

Declaration and Certificate of Originality

I certify that in the preparation of this thesis, I have observed the provisions of the scientific Code of Ethics. Further; I certify that this work is free of plagiarism and all materials appearing in this thesis have been properly quoted and attributed.

I certify that all copyrighted material incorporated into this thesis is in compliance with the international copyright law and that I have received written permission from the copyright owners for my use of their work, which is beyond the scope of the law.

I agree to indemnify and save harmless faculty of Engineering, Aswan university from any and all claims that may be asserted or that may arise from any copyright violation.

I hereby certify that the research work in this thesis is my original work and it does not include any copied parts without the appropriate citation.

Student Name,

.....