**APPROXIMATION METHODS FOR SOLVING FIRST ORDER**

**PARTIAL DIFFERENTIAL EQUATIONS**

**ADEBISI ADEWUNMI FAITH**

**MATRICULATION NO: 20182972**

**DEPARTMENT OF MATHEMATICS**

**COLLEGE OF PHYSICAL SCIENCES**

**FEDERAL UNIVERSITY OF AGRICULTURE, ABEOKUTA.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE DEGREE IN MATHEMATICS.**

## DECLARATION

I hereby declare that this research was written by me and is a correct record of my own research. It has not been presented in any previous application for any degree of this or any other University. All citations and sources of information are clearly acknowledged by means of references.

#### ADEBISI ADEWUNMI FAITH

#### Date:. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## CERTIFICATION

This is to certify that this research work entitled **Approximation Methods for Solving First Order Partial Differential Equations** is the outcome of the research work carried out by **Adebisi Adewunmi Faith** (20182972) in the Department of Mathematics, Federal University of Agriculture, Abeokuta, Ogun State.

*. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .*

#### PROF. M.O OMEIKE Date

(**SUPERVISOR**)

*. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .*

#### DR. E.O. ADELEKE Date

( **HEAD OF DEPARTMENT**)

## DEDICATION

This project work is dedicated to Almighty God, the creator of the universe and all mankind, who gave me this grace from the inception of this project work till its completion. And also to my wonderful family, starting from my beloved parents, Mr and Mrs Adebisi as well as my ever-supportive siblings and to everyone that has been supportive and helpful in my education life.

## ACKNOWLEDGMENTS

All glory, honour and adoration is to the Almighty God who has made the success of the research work and the completion of my BSc. programme at large a reality.

I would like to express my gratitude and appreciation to my supervisor, Prof M.O OMEIKE whose help in stimulating suggestion and encouragement helped in the process of completing this project. I also sincerely thank him for the time spent proofreading and correcting my many mistakes.

I am grateful to the the Head of Department, DR. E.O. Adeleke , immediate past Head of department Prof. B.I. Olajuwon and all lecturers of the Department of Mathematics, because all I have been taught from my first year in the Department made it possible for me to carry out this research work.

My sincere appreciation also goes to my parent Mr and Mrs Adebisifor their full support, advice, prayer, love and care placed on me throughout this project period and my stay on campus at large. Daddy and Mummy, I pray to God that you live long to eat the fruit of your labor.

My profound appreciation also goes to my wonderful siblings for their immensive contribution physically, spiritually, financially towards the success of my programme. I pray that almighty God take them to higher grounds.

Finally, my sincere gratitude also goes to all those who have contributed to my success in FUNAAB: my friends, departmental mates and many others that i couldn`t mention their names. Thank you all and God bless you. (AMEN).

## ABSTRACT

Table of Contents

[DECLARATION i](#_Toc144200135)

[CERTIFICATION ii](#_Toc144200136)

[DEDICATION iii](#_Toc144200137)

[ACKNOWLEDGMENTS iv](#_Toc144200138)

[ABSTRACT v](#_Toc144200139)