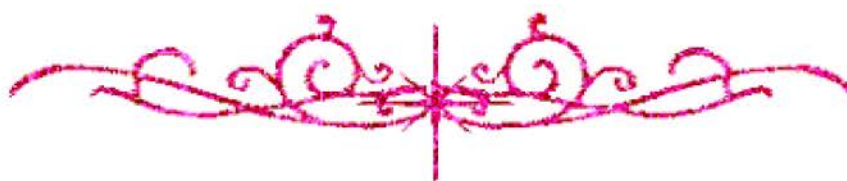


سامية محمد مصطفى



شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم



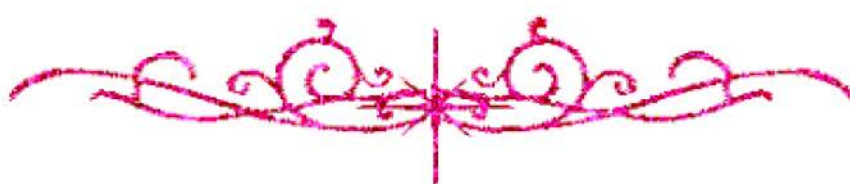
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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

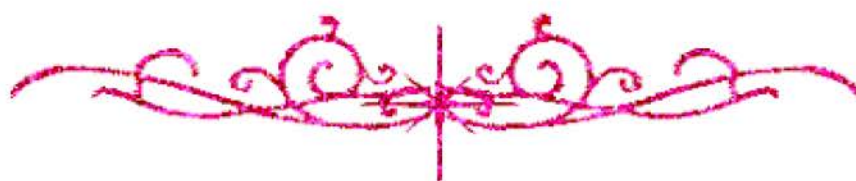
قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



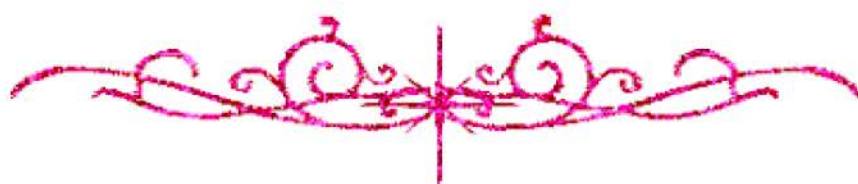
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بعض الوثائق الأصلية تالفة



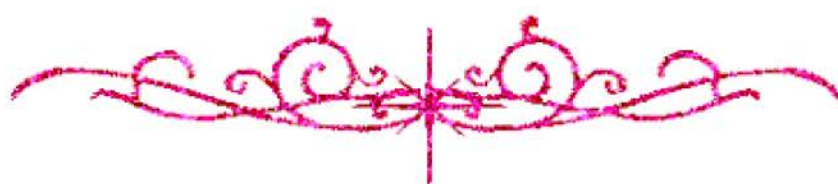
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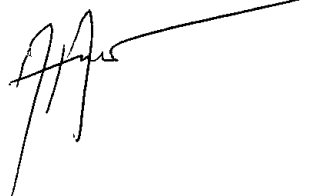
شبكة المعلومات الجامعية



بالرسالة صفحات لم ترد بالأصل



CAIRO UNIVERSITY
FACULTY OF ENGINEERING
IRRIGATION AND HYDRAULICS DEPARTMENT



AGGRADATION AND DEGRADATION IN NILE RIVER REACHES USING HEC-6 MODEL

BY
ENG. WAEI TAHA AHMED ALDAHSHOORY
B.SC. CIVIL ENGINEERING
CAIRO UNIVERSITY (FAYOUM BRANCH)

A Thesis Submitted for Partial Fulfillment
of Degree of Master of Science in Civil Engineering

SUPERVISED BY

Prof. Dr. **MOHAMED MOKHLES ABOU SEIDA**
Professor of Hydraulics
Faculty of Engineering - Cairo University

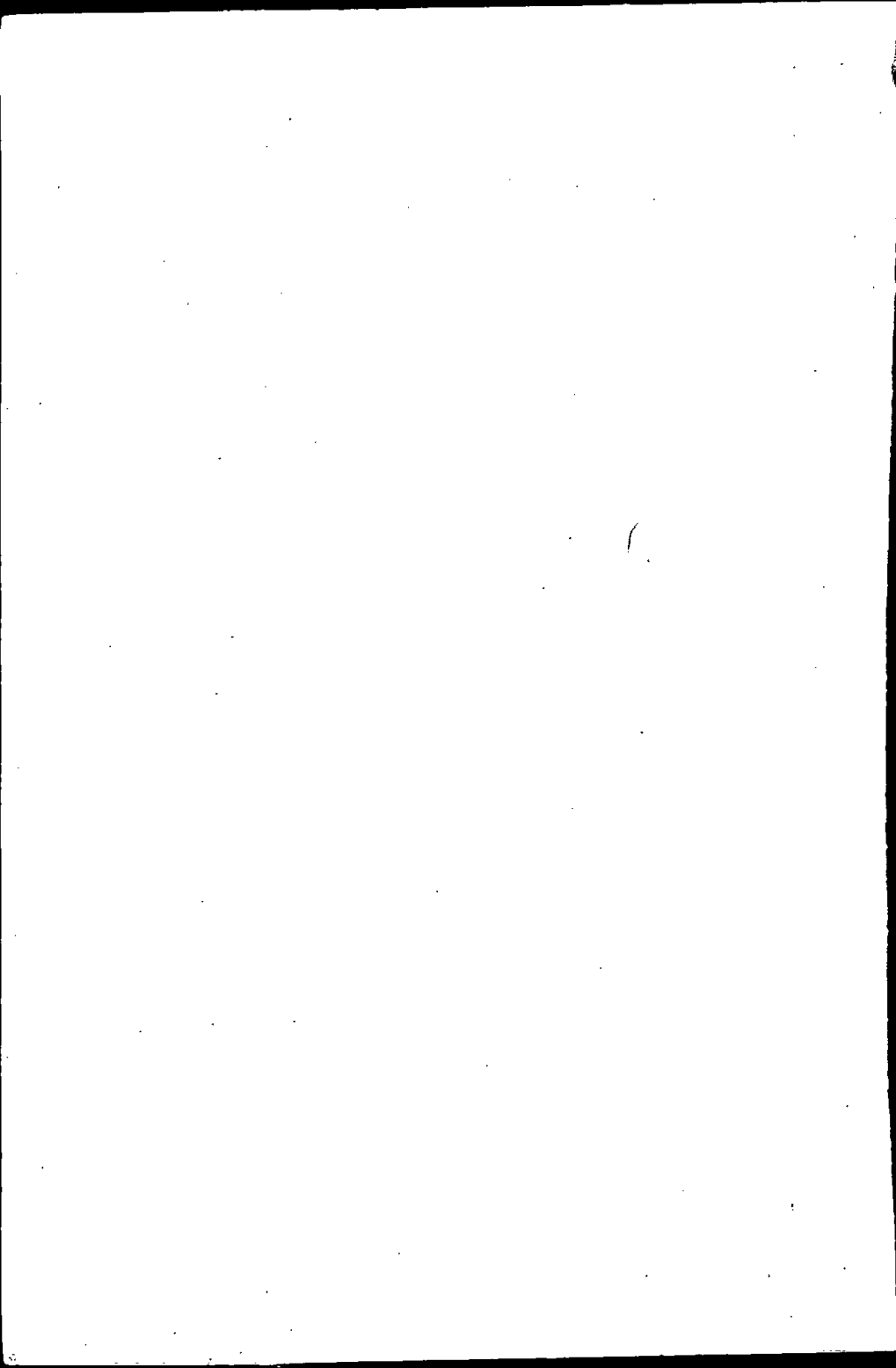
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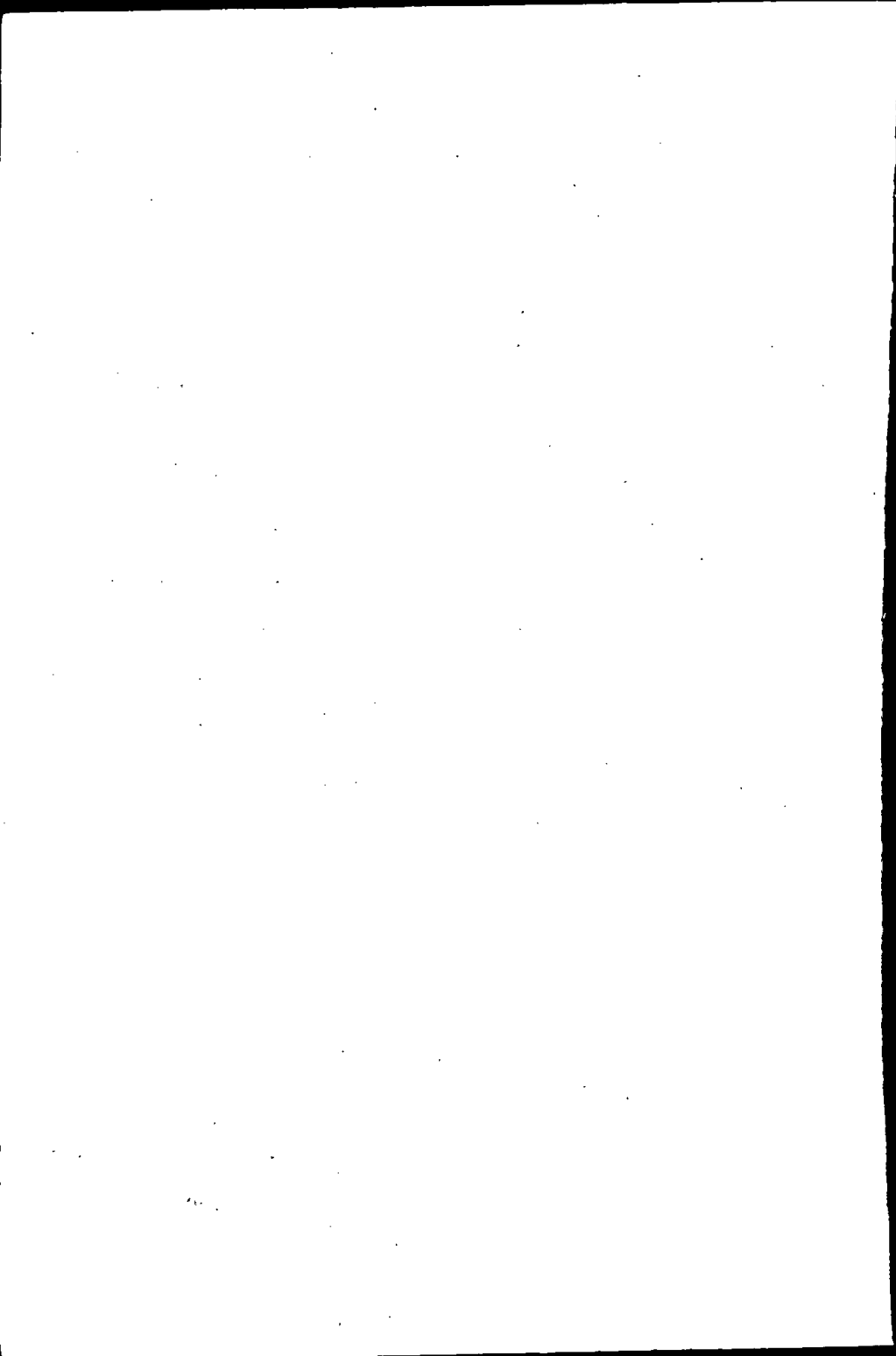
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Water Research Center

E. M. El-Moattasem

Al. 17.

TO
MY PARENTS
&
MY WIFE

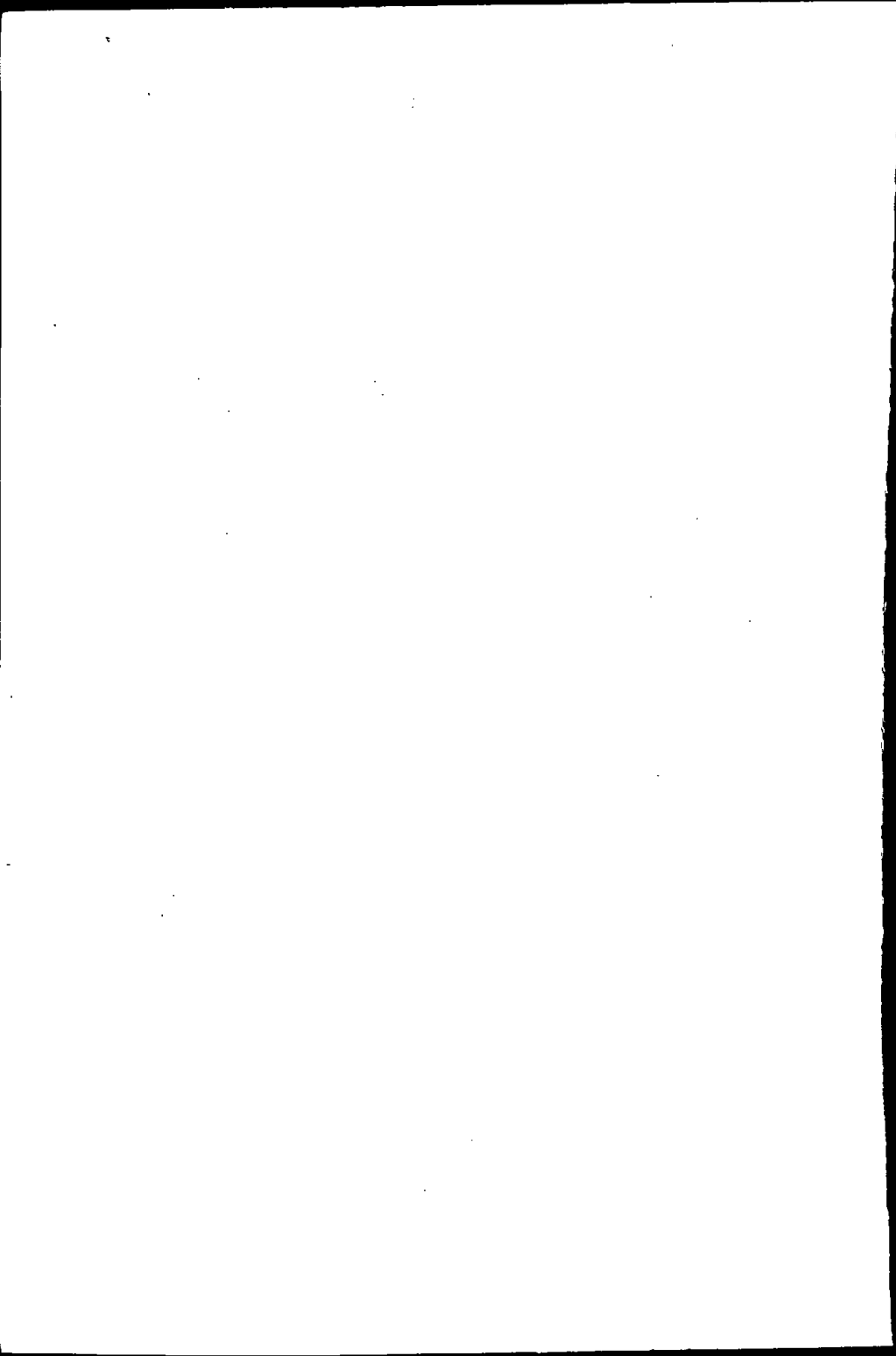


ABSTRACT

The main objectives of this study are to identify the degradation and aggradation areas along the reaches of Nile River, get the temporal and spatial changes in the resistance of the water course, and predict the changes in water depths along the reaches for water distribution studies as well as for navigation facilities.

To reach these objectives, HEC-6 computer model is applied to the second and third reaches of Nile River. Calibration and verification processes give the change of roughness (Manning's n) as a function of the rate of flow and distance. Scenarios for future flow release from the High Aswan Dam were used as an input to the model for prediction of maximum scour and deposition. The results indicate that the maximum scour depths in the second and third reaches after 50 years (1976-2025) are 2.68 and 1.99 meters down stream Esna Barrage and Nag-Hammadi Barrage respectively. The maximum deposition depths are generally found in the area of back water curves tails which are formed up-stream the barrage at the end of any reach.

The study showed that, some cross sections have critical water depths that cause problems for navigation therefore it is recommended to apply two dimensional model to these locations.



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