CERTIFICATE

It is certified that the work entitled "Synthesis, Characterization of Bi-functional Membrane and its Application for Chromium (VI) Removal" by "Zeenat Arif" has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirement of Comprehensive Examination, Candidacy and SOTA for the award of Ph.D. Degree

Supervisor

(Prof. P.K. Mishra)

Department of Chemical

Engineering & Technology

IIT(BHU) Varanasi

Co- Supervisor

(Dr. Bhawna Verma)

External Supervisor

Department of Chemical

Engineering & Technology

IIT(BHU) Varanasi

iii