

Nashik Gramin Shikshan Prasarak Mandal's

**Brahma Valley College of
Engineering & Research Institute**
Anjaneri, Nashik- 422 213

Project Work Book



Department of Mechanical Engineering
[2021-2022]



Nashik Gramin Shikshan Prasarak Mandal's

**Brahma Valley College of Engineering & Research Institute,
Anjaneri, Nashik- 422 213**

(University of Pune)

Department of Mechanical Engineering

Project Work Book

Bachelor of Mechanical Engineering

Year: 2021/22

Project Group No.: 01

1.	Name of Students	Ashish Aher
	Mobile No.	7798584740
	Email ID	-
2.	Name of Students	Sahit Gite
	Mobile No.	8149901081
	Email ID	-
3.	Name of Students	Gaurav Kedar
	Mobile No.	7276491603
	Email ID	-
4.	Name of Students	Nilkanth Solunkhe
	Mobile No.	8087471967
	Email ID	-

Project Title : Elimination of Pokayoke from
final inspection & installation at Gamma robot

Project Guide : Dr. S.H. Pawar

Area of the project: Quality



**Brahma Valley College of Engineering & Research Institute,
Anjaneri, Nashik 422 213**

UNDERTAKING BY STUDENTS

We, the student of B.E. Mechanical Engineering hereby assure that we will follow all the rules and regulations related to project work and activities for project work and dissertation titled as

ELIMINATION OF FOKAYOKA FROM
FINAL INSPECTION & INSTALTTION
AT GAMMA ROBOT

We assure that the project work will be fully designed / developed and every part of the project will be original work and will not be copied / purchased from any source.

1. Name and Signature of Student MR. ASHISH AHER
Aher
2. Name and Signature of Student MR. SAHIL GITE
Gite
3. Name and Signature of Student MR. GAURAV V KEDAR
Kedars
4. Name and Signature of Student MR. NEELKANATH SALUNKHE
Salunkhe

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1. SCHEDULE OF DISSERTATION WORK

Semester VII (Project Stage I)

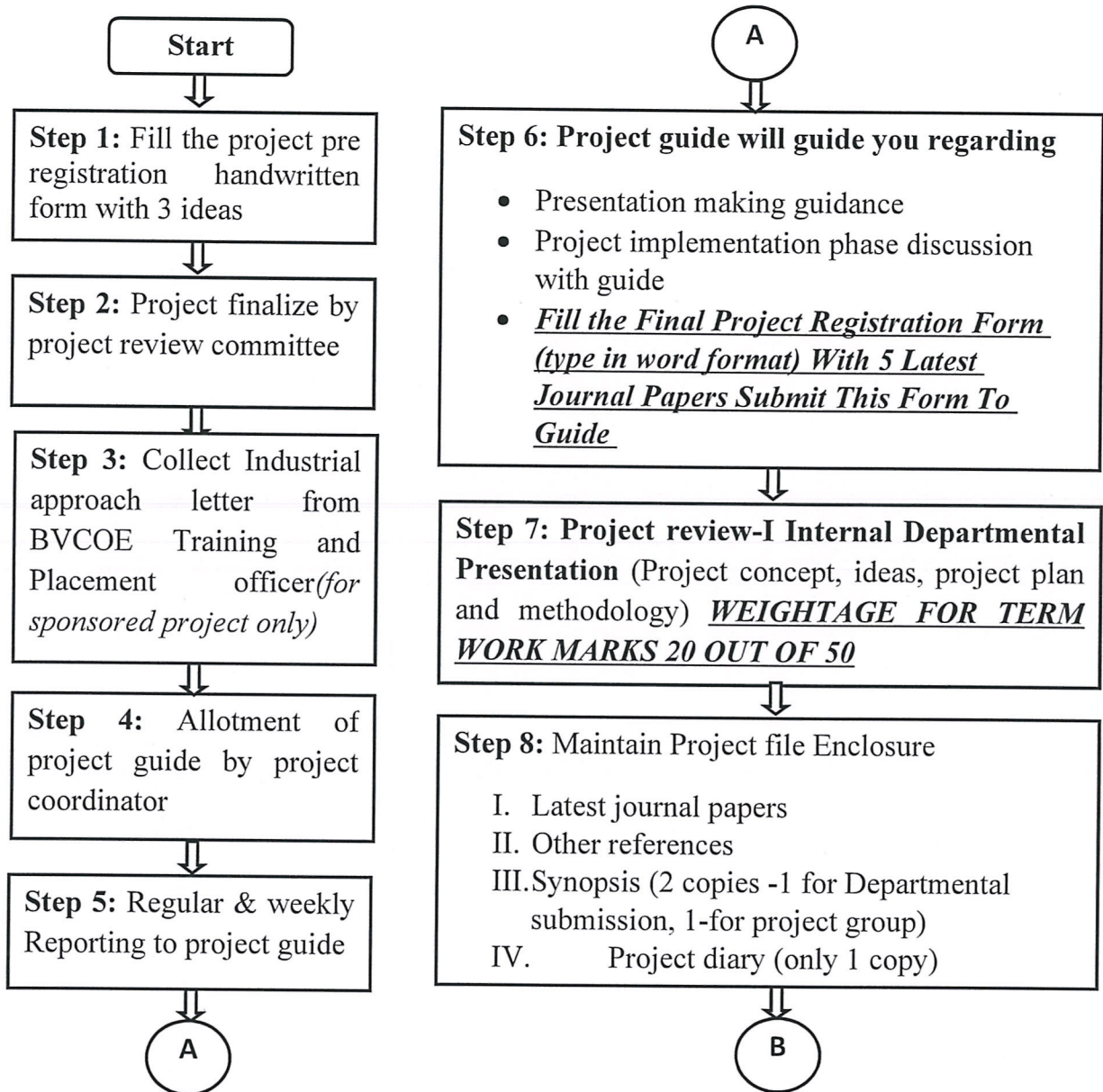
Sr. No	Activity Scheduled	Date
1.	Registration	July
2	Project Acceptance Presentation	Mid August
3	Submission of Dissertation Synopsis	Mid August
4	First Presentation about Progress of Dissertation Work	Last Week of September
5	Submission of Dissertation Report (Stage I)	First Week of Nov
6	Dissertation Work Examination (stage II)	As per SPPU Notification

Semester VIII (Project Stage II)

Sr. No.	Activity Scheduled	Date
1.	First Dissertation Presentations	First Week of February
2	Second Dissertation Presentations	Last Week of March
3	Final Internal Presentation and Demonstration Dissertation Report Preparation and Rough Submission	After satisfactory completion of project
4	Final Submission of Dissertation Report	June / July, Nov / Dec
5	Examination	As per SPPU Notification

2. PROJECT EXECUTION GUIDANCE

Flow chart



B

Step 9: Submit synopsis to project coordinator

Step 10: College project guide will Visit to See Project work at *sponsored* industry

Step 11: Check & sanction project stage-1 presentation & Report from guide

Step 12: Project stage-I presentation (Departmental presentation) **WEIGHTAGE FOR TERM WORK MARKS 30 OUT OF 50**

End of first term

Start Second term

Step 13: Project review-II
(Departmental Presentation)
WEIGHTAGE FOR TERM WORK
MARKS 25 OUT OF 50

Step 14: College Project guide will Visit
to See Project work at *sponsored*
industry

Step 15: Project review-III
(Departmental Presentation)
WEIGHTAGE FOR TERM WORK
MARKS 25 OUT OF 50

Step 16: Check & Sanction Hard copy
of project report & Presentation from
guide (after 2ND END SEM exam)

Step 17: Submit Corrected Hard copy of
project report & project diary

C

Step 18: Final project
presentation / Model
demonstration & oral

End

3. FORMAT OF FINAL SYNOPSIS:

After completing the preliminary acceptance work of the project, the students should submit the final synopsis in the format given below.

PART A: Personal Details

- Project Group No.
- Project Group Information (Student details, Roll no, Name, Exam no, Mobile, Address, email, etc) with Signature.

PART B: Project Details

- Title of project
- Project area(Category /area such as Machine Design, Thermal, Production, Automobile, etc.)
- Abstract with Keywords (at most 5)
- Problem Statement
- Objective
- Scope
- Software, hardware and Test Data requirements.
- Sponsorship details if any (with Signature of external guide)

(Sponsorship details include name of sponsoring authority, address, name of guide, sponsorship terms and conditions and respective document certifying the same from authorities.)

PART C: Approval

- Internal Guide (Name ,designation and email)and signature of approval

4. VISIT RECORD (SEMESTER VII/VIII)

Project Schedule		Phases
1.	Start Date :	1) Literature Survey
2.	Due Date:	2) Title Finalization
		3) Requirement Analysis, finalization of research component
		4) Designing and Modeling
		5) Reviews of Design
		6) Setup Manufacturing (If Any)
		7) Verification and Testing/Validation
		8) Results and Conclusion
		9) Report Preparation

LITERATURE SURVEY GUIDELINES

1. Define a Topic

2. Search and Re-search the Literature

- a. Keep track of the search items you use (so that your search can be replicated)
- b. Keep a list of papers whose pdfs you cannot access immediately (so as to retrieve them later with alternative strategies),
- c. Use a paper management system
- d. Define early in the process some criteria for exclusion of irrelevant papers (these criteria can then be described in the review to help define its scope), and
- e. Do not just look for research papers in the area you wish to review, but also seek previous reviews.

3. Take Notes While Reading

While reading, to start writing down interesting pieces of information, insights about how to organize the review, and thoughts on what to write

4. Choose the Type of Review You Wish to Write

After having taken notes while reading the literature, you will have a rough idea of the amount of material available for the review. This is probably a good time to decide whether to go for a mini- or a full review.

5. Keep the Review Focused, but Make It of Broad Interest

The need to keep a review focused can be problematic for interdisciplinary reviews, where the aim is to bridge the gap between fields

6. Be Critical and Consistent

After having read a review of the literature, a reader should have a rough idea of:

- a. the major achievements in the reviewed field,
- b. the main areas of debate, and
- c. the outstanding research questions

7. Find a Logical Structure

8. Make Use of Feedback

Feedback is vital to writing a good review, and should be sought from a variety of colleagues, so as to obtain a diversity of views on the draft

9. Include Your Own Relevant Research, but Be Objective

10. Be Up-to-Date, but Do Not Forget Older Studies

5. WEEKLY VISIT REPORT

Visit No	Date	Phase Number	Interrupts / Progress (To be filled in by student)	Comments and Grade (To be filled by Guide)	Comments and Grade (To be filled by Industrial Guide)
1	12/8/21	stage-1	Literature review & gap Analysis (ToAC)	select Unique & quality source paper	-
2	26/8/21	stage-1	Six Topics selected for finalization	OK. Elimination of paper for final inspection & installation of gamma robot select	Quality improvement selected topic given
3	02/09/21	stage-1	Abstract related	OK Approved	OK
4	16/9/21	stage-1	Made Sample pin for clamp	Approved	change dim make sp. on. from
5	30/9/21	stage-1	Clamp & all setup working	OK	OK very good
Visit No.	Date	Phase Number	Interrupts / Progress	Comments and Grade	Comments and Grade

			(To be filled in by student)	(To be filled by Guide)	(To be filled by Industrial Guide)
6	28/10/21	stage-1	Objective Literature also methodology & Abstract	Take some Question Others	good.
7	14/10/21	Stage-1	Sample Report for Stage one made	good	very good
8	21/10/21	Stage-1	Stage-1 Report ready	Make paper Correction	OK
9	21/2/22	Stage-1	Review of Jim	Make paper ppt. no. of slide shows	good.
10	19/11/22	Stage-1	upto stage 1 all work complete	very good	OK
Visit No.	Date	Phase Number	Interrupts / Progress (To be filled in by student)	Comments and Grade (To be filled by Guide)	Comments and Grade (To be filled by Industrial Guide)

11	08/02/22	Stage-I	working is Analysis going on	OK	Good
12	11/02/22	Stage-II	Sensor position & working at all conditions check out	good	Nice
13	10/02/22	Stage-I	Programme checking	OK	good
14	08/02/22	Stage-II	Some error happening on dam side	Got through all process	Observed properly do it over
15	08/02/22	Stage-II	we achieved zero error on work station	very good	good
Visit No.	Date	Phase Number	Interrupts / Progress (To be filled in by student)	Comments and Grade (To be filled by Guide)	Comments and Grade (To be filled by Industrial Guide)

16	28/04/22	Stage-II	All work Completed on Compus.	very good make report	Good.
17	04/05/22	Stage-II	Hard binding Completed.	OK.	—
18					
19					
20					
Visit No.	Date	Phase Number	Interrupts / Progress (To be filled in by student)	Comments and Grade (To be filled by Guide)	Comments and Grade (To be filled by Industrial Guide)
21					

6. Project Review-I Internal Departmental Presentation

Name of students	Technical Credibility, Requirement Analysis	Literature Survey	Modeling and Designing/Concept/Project Idea	Project Planning	Presentation and Question-Answer	Synopsis
1.	A	B	A	A	A	B
2.	A	A	B	B	B	A
3.	A	B	B	A	A	A
4.	A	A	A	A	A	A

Name and Signature of Evaluation Committee:

1. Prof. D. D. Patil
2. Prof. A. V. Dhume
3. Prof. G. P. Jeyhale


 S. H. Pawar
 Name & Signature of Guide


 S. H. Pawar
 H.O.D (Mech.)
Head of Department
 Mechanical Engineering Department
 Brahma Valley College of Engg & R. I
 Anjaneri, Nashik- 422 213

Suggestion

OK. very good.

1. try to implement automation system.

2. zero rejection should be achieved.

a. Project Stage 1 Dissertation Writing Guidelines

(402046) PROJECT STAGE I*

Code	Subject	Teaching Scheme (Weekly Load in hrs)			Examination Scheme (Marks)					
		Lect.	Tut.	Pract.	Theory		TW	PR	OR	Total
					In Sem.	End Sem.				
402046	Project Stage I	--	2	--	---	---	50*	--	--	50

INSTRUCTIONS FOR DISSERTATION WRITING (Project Stage I) it is important that the procedures listed below is carefully followed by all the students of B.E. (Mechanical Engineering).

1. Prepare **Three Spiral Bound** Copies of your manuscript.
2. Limit your Project Stage I to **25– 30** pages (preferably)
3. The footer must include the following: Institute Name, B.E. (Mechanical) Times New Roman 10 pt. and centrally aligned
4. Page number as second line of footer, Times New Roman 10 Pt, centrally aligned.
5. Print the manuscript using a. Letter quality computer printing.
b. The main part of manuscript should be Times New Roman 12 pt. with alignment - justified. c. Use 1.5 line spacing. d. Entire report shall be of 5- 7 chapters
6. Use the paper size 8.5"×11" or A4 (210 × 197 mm). Please follow the margins given below

Margin Location Paper 8.5"×11" Paper A4 (210 × 197 mm)

Top	1"	25.4 mm
Bottom	1.5"	37 mm
Left	1.25"	32 mm
Right	1"	25.4 mm

7. All paragraphs will be 1.5 lines spaced with a one blank line between each paragraph. Each paragraph will begin with without any indentation.
8. Section titles should be bold with 14 pt typed in all capital letters and should be left aligned

9. Sub-Section headings should be aligning at the left with 12 pt, bold and Title Case (the first letter of each word is to be capitalized).
10. Illustrations (charts, drawings, photographs, figures) are to be in the text. Use only illustrations really pertinent to the text. Illustrations must be sharp, clear, black and white. Illustrations downloaded from internet are not acceptable. a. Illustrations should not be more than two per page. One could be ideal b. Figure No. and Title at bottom with 12 ptc. Legends below the title in 10 pt d. Leave proper margin in all sides e. Illustrations as far as possible should not be photo copied.
11. Photographs if any should be of glossy prints
12. Please use SI system of units only.
13. Please number the pages on the front side, centrally below the footer
14. References should be either in order as they appear in the thesis or in alphabetical order by last name of first author
15. Symbols and notations if any should be included in nomenclature section only
16. Following will be the order of report
 - i. Cover page and Front page as per the specimen on separate sheet
 - ii. Certificate from the Institute as per the specimen on separate sheet
 - iii. Acknowledgements
 - iv. List of Figures
 - v. List of Tables
 - vi. Nomenclature
 - vii. Contents
 - viii. Abstract (A brief abstract of the report not more than 150 words. The heading of abstract i.e. word —Abstractll should be bold, Times New Roman, 12 pt and should be typed at the centre. The contents of abstract should be typed on new line without space between heading and contents. Try to include one or two sentences each on motive, method, key-results and conclusions in Abstract
1. Introduction (2-3 pages) (TNR – 14 Bold)
 - 1.1 Problem statement (TNR – 12)
 - 1.2 Objectives
 - 1.3 Scope

1.4 Methodology

1.5 Organization of Dissertation

2. Literature Review (20-30 pages) Discuss the work done so far by researchers in the domain area and their significant conclusions. No derivations, figures, tables, graphs are expected.
3. This chapter shall be based on your own simulation work (Analytical/Numerical/FEM/CFD) (15- 20 pages)
4. Experimental Validation - This chapter shall be based on your own experimental work (15-20 pages)
5. Concluding Remarks and Scope for the Future Work (2-3 pages) (IF above Chapters 3,4, 5 not completed please mention the plan for the same and time period for completion and detail activity chart)

References ANNEXURE (if any) (Put all mathematical derivations, Simulation program as Annexure)

17. All section headings and subheadings should be numbered. For sections use numbers 1, 2, 3,and for subheadings 1.1, 1.2, etc and section subheadings 2.1.1, 2.1.2, etc.
18. References should be given in the body of the text and well spread. No verbatim copy or excessive text from only one or two references. If figures and tables are taken from any reference then indicate source of it. Please follow the following procedure for references

Reference Books

Collier, G. J. and Thome, J. R., Convective boiling and condensation, 3rd ed., Oxford University Press, UK, 1996, pp. 110 – 112.

Papers from Journal or Transactions Jung, D. S. and Radermacher, R., Transport properties and surface tension of pure and mixed refrigerants, ASHRAE Trans, 1991, 97 (1), pp. 90 – 98.

Bansal, P. K., Rupasinghe, A. S. and Jain, A. S., An empirical correction for sizing capillary tubes, Int. Journal of Refrigeration, 1996, 19 (8), pp.497 – 505.

Papers from Conference Proceedings

Colbourne, D. and Ritter, T. J., Quantitative assessment of flammable refrigerants in room air conditioners, Proc. of the Sixteenth International Compressor Engineering Conference and Ninth International Refrigeration and Air Conditioning Conference, Purdue University, West Lafayette, Indiana, USA, 2002, pp. 34 – 40.

Reports, Handbooks etc

United Nations Environmental Programmed, Report of the Refrigeration, Air Conditioning and Heat Pumps, Technical Option Committee, 2002, Assessment – 2002

ASHRAE Handbook: Refrigeration, 1994 (Chapter 44)

Patent

Patent no, Country (in parenthesis), date of application, title, year.

Internet

www. (Site) [Give full length URL]

A Dissertation on

(TNR, 16pt, centrally aligned)

**“Project Title” (TNR, 27pt, Bold,
Centrally Aligned, Title Case)**

By(TNR, 16pt, Centrally Aligned)

Mr. Student’s Name (TNR, 16pt, Centrally Aligned)

Guided by (TNR, 16pt, Centrally Aligned)

Prof. Guide Name



Department of Mechanical Engineering

Braham Valley College of Engineering &
Research Institute Anjaneri Nashik- 422 213

[2021-22](TNR, 22pt, Title Case Centrally
Aligned)

Braham Valley College of Engineering & Research Institute
Anjaneri Nashik- 422 213



CERTIFICATE

This is to certify that

MR. Student name

Exam No. B.....

MR. Student name

Exam No. B.....

MR. Student name

Exam No. B.....

has successfully completed the project stage-I entitled “**project title**” under my supervision, in the partial fulfillment of Bachelor of Engineering - Mechanical Engineering, of Savitribai Phule Pune University.

Date:

Place:

Prof.Guide Name
[GUIDE]

Prof.
[INTERNAL EXAMINER]

Dr. S.H.Pawar
H.O.D.
BVCOE & RI Nashik

Dr. H.N.Kudal
PRINCIPAL
BVCOE & RI Nashik


7. INTERNAL EVALUATION SHEET (SEMESTER VII)


Project Stage I

Name of students	Seat No.	Technical Credibility, Requirement Analysis, finalization of research component	Literature Survey	Modeling and Designing	Planning and Prototyping	Presentation and Question-Answer	Stage I Project Report	Total
	Marks Evaluation	(05)	(05)	(10)	(05)	(15)	(10)	(50)
1.		04	05	09	05	12	08	43
2.		04	04	08	04	13	09	42
3.		05	05	08	04	14	08	44
4.		04	04	08	03	13	08	40

Name and Signature of Evaluation Committee:

- 1.Prof. Prof. D. D. Pathy
 2.Prof. Prof. A. V. Dhruv
 3.Prof. Prof. G. P. Jeykumar


 S. H. Pawar
 Name & Signature of Guide


 S. H. Pawar
 H.O.D (Mech.)

Head of Department
 Mechanical Engineering Department
 Brahma Valley College of Engg & R.I
 Anjaneri, Nashik-422 213

Remarks and Suggestions (Project Stage I):


good. week.


8. Project Review-II Internal Departmental Presentation

Name of students	Seat Number	Technical Credibility	Modeling and Designing	Requirement Analysis	Project status	Presentation and Question-Answer
1.		A	A	A	A	B
2.		A	B	A	A	A
3.		A	A	B	A	B
4.		B	A	B	A	B

Name and Signature of Evaluation Committee:

- 1.Prof. D. D. Patil
 2.Prof. A. V. Dhumal
 3.Prof. G. P. Jeyhale


 S. H. Pawar
 Name & Signature of Guide


 S. H. Pawar,
 H.O.D (Mech.)

Head of Department
 Mechanical Engineering Department
 Brahma Valley College of Engg & R. I
 Ajaneri, Nashik-422 213

Remarks and Suggestions (Project Stage I):

Per. Approved by MR.


9. Project Review-III Internal Departmental Presentation

Name of students	Seat Number	Technical Credibility	Modeling and Designing	Requirement Analysis	Project status	Presentation and Question-Answer
1.		A	A	B	B	A
2.		A	A	A	B	A
3.		A	B	B	B	A
4.		B	B	A	B	B

Name and Signature of Evaluation Committee:

- 1.Prof. D. D. Patil
 2.Prof. A. V. Dhurnal
 3.Prof. G. R. Jenghate


 S. M. Pawar
 Name & Signature of Guide


 S. M. Pawar
 H.O.D (Mech.)
Head of Department
 Mechanical Engineering Department
 Brahma Valley College of Engg & R.T.
 Anjaneri, Nashik- 422 213

Remarks and Suggestions (Project Stage I):

OK - good

Project Stage II

Demo on Actual model

	Name of students	Seat Number
1.	Mr. Ashish Phar	
2.	Mr. Sahy Chite	
3.	Mr. Geemar Chite	
4.	Mr. Nikant Solunke	

Date of Presentation:

Title of Project:

Elimination of leakage from inner inspection & installation at gamma robot

Name and Signature of Evaluation Committee:

1. Prof. D. D. Patil
2. Prof. A. V. Dhume
3. Prof. G. R. Jayhale

Suggestions:

OK - sensor attachment at different location suggested



Dr. S. H. Pawar
Name & Signature of Guide



Dr. S. H. Pawar
H.O.D (Mech.)
Head of Department
Mechanics Engineering Department
Brahma Valley College of Engg & Tech
Anjaneri, Nashik-422 213

(402051) PROJECT STAGE II

Code	Subject	Teaching Scheme (Weekly Load in hrs)			Examination Scheme (Marks)					
		Lect.	Tut.	Pract.	Theory		TW	PR	OR	Total
					In Sem.	End Sem.				
402051	Project Stage II	--	6	--	--	--	150	--	50	200

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4. Page number as second line of footer, Times New Roman 10 Pt, centrally aligned.
5. Print the manuscript using a. Letter quality computer printing.
b. The main part of manuscript should be Times New Roman 12 pt. with alignment - justified. c. Use 1.5 line spacing. d. Entire report shall be of 5- 7 chapters
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 - 1.1 Problem statement (TNR – 12)
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 - 1.3 Scope
 - 1.4 Methodology
 - 1.5 Organization of Dissertation