

# GUIDELINES PSM REPORT



FACULTY OF MECHANICAL ENGINEERING

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA  
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## 1. INTRODUCTION

This Guideline is prepared and designed to assist undergraduate students of Faculty of Mechanical Engineering, Universiti Teknikal Malaysia Melaka (UTeM) in the preparation of their final year project report. It deals only with the physical format and writing conventions of the report. It is the responsibility of each student to ensure the work conforms to the guidelines set out below.



## 2. ARRANGEMENT OF CONTENTS

The following arrangement of list of project report sections is to serve as a guideline. Many of these sections are self explanatory. Further information on some of the sections is provided following the list.

### 2.1 Front cover

Title of the PSM report should be as concise as possible giving an accurate description of the work. The pre-title page must contain the following:

2.1.1 Title of the PSM

2.1.2 Full name of student

2.1.3 UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Format and sample of the pre-title page is shown in **Appendix B1** and **Appendix B2**. Do not number this page. This format should be followed closely.

### 2.2 Title Page

The title page should consist of the following:

2.2.1 Title of PSM report

2.2.2 Full name of student

2.2.3 Project report submitted in fulfillment of the requirements for the  
Degree of Bachelor of Mechanical Engineering (Name of Course)

2.2.4 Name of Faculty

2.2.5 UNIVERSITI TEKNIKAL MALAYSIA MELAKA must be  
written in uppercase (capital letters)

2.2.6 The year project report is submitted.

Refer to **Appendix C1 & Appendix C2** for the title page format and sample. Do not number this page.

### 2.3 Copyright (optional)

Under International Law the use of copyright material requires the

permission of either the author or the publisher. It is the responsibility of the student to address this issue and to cover any expenses incurred. No pagination on this page.

#### **2.4 Declaration Page**

This page should contain declaration by the student on the originality of the project report. The declaration should be signed. An example is provided in **Appendix D**. This page should not be numbered.

#### **2.5 Approval**

This page should contain approval from the Supervisor. The approval for the respective degree must be signed. An example is provided in **Appendix E1**. This page should not be numbered.

#### **2.6 Dedication (optional)**

The dedication must be brief, not more than one paragraph, and must not contain any number, chart or photograph. Refer to the example in **Appendix F**.

#### **2.7 Abstract and Abstrak**

The abstract is a digest of the entire project report and should be given the same careful attention as the main text. It should not include any references. Abbreviations or acronyms must be preceded by the full terms at the first use. An abstract should be between 300 and 500 words. It includes a brief statement of the problem and objectives of the study, a concise description of the research method and design, a summary of the major findings including their significance, and conclusions.

Abstracts in both English and Bahasa Malaysia are mandatory. The abstract in Bahasa Malaysia must be in *Italic* for a project report written in English, and vice versa. Abstract is a summary of the entire project report written in one paragraph. It should briefly outline the research problem addressed by the project report, research objectives, research methodology, the findings and the significance of the work in the context of the field of study. The abstract should not exceed one (1) typewritten **single spaced** page. Example can be seen in **Appendix G1** (English) and

**Appendix G2** (Bahasa Malaysia). Number this page „i“. Paginations of the text section follow after this page.

## **2.8 Acknowledgements**

Most project reports will include a brief statement of thanks and appreciations in recognition of special assistance (including financial) and guidance given by individuals, institutions or government bodies. An example can be seen in **Appendix H**.

## **2.9 Table of Contents**

The titles of sections, chapters and their principal subdivisions along with the page numbers on which they appear should be listed in the Table of Contents. Titles should be worded exactly as they appear in the text of the project report. Project report with many subsections should use a hierarchical numbering system for headings and sub-headings (i.e., 2.1, 2.2, 2.3, etc). Such numbering system combined with the judicious use of upper and lower case, indentations and italics should indicate clear relationships between the sections of the project report. All chapters and their sub-sections must be labeled and numbered. The chapters are numbered using Arabic numeric, i.e. Chapter 1, Chapter 2, Chapter 3 and so on. The sub-sections are given as follows

Chapter

2 Title of the chapter

2.1 First level (Title of the sub-section)

2.1.1 Second level (Title of the sub-sub-section)

2.1.1.1 Third level (Title of the sub-sub-sub-section)

If the length of a title of a chapter or any level is more than one line, the same line spacing as in the text should be used. Sub-sections beyond third level should be labeled using characters. Refer to the example in **Appendix I**.

## **2.10 List of Tables, Figures (Illustrations, Plates/Photographs)**

These lists consist of the exact titles (including numbering) of all tables, figures and plates that appear in the project report. All tables, figures and



plates should be numbered consecutively throughout the text. See examples in **Appendix J1** and **Appendix J2**. The caption for tables is placed above the table itself using Times New Roman, font size 12. An example is shown in **Appendix J3**. In contrast, the caption for figures is placed below the figure itself using Times New Roman, font size 12. An example is depicted in **Appendix J4**. Number the tables and figures by chapter, e.g. Table 1.1 and Table 1.2 to indicate they belong to Chapter 1. Whereas, Table 2.1 and Table 2.2 belong to Chapter 2 and so on. In addition, Figure 1.1 and Figure 1.2 to indicate they belong to Chapter 1. Whereas, Figure 2.1 and Figure 2.2 belong to Chapter 2 and so on.

## **2.11 List of Abbreviations, Symbols, Specialized Nomenclature**

This list is optional, depending on the subject matter or technicality of the project report. All scientific symbols and nomenclature should follow the standard SI- system. See example in **Appendix K**.

## **2.12 List of publications (if any)**

List in chronological order the publications of work from this study, with most recent work first and the rest follow in descending order. Include name of the author, year of publication, title of article, name of journal/ book, volume and issue number as well as page number.

## **2.13 Main text of the project report**

The main body of the project report is usually arranged into consecutively numbered chapters or sections. The internal organization of the project report will partly depend on the field of study, but the onus is on the student to provide a systematic and well-organized project report. They should consult their project report supervisor(s) in accordance to the format given in Table of Contents section. The font of the main text should be the **Times New Roman, font size 12 with double-spacing**.

### **2.13.1 Chapter Layout**

There is no restriction on the total number of chapters in a project report. Generally, a project report will have the following chapters:

## **Chapter 1 Introduction**

This chapter introduces the subject matter and problem(s) being studied, and indicates its importance and validity. Introduction is the first part of a project report and allows the readers to get the general idea of what your project report is about. It also acquaints the readers with the project report topic, explaining the basic points of the research and pointing the direction of your research. Introduction sets out the hypotheses to be tested (if applicable) and research objectives to be attained. It is important to remember that the research objectives stated in the project report should match the findings of the study. Failing to do so could result a recommendation by the examiners to conduct additional studies so that the stated objectives are met.

## **Chapter 2 Literature Review**

This section encompasses a critical and comprehensive review of the literature related to the topic of project report. It is meant to act as a base for the experimental and analytical sections of the project report. Literature selected must be up to date, and be analysed and synthesised logically. It is not simply a summary of works of different authors. It is a critical, analytical summary and synthesis of the current knowledge of a topic. Thus, it should compare and relate different theories, findings, etc rather than just summarise them individually.

In addition, it should have a particular focus or theme to organise the review. It does not have to be an exhaustive account of everything published on the topic, but it should discuss all the significant academic literature important to that focus. The review should give the gist of each book or pertinent findings of a journal article, explain how it relates to the topic and show why it is not sufficient to answer the research questions. Textbook materials on basic principles or theories should be kept to a minimum.

## **Chapter 3 Materials and Methods OR Methodology**

This section varies from project report to project report depending on the discipline of study, and may be absent in theoretical theses. It contains a description and justification of the materials, theoretical approaches, experimental designs and methods (including statistical analysis) used to

achieve the stated objectives of the study undertaken. In engineering this may include, but is not limited to, a description of the methodology, theoretical development, fundamental philosophical foundation, experimental design and standard procedure description. The materials and methods used in the study should be described in detail and concisely such that a reader would be able to replicate the experiment solely with the information contained in this section.

## **Chapter 4 Results and Discussions**

The section presents a complete account of the results obtained in the study in the form of text, figures or tables so that the key information is highlighted. The same set of results or data should not be presented in more than one format (e.g. either as a table or figure, but not both). This may be presented as a single chapter, divided separately into appropriate section or in two or more chapters to include the analysis and presentation of data. When results are placed in one chapter, sub-headings may be used to demarcate the different aspects of the study. The results should be interpreted, but extensive reference to other relevant work should not be included.

These are then followed by the analyses or interpretations of the results obtained, and the conclusions drawn. Students should discuss these results in relation to the hypotheses (if applicable) or objectives set out in the Introduction, and how they fit into the existing or current body of knowledge. The significance and implications of the main findings should be made clear.

## **Chapter 5 Conclusion and Recommendations for Future Work**

This chapter contains a brief summary of the entire work, including methods, results and major conclusions /recommendations arising from the work. This chapter is important since it illustrates the significance of the study and stresses the findings upon which a conclusion or conclusions are drawn in line with the objectives set, acknowledges the limitations, and suggests further research which may be carried out on the topic. The summary can be written in a single section or in separately numbered sections. Suggestions for future work are often included together with contributions of research. It is acceptable for individual

chapter to be self-contained, including their own introduction, methods, results and discussions, as is often the case where individual chapter being submitted for publication. However, in such project report a broader introduction to the whole project report should be included to tie the chapters or sections together and to provide the framework for the whole project report.

### **3. FORMAT OF PROJECT REPORT**

#### **3.1 Language**

The project report must be written in either English or Bahasa Malaysia. The language of the project report should be as direct and simple, as the subject matter will allow. Language use should be consistent throughout the project report, especially in terms of spelling (American or British).

#### **3.2 Typing**

A project report should be typed in word format MS Office Word or text processor.

##### **3.2.1 Font**

Students should use the Times New Roman with font size 12 in preparing their project report. Other fonts are not acceptable. Chapters and their sub-sections must be given titles. The title of each chapter should be typed using capital letters and centered. A new chapter must start on a new page. The titles should be typed using bold letters and should not be underlined. Write the titles of the sub-sections in “sentence case”, that is the same capitalization that students would have used in normal sentence (capitalize only the first word).

##### **3.2.2 Space and Format**

The project report should only be typed on one side of the page. The text should be double-spaced throughout, including explanatory footnotes, equations, long quotations, appendices, heading and subheadings. However, legends, captions or keys to tables, figures or plates should be single spaced. The following guidelines should also be observed.

- 3.2.2.1 The spacing between the lower top margin and the chapter number should be one (1) line spacing
- 3.2.2.2 The spacing between the chapter number and the title, and between the title and the first line of a text should be one (1) line spacing

- 3.2.2.3 The spacing between the last line of a text with the title of a subsection should be one (1) line spacing
- 3.2.2.4 No spacing between the title of a sub-section and the first line of a text
- 3.2.2.5 No spacing between paragraphs
- 3.2.2.6 The number and the title of sub-section should be aligned with the left margin
- 3.2.2.7 The first line of a paragraph should be indented by 1 tab (1.22 cm) from the left margin
- 3.2.2.8 A new paragraph should not begin on the last line of a page
- 3.2.2.9 The spacing between the last line of a text and a table, or a figure or an illustration should be one (1) line spacing
- 3.2.2.10 The spacing after a full stop (.) should be one (1) character spacing
- 3.2.2.11 The spacing after a comma (,) should be one (1) character spacing

(An example is provided in **Appendix L**)

### **3.2.3 Symbol**

For symbols that are not available on the computer keyboard, such as copyright symbol, trademark symbol, paragraph marks and Unicode characters, use appropriate function in the MS Office Word to generate them.

### **3.2.4 Typing Quality**

All copies must be of good legible quality. Hard copies of the project report submitted for examination or binding must be printed using a laser printer or similar quality machines. Students are required to carefully **proof read** and correct any typographical errors before submitting the project report.

## **3.3 Margin**

Left margin should be **3 cm (30 mm)** wide for binding purposes. The other three sides that are top, bottom and right margin should be **2.5 cm (25 mm)** wide.

### **3.4 Page Numbering**

Pages should be numbered consecutively throughout the project report, including pages of figures, tables and appendices. Preliminary pages preceding Chapter 1 (i.e. from abstract) must carry page numbers in small Roman numerals (i, ii, iii, etc.). The title page should not be numbered. Pagination begins with the first page of Chapter 1 (i.e., Introduction) using Arabic numeric (1, 2, 3, etc.). Page numbers should be centered and should be printed 1.5cm from the bottom of the page. Font size 12 recommended for numbers. Page numbers should appear by themselves and they are not to be enclosed in parenthesis, hyphens, etc. Each appendix should be identified separately in alphabetical order. The pages of the appendices should also be typed according to the above pagination system. Page numbers should be retained at the centre and bottom of the page (at portrait layout) even though landscape table and figures are attached. Text, tables and figures should be printed on one (1) side of each sheet only.

### **3.5 Notes and Footnotes**

In the case where notes and footnotes are used with font size 10 and should be kept to minimum.

### **3.6 Tables and figures**

Source of the tables and figures should be stated in full if it was adopted from copyrighted permission. It should be written at the end of the caption. The caption of a figure is located below the figure and centered (refer to Appendix J4) and the caption of the table is located above the table and centered (refer to Appendix J3).

All figures and tables must be cited in the text using 'Figure 1.1' or 'Table 2.3'. For example

Figure 4.3 shows the experimental results of the bulk density of the fibrous and porous materials.

The illustration of the sound propagation is shown in Figure 2.5.

### **3.7 Colour**

Colour can help enormously to present data clearly. However, design the colourful diagrams to preserve as much information as possible in a black and white print out.



## 4. LITERATURE CITATION AND REFERENCING

Any project report which makes use of other works, either in direct quotation or by reference, must contain a bibliography listing of these sources. Only works directly cited or quoted in the text should be included in the bibliography. PSM report follows the **Harvard System** for literature citation and referencing. References are made by giving the author's last name together with the year of publication.

### 4.1 Citation in Text

#### 4.1.1 Author's name cited in text

In the text, the year of publication appears within parenthesis after the author's surname if the latter forms part of a sentence. For example:

Chong (1986) states that...

In any particular sentence, if several publications are cited, the references should be cited in chronological order. For example:

Jones (2006) and Smith (2008) have both shown...

However, if several publications of the same year are cited the references should be cited in **alphabetical order** and with single author taking precedence over joint authors. For example:

Azis and Harrison (1987) claim that...

Where there are more than two authors:

Yamakura et al. (1990) found that...

If several papers by the same author(s) and from the same year are cited, the letters a, b, c, etc. should be put after the year of publication. For example:

Chazdon and Ibrahim (1988b).

#### **4.1.2 Author's name not cited directly in the text**

Reference to a work or piece of research without mentioning the author in the text then both the author's name and publication year are placed at the relevant point in the sentence or at the end of the sentence in brackets. For example:

Making reference to published work appears to be characteristic of writing for a professional audience (Cormack, 1994).

#### **4.1.3 No author**

Reference from authorless articles should be cited as: (Anonymous, 1998). For example:

Marketing strategy assists our customers in optimizing and executing their go-to-market strategy (Anonymous, 1999).

#### **4.1.4 Corporate authors**

Reference from official publications of an organization or international bodies/agencies with no personal author should be written as: (SIRIM, 1984). For example:

More recently SIRIM (1984) has issued guidelines...

#### **4.1.5 No date**

Every effort should be made to establish the year of publication if you intend to use one reference as supporting evidence in an academic submission. However, in case of the year of publication is not available, the abbreviation n.d. is used to denote this:

Directly:

Smith (n.d.) has written and demonstrated...

Indirectly:

Earlier research (Smith, n.d.) demonstrate that...

#### 4.1.6 Secondary referencing

You may come across a summary of another author's work in the source you are reading, which you would like to make reference to in your document. This is called secondary referencing. For example:

Direct reference:

Recently, research carried out in Melaka area by Ariffin (2001 cited in Abdullah, 2007) found that...

Ariffin (2001) as cited in Abdullah (2007) suggests that...

Indirect reference:

(Ariffin, 2001 cited in Abdullah, 2007)

#### 4.1.7 Websites

When citing material found on a website, you should identify the authorship of the website, either by author's surname or organization's name. URL or website address should not be written in the text. For example:

Recent research on Super Alloy (Bowman, 2009) has shown...

### 4.2 Referencing

At the end of the project report, all the references cited are listed in **alphabetical order** and **should not be indented**. There is no necessity to number or bullet the references. The bibliography should be double-spaced as with the rest of the text using font size 12.

(An example is provided in **Appendix M**)

The following bibliographic style must be followed:

#### 4.2.1 Reference from books

Author's surname, Initials., Year. *Title of book*, Edition., (only include this if not the first edition) Place of publication: (this must be a town or city, not a country) Publisher.

Example for one author:

Conn, E.E., 1987. *Outlines of Biochemistry*, 5th ed., NewYork: John Wiley & Sons.

Example for two or more authors:

Kalpakjian, S., and Schmid, S.R., 2001. *Manufacturing Engineering and Technology*, 4th ed., New Jersey: Prentice-Hall.

#### 4.2.2 Chapters of edited books

Chapter author(s) surname(s), Initials. Year of chapter followed by In: Book editor(s) initials and surnames with edition. After the last name. Year of book. Title of book. Place of publication:Publisher.

Example:

Horking, A.D. 1988. Moulds and Yeasts Associated with Foods of Reduced Water Activity: Ecological Interactions. **In** *Food Preservation by Moisture Control* (Seow, C.C., 2nd ed.), pp. 57-72. London: Elsevier Applied Science Publication.

#### 4.2.3 Books which have been translated

Author, Year. *Title of book*. Translated from (language). Place of publication: Publisher.

Example:

Yahya, R., 2005. *Hidraulik dan Pneumatik*. Translated from English. Johor, Malaysia: UTM Press.

#### 4.2.4 E-books

The required elements for e-books accessed from the University Library or other sources:

Author, Initials., Year. *Title of book*. [e-book] Place of publication:

Publisher. Followed by "Available through:" include e-booksource/database, web address or URL [Accessed date].

Example:

Fishman, R., 2005. *Ceramic Processing*. [e-book] Chester: Castle Press. Available through: Universiti Teknikal Malaysia Melaka Library<<http://library.utem.edu.my>> [Accessed on 14September 2010].

#### 4.2.5 Reference from journals and newspapers

Author, Initials., Year. Title of article. *Full title of journal*, Volume number(Issue / Part number), Page numbers

Example for article:

Kalotas, T.M., and Lee, A.R., 1990. A Simple Device to Illustrate Angular Momentum Conservation and Instability. *American Journal of Physics*, 58 (6), pp.80 -81.

Example for newspaper:

Kipper, D., 2008. Japan's New Dawn. *The Times*, 3 Sep, pp.10.

#### 4.2.6 Reference from conference proceedings

Author, Initials., Year. Full title of conference paper. In: followed by editor or name of organization, *Full title of conference*. Location, Date, Place of publication.

Example:

Hassan, M.D., and. Norshimah, H., 1996. Designing of Primers for Cloning of Papaya Ringspot Virus Coat Protein Gene. In: Hasanah, M.G., Khatijah, M.Y., and Marziah, M.,

*Proceedings of the 8th National Biotechnology Seminar, Selangor, Malaysia, 24 – 27 May 1996. UKM Publisher.*

#### **4.2.7 Standards**

Corporate author, Year. *Identifying letters and numbers and full title of the standards.* Place of publication: Publisher.

Example:

International Standards Office, 1998. *ISO 690 – 2 Information and documentation: Bibliographical references.* Geneva: ISO.

#### **4.2.8 Patent**

Inventor name, Initials., Assignee., Year. Title. Place. Patent number (status, if an application).

Example:

Leonard, Y., Super Sports Limited., 2008. Tin Can Manufacture and Method of Sealing. Canada. Pat. 12,789, 675.

#### **4.2.9 Multiple works from the same author in the same year**

For example:

Reed, R.C., 2006a. *The Superalloys – Fundamentals and Applications*, Cambridge: Cambridge University Press.

Reed, R.C., 2006b. *Fusion Welding of Superalloys*, London: Macmillan.

#### 4.2.10 Anonymous (authorless) reference

Depending on the type of document, replace the authorship with Anonymous.

For example:

Anonymous, 1996. External Trade in Sago Flour and Sago Starch, 1985-1995. *Agricultural Statistics, Sarawak*. Planning Division, Department of Agriculture, Sarawak, Malaysia.

#### 4.2.11 Publications of international bodies/agencies

Depending on the type of source, replace the author's name with the organization name.

For example:

WHO, 1984. Environmental Health Criteria 39: Paraquat and Diquat. World Health Organization, Geneva.

#### 4.2.12 Websites

Authorship or Source, Year. *Title of web document or webpage*. [type of medium] (date of update if available) Available at: include website address or URL [Accessed date].

Example:

Bowman. R., 2009. *Super alloys: A Primer and History*. [online]  
Available at:  
<http://www.tms.org/Meetings/Specialty/superalloys2000/SuperalloysHistory.html> [Accessed on 8 November 2010].

#### 4. 2.13 Mathematical equations

Mathematical equations must be numbered using Arabic numerals. Use an equation editor to insert common mathematical equations or other formulas.

##### a. Equation numbering

Equation must be centered and the equation numbers must be written at the end of the equation and linked to the chapter number. For example, the numbers (4.3) and (4.4) must be located at the end of the margin and are given to the third and fourth equations respectively that appears in Chapter 4, as follows:

$$y^2 = 3x^2 + 3xy + C \quad (4.3)$$

$$(x + a)^n = \sum_{k=0}^n \binom{n}{k} x^k a^{n-k} \quad (4.4)$$

##### b. Citing the equation

Each equation must be cited in the text. Use short form of “Eq. (2.6)” inside the text. For example

According to Eq. (2.6), the acoustic power is directly proportional to the pressure square of sound.

If the equation is mentioned at the **beginning** of a sentence, use the full form “Equation (2.6)”. For example:

Equation (2.6) shows that the acoustic power is directly proportional to the pressure square of sound.



c. Equation variable

The physical variable must be written **in line** with the text. For example

The equation of motion is given by

$$m \frac{d^2 x}{dt^2} + c \frac{dx}{dt} + kx = f(t) \quad (2.8)$$

where  $m$  is the mass,  $c$  is the damping coefficient,  $k$  is the stiffness constant,  $f$  is the excitation force,  $x$  is vibration amplitude and  $t$  is time.

Suggestion:

For MS Office 2013 and older versions, use Equation 3.0 instead of Equation editor symbol usually located on the right top of the page. To obtain this go to Insert → Object → Microsoft Equation 3.0.

This editor is much more convenient to be used and the font is Times New Roman by default. (However in MS Office 2016, this editor is no longer available).

## 5. BINDING THE REPORT

- 5.1 Final report PSM II which has been corrected must be bound using hard cover with moss green colour (colour code: 8069).
- 5.2 On the front cover, print the PSM title, name of student and Universiti Teknikal Malaysia Melaka (Please refer to **Appendix B1**) using capital letter with yellow gold colour.
- 5.3 On the spine of the report, print the name of student, degree and year of the submission (Please refer to **Appendix P1**) with the same yellow gold colour.
- 5.4 If the report is written in English, the spine must use the format in English. Please refer **Appendix P2**.  
If the report is written in Bahasa Malaysia, the spine must use the format in Bahasa Malaysia. Please refer **Appendix P3**.

## 6. APPENDICES

This section is optional and will depend on the individual project report contents. It contains supplementary illustrative material, original data, and quotations too long for inclusion and not immediately essential to an understanding of the subject. The appendices should be labeled alphabetically such as Appendix A, Appendix B, and so on depending on type and quantity to be included. Specific titles can also be given. Example can be seen in **Appendix N**.

**APPENDIX B1**

Front Cover (Font Type: Arial Narrow)

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**TITLE OF THE PSM**

*Equal margin*

**FULL NAME OF STUDENT**

*Equal margin*

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

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**APPENDIX B2 (SAMPLE OF FRONT COVER)**

**MAGNETIC CHARACTERISTICS OF STRONTIUM FERRITE  
ADDED WITH ZIRCONIA**

**FAZLIN ABD KHAIR**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

## APPENDIX C1

Format of Project Report Title Page (Font Type: Times new Roman)

SPACING:  $\approx$  4 line spacing  
from top margin.

### **TITLE OF PROJECT REPORT**

(Front size 12, Bold,Uppercase)

SPACING:  $\approx$  6 line spacing from  
the Title of Project Report.

### **NAME OF STUDENT**

(Front size 12, Bold,Uppercase)

SPACING:  $\approx$  6 line spacing from  
the Name of Student.

**A report submitted  
in fulfillment of the requirements for the degree of  
Bachelor of Mechanical Engineering (Name of Course)**

(Front size 12, Bold)

SPACING:  $\approx$  8 line spacing.

### **Name of faculty**

(Front size 12, Bold)

SPACING:  $\approx$  8 line spacing from  
the Name of Faculty.

### **UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

(Front size 12, Bold,Uppercase)

SPACING:  $\approx$  6 line spacing.

### **YEAR**

(Font size 12, Bold,Uppercase)

**APPENDIX C2 (SAMPLE OF TITLE PAGE )**

**MAGNETIC CHARACTERISTICS OF STRONTIUM FERRITE  
ADDED WITH ZIRCONIA**

**FAZLIN ABD KHAIR**

**A report submitted  
in fulfillment of the requirements for the degree of  
Bachelor of Mechanical Engineering (Structure & Materials)**

**Faculty of Mechanical Engineering**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

**2015**

**APPENDIX C3 (SAMPLE OF TITLE PAGE )**

**SIFAT-SIFAT MAGNETIK STRONTIUM FERRITE  
YANG DITAMBAH DENGAN ZIRKONIA**

**FAZLIN ABD KHAIR**

**Laporan ini dikemukakan sebagai  
memenuhi sebahagian daripada syarat pengaugerahan  
Ijazah Sarjana Muda Kejuruteraan Mekanikal (Struktur & Bahan)**

**Fakulti Kejuruteraan Mekanikal**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

**2015**

**APPENDIX D1**  
Sample of Declaration

2.5 cm

**DECLARATION**

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*2 double line spacing*

I declare that this project report entitled “Thermal analysis using Galerkin Finite Element Method on Printed Circuit Board” is the result of my own work except as cited in the references

Signature : .....

Name : .....

Date : .....

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**APPENDIX D2**  
Sample of Declaration

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**PENGAKUAN**

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Saya akui laporan ini yang bertajuk “Analisis Haba menggunakan Kaedah Unsur Terhingga Galerkin pada Papan Litar Bercetak” adalah hasil kerja saya sendiri kecuali yang dipetik daripada sumber rujukan.

Tandatangan: .....

Nama : .....

Tarikh : .....

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**APPENDIX E1**  
Sample of Approval

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**APPROVAL**

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I hereby declare that I have read this project report and in my opinion this report is sufficient in terms of scope and quality for the award of the degree of Bachelor of Mechanical Engineering (Structure & Materials).

Signature : .....

Supervisor's Name : .....

Date :.....

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**APPENDIX E2**  
Sample of Approval

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**PENGESAHAN PENYELIA**

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Saya akui bahawa telah membaca laporan ini dan pada pandangan saya laporan ini  
adalah memadai dari segi skop dan kualiti untuk tujuan penganugerahan Ijazah Sarjana  
Muda Kejuruteraan Mekanikal (Struktur & Bahan).

Tandatangan : .....

Nama Penyelia : .....

Tarikh : .....

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**APPENDIX F**  
Sample of Dedication

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**DEDICATION**

To my beloved mother and father

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**APPENDIX F2**  
Sample of Dedication

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DEDIKASI

Khas buat

Ayah dan Ibu tersayang

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## APPENDIX G1

Sample of Abstract in English for a project report written in English

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### ABSTRACT

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Process variation is unavoidable and affects quality in manufacturing, and addressing it has become more challenging due to more stringent demands on manufacturing processes. It is becoming necessary to very rapidly identify sources of unnatural variation for diagnostic and intervention purposes. As such, it is crucial that process variability patterns be recognised in a timely manner, as waiting for process deterioration to develop fully could be too late for preventive purposes or may even be catastrophic. The purpose of this study was to develop a scheme for enabling on-line recognition of such patterns on Shewhart charts even as they are developing. Extensive simulations were performed and a scheme that can address the requirements is proposed. Evaluation was based on recognition accuracy, average run length, type I error, type II error, and a new measure, average recognition attempts. It was found that a scheme developed using a minimal set of statistical features for input representation, compact structure of artificial neural network pattern recognisers, synergy of specialised and generalised recognisers, and joint monitoring by runs rules and CUSUM resulted in the best scheme among the alternative designs developed. This scheme showed significant improvement in overall performance and, among others, timely and accurate on-line recognition, ignoring unnecessary recognition of stable processes and capability to recover from false alarms. The findings suggest that the recognition of developing control chart patterns should be addressed from an interlinking monitoring and recognition perspective and by implementing a “recognise only when necessary” philosophy. The framework used to develop the scheme is general enough for further investigation by either evaluating other designs of its components or by extending its application to other problems.

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## APPENDIX G2

Sample of Abstract in Bahasa Malaysia for a project report written in English

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### ABSTRAK

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Variasi proses sentiasa wujud dalam operasi pembuatan, dan menanganinya menjadi semakin mencabar akibat keperluan proses pembuatan yang semakin rumit. Adalah penting untuk mengenalpasti secepat mungkin sumber variasi yang tidak tabii untuk tujuan diagnosis dan pembaikan. Oleh itu, corak variasi proses perlu di kenalpasti tepat pada masanya. Menunggu kematangan corak variasi akan melewati tindakan pencegahan dan ianya berpotensi mengakibatkan bencana. Tujuan penyelidikan ini adalah untuk membangunkan skema yang berupaya menangani keperluan telah dicadangkan. Keberkesanan skema telah dinilai berdasarkan kepada ketepatan mengecam, berdasarkan masa-nyata, corak variasi proses di atas carta kawalan Shewhart walaupun corak tersebut sedang membentuk. Kajian simulasi yang meluas telah dilakukan dan satu skema yang berupaya menangani keperluan telah dicadangkan. Keberkesanan skema telah dinilai berdasarkan kepada ketepatan pengesanan, purata panjang larian, ralat jenis I, ralat jenis II, dan purata percubaan mengecam. Skema yang dibangunkan dengan menggunakan set sifat statistical minimum bagi perwakilan masukan, struktur pengecam corak rangkaian neural tiruan yang padat, sinergi di antara pengecam khusus dan umum, dan pemantauan bersama oleh runs rules dan CUSUM telah menghasilkan skema yang terbaik di antara reka bentuk alternatif yang dikaji. Skema ini menunjukkan pembaikan yang signifikan kepada prestasi keseluruhan, dan antara lain, berkeupayaan mengecam dengan tepat secara masa-nyata, mengabaikan pengesanan yang tidak diperlukan bagi proses yang stabil, dan berkebolehan untuk pulih daripada kesilapan isyarat. Penemuan kajian ini menunjukkan bahawa masalah pengesanan corak variasi yang sedang berkembang sepatutnya ditangani dari perspektif pemantauan dan pengesanan yang bersepadu, dan melaksanakan falsafah "mengecam hanya bila perlu". Rangka skema di atas adalah bersifat umum dan boleh digunakan untuk kajian lanjut samada bagi menguji berbagai jenis rekabentuk komponennya atau meluaskan penggunaannya kepada masalah lain.

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## APPENDIX H

### Sample of Acknowledgement

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### ACKNOWLEDGEMENTS

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First and foremost, I would like to take this opportunity to express my sincere acknowledgement to my supervisor Associate Professor Dr. Azizah Binti Shaaban from the Faculty of Manufacturing Engineering Universiti Teknikal Malaysia Melaka (UTeM) for her essential supervision, support and encouragement towards the completion of this project report.

I would also like to express my greatest gratitude to Engr. Imran Bin Mohd. Ibrahim from Faculty of Electronics and Computer Engineering, co-supervisor of this project for his advice and suggestions in evaluation of microwave absorption measurement. Special thanks to UTeM short term grant funding for the financial support throughout this project.

Particularly, I would also like to express my deepest gratitude to Mr. Azhar and Mr. Hairul Hisham, the technicians from material laboratory Faculty of Manufacturing Engineering, Mr. Imran and Mr. Ismail lecturer and technician from chemistry lab Faculty of Mechanical Engineering. Mr. Zainol, Mr. Aeini and Mr. Safuan, lecture and technicians from microwave laboratory Faculty of Electronics and Computer Engineering, for their assistance and efforts in all the lab and analysis works.

Special thanks to all my peers, my late mother, beloved father and siblings for their moral support in completing this degree. Lastly, thank you to everyone who had been to the crucial parts of realization of this project.

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Sample of Table of Contents  
(Main heading and subheading are numbered)

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**APPENDIX J1**  
Sample of List of Tables

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**LIST OF TABLES**

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<b>TABLE</b>	<b>TITLE</b>	<b>PAGE</b>
2.1	The role of statistical quality engineering	16
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**APPENDIX J2**  
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2.5 cm

**APPENDIX J3**  
Sample of Table in Text

Table 2.1: Comparison of Exprimental and Computer Simulation Results

Distance Ratio	Experiment (Mean value)	Computer Simulation (Mean Value)
0.125	0.25	0.137
0.250	0.46	0.560
0.375	0.63	0.738
0.500	0.75	0.861
0.625	0.83	0.939
0.750	0.88	0.981
0.875	0.93	0.997
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## APPENDIX J4

Sample of Figure or Illustration in Text

Example of Graph

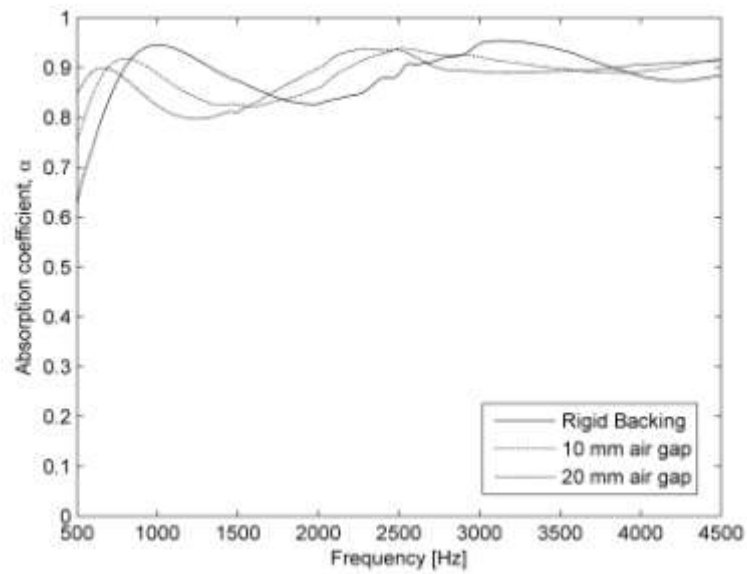


Figure 2.1: Sound absorption coefficient of OPEFB fibers with 50 mm thickness.

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Example of Pie Chart

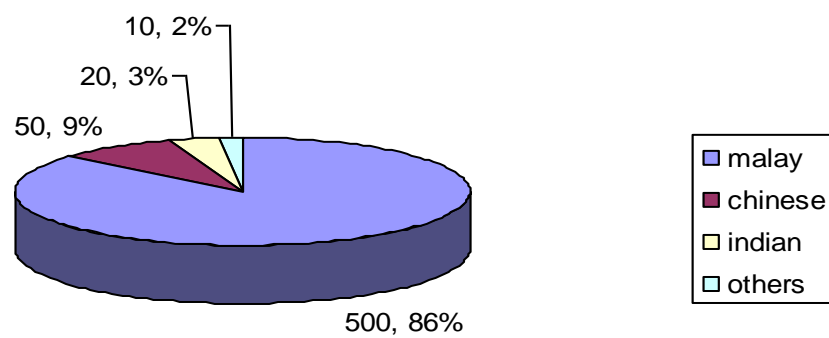


Figure 2.2: Number of Population in Jasin by Races

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**APPENDIX K**  
Sample of List of Symbols

**LIST OF SYMBOLS**

D, d	-	Diameter
F	-	Force
g	-	Gravity = 9.81 m/s
I	-	Moment of inersia
l	-	Length
m	-	Mass
N	-	Rotaional velocity
P	-	Pressure
Q	-	Volumetric flow-rate
r	-	Radius
T	-	Torque
Re	-	Reynold number
V	-	Velocity
w	-	Angular velocity
x	-	Displacement
z	-	Height
q	-	Angle
r	-	Density



**APPENDIX L**  
Sample of Space and Format

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**CHAPTER 1**

**INTRODUCTION**

**1.0 Background**

1.22 cm  
Kenaf is a warm annual crop. It is a member of hibiscus family and related to cotton and jute. Kenaf is originally a native in Africa. For the last 200 years, India has produced and used kenaf. In the United States, kenaf was introduced as material for the war effort during World War II. Then in 1950s, the US researchers have found that kenaf was an excellent cellulose fiber source for pulping of paper products (Webber et. al., 2002).

3 cm

Kenaf plant is growing to more than 3 meters tall within 4-5 months. The stems are 2.5cm – 3.5cm diameter and consisting of two parts, an outer fibrous bark and an inner woody core (Zhang, 2003). Raw kenaf fiber obtained from the outer fibrous bark is abundant of lignocelluloses fibers. The core is the spongy tissue inner the bark of the plant.

2.5 cm

**1.1 Statement of the Purpose**

The purpose of the research is to investigate the effect of fiber treatment on the mechanical properties such as tensile, flexural and impact properties and water absorption of kenaf/polyester composite.

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## 1.2 Problem Statement

Composite materials offer many exceptional properties that are difficult or impossible to match with traditional materials such as steel, aluminum and wood. Previously, composites made of glass and carbon fibers replaced many metal applications by supplying the benefits of low cost and high strength properties. Synthetic fiber composite is very well known for its strength and rigidity. For an example, the bicycle frame made from glass-carbon composites are offer high strength and lightweight.

2.5 cm

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## APPENDIX M

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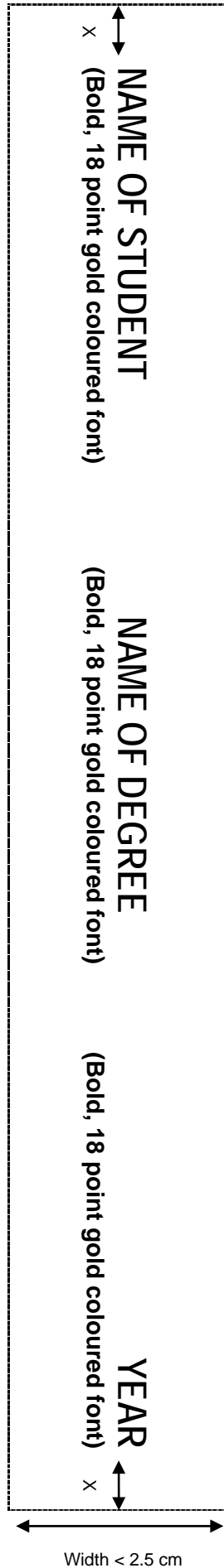
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Sample of List of Appendices

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## APPENDIX P1

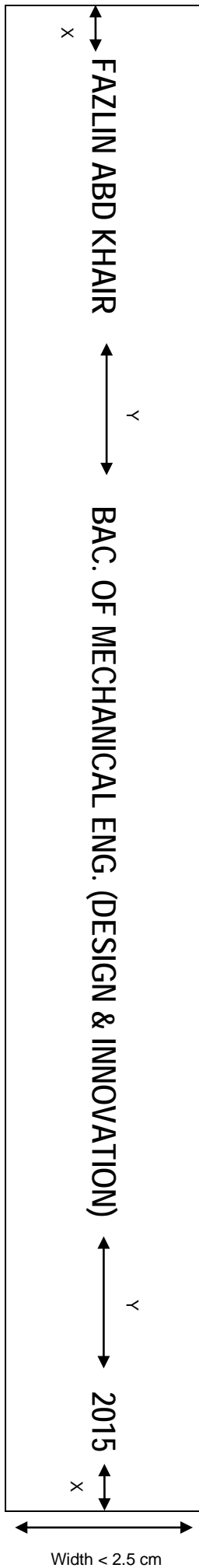
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## APPENDIX P2

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LIM KAH HEI

**BAC. OF MECHANICAL ENG. (AUTOMOTIVE)**

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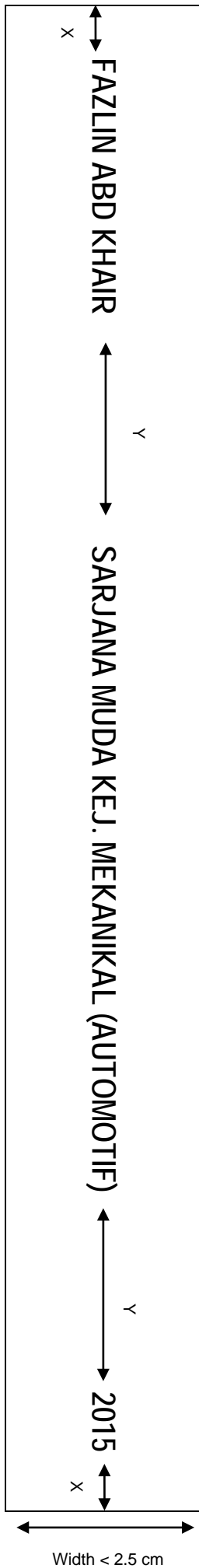
**BAC. OF MECHANICAL ENG. (PLANT & MAINTENANCE)**

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### APPENDIX P3

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<div> <div>↔</div> <div>SITI NURFARIZAN</div> <div>x</div> </div>	SARJANA MUDA KEJ. MEKANIKAL (REKABENTUK & INNOVASI)	<div> <div>2015</div> <div>↔</div> <div>x</div> </div>
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<div> <div>↔</div> <div>FAZLIN ABD KHAIR</div> <div>x</div> </div>	SARJANA MUDA KEJ. MEKANIKAL (STRUKTUR & BAHAN)	<div> <div>2015</div> <div>↔</div> <div>x</div> </div>
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<div> <div>↔</div> <div>OR KHAI HEE</div> <div>x</div> </div>	SARJANA MUDA KEJ. MEKANIKAL (TERMA-BENDALIR)	<div> <div>2015</div> <div>↔</div> <div>x</div> </div>
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<div> <div>↔</div> <div>LIM KAH HEI</div> <div>x</div> </div>	<div>SARJANA MUDA KEJ. MEKANIKAL (AUTOMOTIF)</div>	<div> <div>2015</div> <div>↔</div> <div>x</div> </div>
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<div> <div>↔</div> <div>LIM ZHI YING</div> <div>x</div> </div>	<div>SARJANA MUDA KEJ. MEKANIKAL (LOJI &amp; PENYELENGGARAAN)</div>	<div> <div>2015</div> <div>↔</div> <div>x</div> </div>
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