****

**TITLE OF THESIS**

**By**

**NAME OF STUDENT**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of ....... (*Insert the name of degree*)**

**Month and year of Viva Voce (*e.g. January 2015*)**

All material contained within the thesis, including without limitation text, logos, icons, photographs and all other artwork, is copyright material of Universiti Putra Malaysia unless otherwise stated. Use may be made of any material contained within the thesis for non-commercial purposes from the copyright holder. Commercial use of material may only be made with the express, prior, written permission of Universiti Putra Malaysia.

Copyright © Universiti Putra Malaysia

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of (*name of degree*)

**TITLE OF THESIS**

By

**NAME OF STUDENT**

**Month and Year of Viva Voce**

**Chair: Name of Chairman of Supervisory Committee, PhD**

**Faculty: Name of Faculty**

The abstract is a digest of the entire thesis and should be given the same consideration as the main text. It does not normally include any reference to the literature. Abbreviations or acronyms must be preceded by the full term at the first use.

An abstract should be between 300-500 words. It includes a brief statement of the problem, a concise description of the research method and design, a summary of major findings, including their significance or lack of it, and conclusions.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah ………… (*nama ijazah*)

**TAJUK TESIS**

Oleh

**NAMA CALON**

**Bulan dan Tahun Viva Voce diadakan**

**Pengerusi: Nama Pengerusi Jawatankuasa Penyeliaan, PhD**

**Fakulti: Nama Fakulti**

Abstrak merupakan ringkasan keseluruhan tesis dan wajib diberi perhatian rapi sepertimana bahagian tesis yang lain. Abstrak tidak mengandungi bahan rujukan. Nama singkatan atau akronim mesti didahului dengan terminology penuh pada penggunaan kali pertama.

Abstrak harus diolah antara 300-500 perkataan. Abstrak merangkumi pernyataan permasalahan, penerangan rigkas dan tepat tentang reka bentuk dan pengkaedahan penyelidikan, rumusan penemuan utama dan kesimpulan.

**ACKNOWLEDGEMENTS**

I certify that a Thesis Examination Committee has met on (date of viva voce) to conduct the final examination of (student’s name)on his (her) thesis entitled (“Title of Thesis”) in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the (insert the name of relevant degree).

Members of the Thesis Examination Committee were as follows:

**Name of Chairperson, PhD**

Title (e.g., Professor/Associate Professor/Ir; omit if irrelevant)

Name of Faculty

Universiti Putra Malaysia

(Chairman)

**Name of Examiner 1, PhD**

Title (e.g., Professor/Associate Professor/Ir; omit if irrelevant)

Name of Faculty

Universiti Putra Malaysia

(Internal Examiner)

**Name of Examiner 2, PhD**

Title (e.g., Professor/Associate Professor/Ir; omit if irrelevant)

Name of Faculty

Universiti Putra Malaysia

(Internal Examiner)

**Name of External Examiner, PhD**

Title (e.g., Professor/Associate Professor/Ir; omit if irrelevant)

Name of Department and/or Faculty

Name of Organisation (University/Institute)

Country

(External Examiner)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(Insert name of current Deputy Dean)**

**(E.g. XXXXX XXXX, PhD)**

Professor and Deputy Dean

School of Graduate Studies

Universiti Putra Malaysia

Date:

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of ………… (type of degree). The members of the Supervisory Committee were as follows:

**Name of Chairperson, PhD (omit `PhD’ if not applicable)**

Title (e.g., Professor/Associate Professor/Ir; if applicable)

Name of Faculty

Universiti Putra Malaysia

(Chairman)

**Name of Member 1, PhD (omit `PhD’ if not applicable)**

Title (e.g., Professor/Associate Professor/Ir; if applicable)

Name of Faculty

Universiti Putra Malaysia

(Member)

**Name of Member 2, PhD (omit `PhD’ if not applicable)**

Title (e.g., Professor/Associate Professor/Ir; if applicable)

Name of Department and/or Faculty

Name of Organisation (University / Institute)

(Member)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**(Insert name of current Dean)**

**(E.g. XXXXX XXXX, PhD)**

Professor and Dean

School of Graduate Studies

Universiti Putra Malaysia

Date:

**Declaration by graduate student**

I hereby confirm that:

* this thesis is my original work;
* quotations, illustrations and citations have been duly referenced;
* this thesis has not been submitted previously or concurrently for any other degree at any other institutions;
* intellectual property from the thesis and copyright of thesis are fully-owned by Universiti Putra Malaysia, as according to the Universiti Putra Malaysia (Research) Rules 2012;
* written permission must be obtained from supervisor and the office of Deputy Vice-Chancellor (Research and Innovation) before thesis is published (in the form of written, printed or in electronic form) including books, journals, modules, proceedings, popular writings, seminar papers, manuscripts, posters, reports, lecture notes, learning modules or any other materials as stated in the Universiti Putra Malaysia (Research) Rules 2012;
* there is no plagiarism or data falsification/fabrication in the thesis, and scholarly integrity is upheld as according to the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) and the Universiti Putra Malaysia (Research) Rules 2012. The thesis has undergone plagiarism detection software.

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name and Matric No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Declaration by Members of Supervisory Committee**

This is to confirm that:

* the research conducted and the writing of this thesis was under our supervision;
* supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

|  |  |  |
| --- | --- | --- |
| Signature: |  |  |
| Name of Chairman of Supervisory Committee: |  |  |
| Signature: |  |  |
| Name of Member of Supervisory Committee: |  |  |

|  |  |  |
| --- | --- | --- |
| Signature: |  |  |
| Name of Member of Supervisory Committee: |  |  |

|  |  |  |
| --- | --- | --- |
| Signature: |  |  |
| Name of Member of Supervisory Committee: |  |  |

###### TABLE OF CONTENTS

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | Page | | |
| **ABSTRACT** | | | | | | | | | ii | | |
| ***ABSTRAK*** | | | | | | | | | iv | | |
| **ACKNOWLEDGEMENTS** | | | | | | | | | vii | | |
| **APPROVAL** | | | | | | | | | viii | | |
| **DECLARATION** | | | | | | | | | ix | | |
| **LIST OF TABLES** | | | | | | | | | x | | |
| **LIST OF FIGURES** | | | | | | | | | xii | | |
| **LIST OF ABBREVIATIONS** | | | | | | | | | xiii | | |
|  | | | | | | | | |  | | |
| **CHAPTER** | |  | | | |  |  | | |  |  | | |
|  | |  | | | | | | |  | | |
| **1** | **INTRODUCTION** | | | | | | | 1 | | | | |
|  |  | | |  | | | |  | | | | |
| **2** | **LITERATURE REVIEW** | | | | | | | 6 | | | | |
|  | 2.1 | | | Sub-heading 1 | | | | 6 | | | | |
|  |  | | | 2.1.1 | Sub-subheading 1 | | | 8 | | | | |
|  |  | | | 2.2.1 | Sub-subheading 2 | | | 12 | | | | |
|  | 2.2 | | | Sub-heading 2 | | | | 15 | | | | |
|  | 2.3 | | | Sub-heading 3 | | | | 21 | | | | |
|  |  | | | 2.3.1 | Sub-subheading 1 | | | 22 | | | | |
|  |  | | | 2.3.2 | Sub-subheading 2 | | | 25 | | | | |
|  |  | | | 2.3.3 | Sub-subheading 3 | | | 31 | | | | |
|  | 2.4 | | | Sub-heading 4 | | | | 33 | | | | |
|  |  | | | | | | |  | | | | |
| **3** | **MATERIALS AND METHODS / METHODOLOGY** | | | | | | | 38 | | | | |
|  | 3.1 | | | Sub-heading 1 (e.g., Materials) | | | | 38 | | | | |
|  | 3.2 | | | Sub-heading 2 (Method 1) | | | | 42 | | | | |
|  | 3.3 | | | Sub-heading 3 (Method 2) | | | | 45 | | | | |
|  | 3.4 | | | Sub-heading 4 (Method 3) | | | | 47 | | | | |
|  |  | | | 3.4.1 | Sub-subheading 1 | | | 48 | | | | |
|  |  | | | 3.4.2 | Sub-subheading 2 | | | 50 | | | | |
|  |  | | | 3.4.3 | Sub-subheading 3 | | | 52 | | | | |
|  | 3.5 | | | Sub-heading 5 (Method 4) | | | | 55 | | | | |
|  | 3.6 | | | Sub-heading 5 (Method 5) | | | | 58 | | | | |
|  |  | | | 3.6.1 | Sub-subheading 1 | | | 58 | | | | |
|  |  | | | 3.6.2 | Sub-subheading 2 | | | 63 | | | | |
|  |  | | | | | | |  | | | | |
| **4** | **RESULTS AND DISCUSSION** | | | | | | | 66 | | | | |
|  | 4.1 Sub-heading 1 | | | | | | | 66 | | | | |
|  |  | | 4.1.1 Sub-subheading 1 | | | | | 69 | | | | |
|  |  | | 4.1.2 Sub-subheading 2 | | | | | 72 | | | | |
|  | 4.2 Sub-heading 2 | | | | | | | 75 | | | | |
|  |  | | 4.2.1 Sub-subheading 1 | | | | | 76 | | | | |
|  |  | | 4.2.2 Sub-subheading 2 | | | | | 81 | | | | |
|  |  | | 4.2.3 Sub-subheading 3 | | | | | 88 | | | | |
|  | 4.3 Sub-heading 3 | | | | | | | 94 | | | | |
|  | 4.4 Sub-heading 4 | | | | | | | 105 | | | | |
|  |  | | | | | | |  | | | | |
| **5** | **SUMMARY, CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH** | | | | | | | 111 | | | | |
|  | |  | | | | | | |  | | |
| **REFERENCES/BIBLIOGRAPHY** | | | | | | | | | 115 | | |
| **APPENDICES** | | | | | | | | | 124 | | |
| **BIODATA OF STUDENT** | | | | | | | | | 133 | | |
| **LIST OF PUBLICATIONS**  (Publications that arise from the study) – if applicable | | | | | | | | | 135 | | |

###### LIST OF TABLES

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table** |  | |  |  | | |  | **Page** | | |
|  |  | | | | |  | | |
| 3.2 | Number of visitors according to participation in different activities | | | | 54 | | | | |
|  |  |  | | |  | | | | |
|  |  | | | |  | | | | |

###### LIST OF FIGURES

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table** |  |  |  | | |  | **Page** | | |
|  |  | | | |  | | |
| 2.2 | Number of Postgraduate Students at Universiti Putra Malaysia by Group | | | 56 | | | | |