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**DEVELOPING A SUPPLEMENTARY STUDY GUIDE IN
PHYSICS APPLICATION IN BIOLOGY AND MEDICINE FOR
INTERMEDIATE LEVEL PHYSICS**

PROJECT REPORT PRESENTED BY

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to the Board of Study in Science Education of the
POSTGRADUATE INSTITUTE OF SCIENCE

*In the partial fulfillment of the requirement
for the award of the degree of*

MASTER OF SCIENCE IN SCIENCE EDUCATION

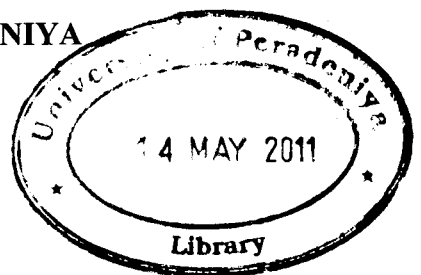
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**DEVELOPING A SUPPLEMENTARY STUDY GUIDE IN PHYSICS
APPLICATIONS IN BIOLOGY AND MEDICINE FOR
INTERMEDIATE LEVEL PHYSICS**

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The aims and objectives of the project were mainly to popularize the subject Physics by identifying interesting Physics applications in the field of Biology and Medicine, to classify the Physics applications in Biology and Medicine according to the units given in the General Certificate of Education (Advanced Level) syllabus, to create the awareness among the GCE A/L students regarding some simple Biological process where Physics laws and concepts are involved and to make the process of teaching easier for teachers who involve in intermediate level Physics teaching.

The above objectives were meant to be achieved by means of a supplementary study guide. This study guide was prepared after analyzing the GCE (A/L) Physics syllabus, teachers' guide for GCE A/L Physics, past papers and various Physics books that are written for intermediate level Physics. Input from the formal and informal discussions with group of experienced GCE A/L Physics teachers and GCE A/L students are very significant.

Materials for the supplementary study guide were collected from various text books, web resources, journals and articles written under the topics of Physics applications in Biology and Medicine, Medical Physics and Health Physics. The study guide consists of seven lessons namely mechanics, waves and vibrations, light, thermal Physics, matter and radiation, mechanical properties of matter and electricity. Each lesson helps students to increase their subject knowledge by understanding Physics applications in Biology and Medicine.

After piloting the study guide to a group of teachers revisions were done. Then it was given to 28 experienced Physics teachers with a questionnaire. Their responses revealed that the study guide was highly appreciated because of the important applications of Physics in the functions of human body and in the Medical field. They also expressed that students will appreciate the knowledge of Physics through the examples in the study guide.