شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

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

يجب أن

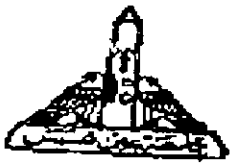
تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل



RADIOTHERAPEUTIC ABSORBED DOSE DETERMINATION USING THE RECENT INTERNATIONAL ATOMIC ENERGY AGENCY CODE OF PRACTICE, 1997

PRESENTED BY

MOHAMED METWALLY MOHAMED MOHAMED

(B.Sc.1993)

Thesis Submitted In the Partial Fulfillment of the Requirement for the Degree of Master of Science in Physics.

PHYSICS DEPARTMENT
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THE

ENCY

pproved

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Physics Department

Title: **RADIOTHERAPEUTIC ABSORBED DOSE DETERMINATION USING THE RECENT INTERNATIONAL ATOMIC ENERGY AGENCY CODE OF PRACTICE, 1997.**

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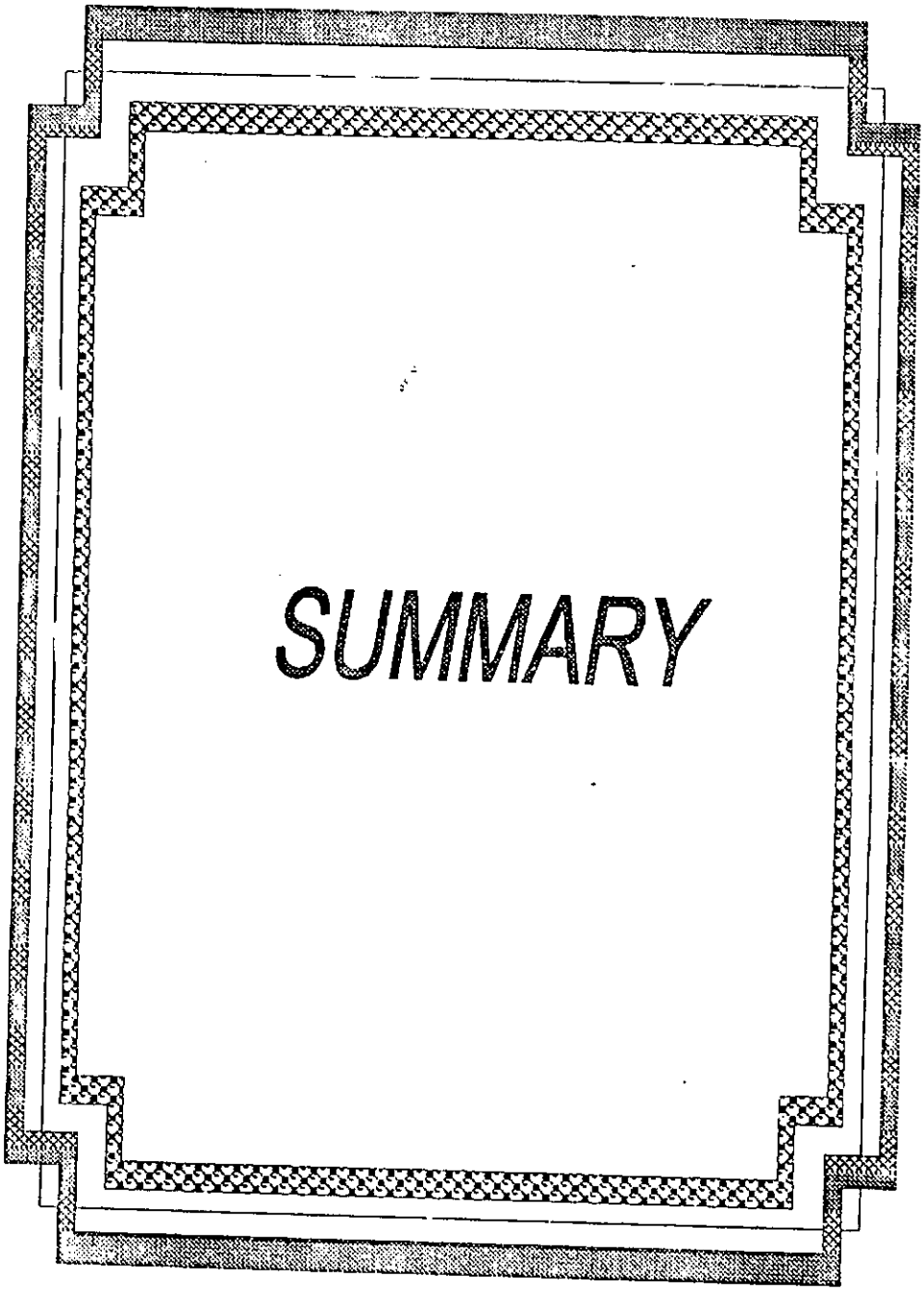
SUMMARY

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One of the recent dosimetry protocols for the dosimetry of high-energy photon and electron beams using the plane parallel ionization chamber was introduced by the IAEA on 1997 (TRS 381). This protocol is an extension and complementary of the previous IAEA protocol (TRS 277).

Before the publication of this protocol, TRS381, the most famous dosimetry protocols used in Egypt were the IAEA (TRS 277): the American Association of Physicists in Medicine AAPM {TG21 (1983), TG25 (1991) and TG39 (1994)}(called TG-protocol in this work) and Nederlandse Commissie Voor Stralingsdosimetrie (NCS) (1986,1989) dosimetry protocols.

An intercomparative study is performed to know the improvement level carried by the new international dosimetry protocols to the ratiotheraputec dosimetry in both photon and electron beams in Egypt.

The study is authored in five chapters contained in this thesis. The first chapter is a literature review on dosimetry protocol. The second chapter illustrates the dosimetric units, quantities and terminology. The third chapter focused on the formalism and the recommended data in the protocols of interest. The fourth chapter includes description of the therapeutic units, specification of phantoms and dosimetry systems used in this work and detailed information about the various steps of the experimental work. The fifth chapter includes results, discussion and conclusion in two parts: part (I) for photons and part (II) for electrons.