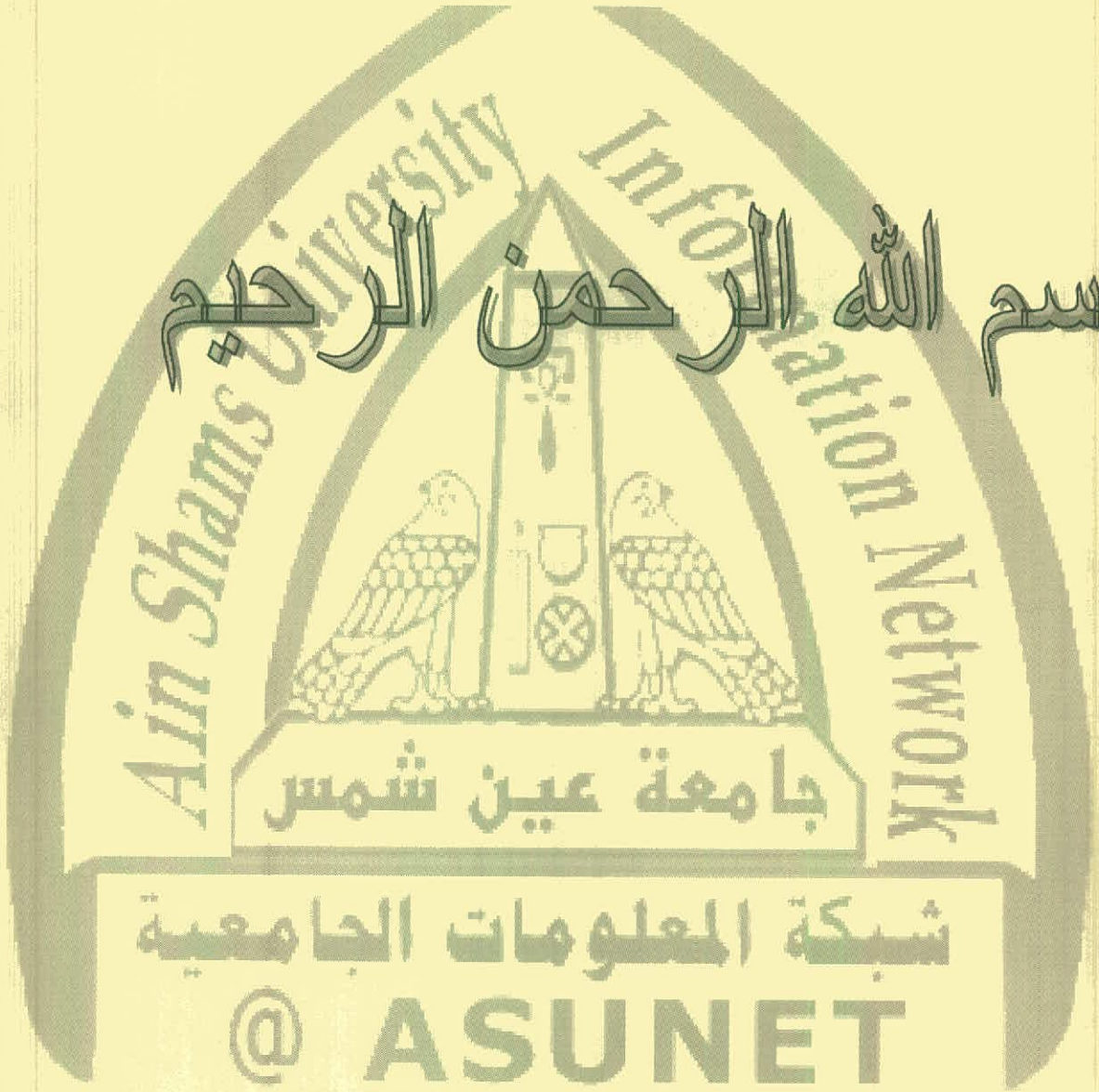

شبكة المعلومات الجامعية




# 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

El-Mansoura University
Faculty of Engineering
Structural Engineering Department

# FUNDAMENTAL PERIOD OF VIBRATION OF MULTISTORY REINFORCED CONCRETE BUILDINGS

*By*

*Aiman Ezzat Mohammed Morsy*

*B.Sc. (Civil Eng.) May, 1992*

*A Thesis*

Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Structural Engineering

*Under Supervision of*

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بسم الله الرحمن الرحيم

﴿ قالوا سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم ﴾

صدق الله العظيم

سورة البقرة آية ﴿ ٣٢ ﴾

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*Ayman Ezzat Mohammed*

# ABSTRACT

This thesis deals with the dynamic analysis of multistory reinforced concrete buildings and aims at finding a simple approach for evaluating the fundamental period of vibration of such buildings.

A comparative study for previous formulae in different codes and researches has been presented.

A parametric study is made on multistory- multibay frames with different properties to investigate the influence of the different parameters affecting the fundamental period of vibration of such frames.

Two formulae for the calculation of the fundamental period have been developed for the cases of frames of uniform properties and of frames of different member properties, and of different bay lengths. One of the two formulae are based on calculating the fundamental period of a unit frame which can be chosen arbitrarily from the different units of the frame under consideration. The formulae account for the effect of the frame height, width, members properties and frame mass on the magnitude of the fundamental period.

A verification study has been conducted on the proposed approach and formulae using different models with variable properties.

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