## LIST OF CONTENTS

|  | Page |
|--|------|
| LEGALIZATION PAPER                         | i    |
| BIOGRAPHY                                  | ii   |
| ABSTRACT                                   | iii  |
| ACKNOWLEDGMENT                             | iv   |
| LIST OF CONTENTS                           | vi   |
| LIST OF TABLES                             | viii |
| LIST OF FIGURES                            | x    |
| LIST OF APPENDIX                           | xi   |
|  |      |
| CHAPTER I. INTRODUCTION                    |      |
| 1.1.Research Background                    | 1    |
| 1.2.Problem Identification                 | 3    |
| 1.3.Research Scope                         | 3    |
| 1.4.Problem Statement                      | 3    |
| 1.5.Research Objective                     | 3    |
| 1.6.Research Significances                 | 4    |
|  |      |
| CHAPTER II. LITERATURE REVIEW              |      |
| 2.1.Concept, Conception, and Preconception | 5    |
| 2.2.Misconceptions                         | 7    |
| 2.2.Types of Misconceptions                | 9    |
| 2.3.The Causes of Misconceptions           | 10   |
| 2.4.Conceptual Framework                   | 12   |
|  |      |
| CHAPTER III. RESEARCH METHODS              |      |
| 3.1.Research Overview                      | 15   |
| 3.2.Time and Location of Research          | 16   |
| 3.3.Population and Sample of Research      | 16   |
| 3.4.Research Instruments                   | 17   |

| 3.5. Technique for Collecting the Data                                       | 17/ |
|--|-----|
| 3.6. Technique for the Data Analysis   | 17  |
|  |     |
| CHAPTER IV. RESULT AND DISCUSSION  |     |
| 4.1. Description of Result   | 20  |
| 4.2. Students' Ability   | 20  |
| 4.3. Data Analysis   | 21  |
| 4.3.1. How to prepare buffer solution  | 23  |
| 4.3.2. How buffer solutions work   | 30  |
| 4.3.3. Equilibrium system of buffer solution                                 | 37  |
| 4.3.4. Change of pH upon the addition of slightly acid or base and dilution. | 41  |
| 4.3.5. Function of buffer solution in daily life                             | 44  |
| 4.3.6. Relation between ionization constant, pH and ratio of acid base       |     |
| component of buffer solution   | 47  |
| 4.4. Discussion  | 59  |
|  |     |
| CHAPTER V. CONCLUSION AND SUGGESTION   |     |
| 5.1. Conclusion  | 63  |
| 5.2. Suggestions   | 63  |
|  |     |
| REFERENCES 65  |     |

