

## TABLE OF CONTENT

<b>Contents</b>	<b>Page</b>
TITLE PAGE.....	i
REQUIREMENT SHEET.....	ii
TEST IMPLEMENTATION.....	iii
RATIFICATION BY THESIS ADVISORS.....	iv
RATIFICATION BY DEAN.....	v
DEDICATION.....	vi
ASSERTION.....	vii
ACKNOWLEDGEMENTS.....	viii
LISTS OF CONTENTS.....	xi
LIST OF TABLES.....	xiii
LIST OF FIGURES.....	xiv
LIST OF APPENDICES.....	xv
ABSTRACT.....	xvi
INISARI.....	xvii
<b>I. INTRODUCTION</b>	
A. BACKGROUND OF PROBLEM.....	1
B. FORMULATION OF PROBLEM.....	2
C. RESEARCH OBJECTIVES .....	3
D. RESEARCH AUTHENTICITY.....	3
E. RESEARCH BENEFITS.....	3
<b>II. REVIEW OF LITERATURE</b>	
A. Literature Review	
1. Composite Resin	
1.1 Definition of composite resin.....	5
1.2 Composition of composite resin .....	5
1.3 Classification of composite resin by particle size .....	7
1.3.1 Traditional composites / macrofilled composites.....	7
1.3.2 Small particles composites .....	7
1.3.3 Microfilled composites.....	7
1.3.4 Hybrid composites.....	7
1.3.5 Nanofilled composites.....	8
1.4 Uses of composite .....	10
1.5 Properties of composite resins.....	10
1.5.1 Physical properties.....	10
1.5.1.1 Setting times.....	10
2. Polymerization	10
2.1 Definition of polymerization.....	10

2.2 Stage of polymerization.....	10
2.3 Phase of polymerization.....	11
2.4 Type of activation system.....	12
2.4.1 Chemical activated (self-cured) resins.....	12
2.4.2 Photochemically activated ( light-cured) resins .....	12
2.4.3 Dual-cured resins .....	13
2.5 Factor influence polymerization.....	13
2.5.1 Intensity of light.....	13
2.5.2 Degree of conversion .....	14
2.5.3 Depth of cured.....	14
3. Polymerization shrinkage	
3.1 Definition polymerization shrinkage.....	15
3.2 Process of polymerization shrinkage .....	15
3.3 Effect of polymerization shrinkage.....	16
4. Light-Emitting Diode (LED)	
4.1 Definition of LED.....	16
4.2 Intensity of LED.....	17
B. Theoretical Basis.....	17
C. Hypothesis.....	18
<b>III. RESEARCH METHODOLOGY</b>	
A. Type of Research.....	19
B. Identification of Variables.....	19
C. Study Sample .....	19
D. Determination of the Number of Samples.....	20
E. Operational Definition.....	20
F. Tools and Materials.....	21
G. Research Places.....	22
H. Study Procedure.....	22
I. Study Analysis.....	25
J. Research scheme.....	26
<b>IV. RESULTS AND DISCUSSION</b>	
A. Results.....	27
B. Discussion.....	29
<b>V. CONCLUSION AND SUGGESTIONS</b>	
A. Conclusion.....	31
B. Suggestions.....	31
<b>REFERECES.....</b>	<b>32</b>
<b>APPENDICES.....</b>	<b>36</b>