip Chattopadhyay (Associate Professor, Department of Bio-Medical Laboratory Science and Management, Vidyasagar University, Midnapore, West Bengal, India) for his endless inspiration, enthusiasm, valuable advice and guidance, without which it would not have been possible for me to persue the present work. Thanks to him for the ideas and support in writing thesis and nice talks together.

I sincerely thanks to Dr. Amit Kumar Mandal (Assistant Professor, Department of Sericulture, Raiganj University, Raiganj, Uttar Dinajpur, India) for his support and encouragement during the study.

I sincerely acknowledge to USIC, Vidyasagar University for providing the infrastructural facilities to fulfill my research work.

I acknowledge to Mrs. Vertika Rai (School of Medical Science and Technology, IIT, Kharagpur) for her technical assistance to complete the thesis.

I also thanks to my colleagues Mr. Bimal Deb, Mrs. Hasina Perveen, Miss Shamima Khatun, Mrs. Moumita Dash, Mrs. Lipi Rani Jana, Mr. Arindam Dey, Mr. Suryashis Jana and Mr. Soumitra Barick for their endless co-operation during the execution of my Ph.D. assignment.

Last but not least I express my sincere gratitude to my beloved parents, family and the people

who are closest to my heart for always support to let me achieve my dreams. I cannot say how much you support me every time. Thank you so much for you appreciation in each moment.

Moulima Meity

Moulima Maity