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**A STUDY OF THE CONCEPTS OF LIMIT THEOREMS AND  
THEIR APPLICATIONS IN  
THE G.C.E. (A/L) COMBINED MATHEMATICS SYLLABUS**

A PROJECT REPORT PRESENTED BY

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With the introduction of the new amended syllabus in 1995, some lesson units have been dropped from the G.C.E. (A/L) Combined Mathematics syllabus. It disregards directly to the constructive Mathematics knowledge of the students. Comparing other lesson units teachers as well as students feel that the questions in the G.C.E. (A/L) examination, under the concepts of limit theorems have been declined after 2000. As a consequence, students have taken very little interest in learning concepts of limit theorems. With this background, the main objective of this study was to find out the problems faced by the teachers and the students, after introducing new amended syllabus.

A sample of Mathematics students from government schools in Gampaha and Kandy districts, teachers from same schools, as well as undergraduate students from Peradeniya University was selected for the study. An assignment, a questionnaire, an interview and G.C.E.(A/L) examination marking schemes were used as tools for collecting data. The assignment was used to collect data from the G.C.E. (A/L) students who offer Combined Mathematics. The questionnaire was used for university students who offer Mathematics as a subject in the university and the interview was held for G.C.E. (A/L) Mathematics teachers.

Prior to year 2000, the syllabus of Pure Mathematics contained number of important lessons under concepts of limit theorems those are useful to the higher education of the students. But when new amended syllabus was introduced in 1995, some of the important lessons under concepts of limits were dropped from the syllabus. Regarding of lack of knowledge of the students who follow the Combined Mathematics syllabus, they still can get qualified for higher studies.

Finding of this study revealed that the amended syllabus is not sufficient for the improvement of students' knowledge about concepts of limit theorems and their applications. Study disclosed that there is a correlation between the examination procedure and the students learning trend. Furthermore, it revealed that the existing new amended syllabus of Combined Mathematics does not provide an adequate knowledge to students who wish to follow higher studies in Mathematics.

Most of the experienced G.C.E. (A/L) Combined Mathematics teachers who have taught mathematics more than two decades are not satisfied with the new amended syllabus.

