

STUDY & EVALUATION SCHEME

of
COURSEWORK
for
Ph.D. PROGRAMME



TEERTHANKER MAHAVEER UNIVERSITY

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(In compliance of University Grants Commission (Minimum Standards and Procedures for Award of M.Phil/ Ph.D. Degree) Regulations, 2016) Effective from May 5, 2016

[Amended w.e.f. January 01, 2020]

SCHEME OF EVALUATION

for Research Methodology I, Research Methodology II & Research and Publication Ethics

Ph.D. PROGRAMME

SL. NO.	COURSE CODE	SUBJECT	CREDITS	MIN. QUALIFYING MARKS	MAX. MARKS
1	RRMD101	Research Methodology-I	4	55	100
2	RRMD102	Research Methodology-II	4	55	100
3	RMGT171	Seminar on Review of Literature	4	--	--
4	RMGT103*	Management Philosophy and Practices	4	55	100
5	CPE-RPE101**	Research and Publication Ethics	2	55	100

* Only for Research Scholars registered for Ph.D. in Management

**Amended w.e.f. January 01, 2020, as per UGC D.O. No. F-1-1/2018(Journal/CARE)

QUESTION PAPER STRUCTURE (RRMD101, RRMD102 & CPE-RPE101)

The question paper shall be divided into three parts viz. Section A, Section B, and Section C, as given below:

Section A shall consist of 8 *very short answers type questions* (not exceeding 50 words for each answer), out of which the candidate shall be required to answer any 5 questions, carrying 5 marks each.

Section B shall consist of 8 *short answer type questions* (not exceeding 100 words for each answer), out of which the candidate shall be required to answer any 5 questions, carrying 10 marks each.

Section C shall consist of 2 *long answer type questions*, out of which a candidate shall be required to answer any 1 question, carrying 25 marks.

EVALUATION OF LITERATURE REVIEW (RMGT171)

The research scholar shall submit a draft copy of the review of literature duly recommended by his supervisor(s) to the concerned college/department of the university. The review of literature shall be evaluated by an external subject expert nominated by the Vice Chancellor who shall submit his assessment/recommendations to the university as to whether the review of literature be accepted/accepted with minor suggestions; referred to the scholar for submission in revised form; or cannot be accepted in the present form and to be resubmitted. If the expert recommends the revision/re-submission, the research scholar shall be required to submit the revised draft copy of the review of literature after incorporating the recommendations and suggestions through the research supervisor for the review of CRC whose decision shall be final for grading of the research scholar's performance in the literature review.

Syllabus for Research Methodology I, Research Methodology II &

Research and Publication Ethics

Ph.D. PROGRAMME

RESEARCH METHODOLOGY – I

COURSE CODE: RRMD101

OBJECTIVE: To familiarise the research scholar with the fundamentals of scientific research.

COURSE CONTENTS:

1. Scientific Research: meaning and characteristics of scientific research, validity in research, phases/stages in research; types of research- qualitative, quantitative, exponential, exploratory, empirical, descriptive, ex-post facto, case studies, historical studies, philosophical studies, quasi-experimental; ethical problems in research; constructs and variables- nature of construct and variables, concept of constructs, type of variables, continuous and categorical, constructs, observables and intervening variables; Review of literature- purpose of the review, sources of the review, preparation of index card for reviewing and abstracting.

2. Problem Identification and Hypothesis Formation: problem- meaning and characteristics of a problem, types of problem, generality and specific of problem; hypothesis- meaning and characteristics of a good hypothesis, types of hypotheses, formulating a hypothesis, ways of stating a hypothesis; testing experimental hypothesis- standard error, test of significance, level of significance, degrees of freedom, errors in hypothesis- type I, type II errors.

3. Sampling and Research Design: meaning and types of sampling; probability and non probability sampling. methods of drawing samples, requisites of a good sampling method, sample size, sampling error; meaning and purpose of research design, types of research design, criteria of a good research design, basic principles of experimental design.

4. Introduction to MS-Office: MS-WORD, MS-EXCEL, MATLAB, LATEX.

Suggested Readings:

1. Cooper & Schindler, *Business Research Methods*, Tata McGraw Hill.
2. Saunders, *Research Methods for Business Students*, Pearson Education.
3. Allen T Harrell, *New Methods in Social Science Researchs*, Praeger Publishers, New York
4. Beri, G.C., *Statistics for Management*, Tata MacGraw-Hill
5. Chandan J. S., *Statistics for Business and Economics*, Vikas Publications.
6. Broota, K.D., *Experimantal Designs in Behavioural Research*, New Age International
7. Singh A. K., *Test Measurement and Research Methods in Behaviours Sciences*, Bharti Bhawan
8. Joyce Cox & Polly Urban, *Microsoft Office*, Galgotia Publishing
9. Sinha P.K., *Computer Fundamentals*, BPB Publishing.

****Latest editions of all the suggested books are recommended.***

RESEARCH METHODOLOGY – II

COURSE CODE: RRMD102

OBJECTIVE: To gain familiarity about various data collection tools and techniques, data analysis and interpretation along with the application of computer and statistical software in research.

COURSE CONTENTS:

1. Measurement and Scaling Techniques: measurement in research, measurement scales sources of errors in measurement, tests of second measurement, techniques of developing measurement tools, meaning of scaling, scale classification bases, important scaling techniques, and scale construction techniques.

2. Data Collection, Processing and Analysis: methods of data collection – primary data, secondary data; primary data collection – observation method, interview method, questionnaires, schedules, guideline for constructing questionnaires/schedules, secondary data collection of, selection of appropriate method of data collection; coding, editing and tabulation of data, charts and diagrams used in data analysis, bar and pie diagrams and their significance; measures of central tendency, measures of dispersion; correlation and regression analysis - meaning and uses, methods of calculation of coefficients and their analysis and implication. sampling distribution, sampling schemes and sample sizes, confidence interval for the mean, t-statistic, z-statistic, confidence interval for the population variances, hypothesis testing, test of hypothesis for the population mean, population variance and ratio of two population variances; applications of z-test, t-test, f-test and chi-square test, association of attributes and techniques of testing, ANOVA.

3. Report Writing: meaning and significance of report writing, types of report, steps in writing report, layout of the research report, precaution in writing research report, developing thesis report, formatting, inside citations, references and bibliography, knowledge of computer, statistical software and their application, application of statistical tests/techniques through the use of statistical software like SPSS, scientific packages like LISREL, AMOS, and SYSTAT for documentation and report generation.

Suggested Readings:

1. Cooper & Schindler, *Business Research Methods*, Tata McGraw Hill.
2. Malhotra Naresh K. , *Marketing Research*, Pearson Education
3. Power Analysis for experimental Research: A practical Guide for the Biological, Medical and Social Sciences by R. Barker Baushell, Yu-Fang Li Cambridge University Press
4. Chandan J. S., *Statistics for Business and Economics*, Vikas Publications.
5. Broota, K.D., *Experimantal Designs in Behavioural Research*, New Age International
6. Singh A. K., *Test Measurement and Research Methods in Behaviours Sciences*, Bharti Bhawan
7. Joyce Cox & Polly Urban, Microsoft Office, Galgotia Publishing
8. Sinha P.K., *Computer Fundamentals*, BPB Publishing.
9. Latex: A Document Preparation System, 2/E pearson low price edition by Lamport
10. MATLAB: An Introduction with Applications by Gilat Wiley India Pvt Ltd
11. Getting started with MATLAB by Rudra Pratap Oxford University Press

****Latest editions of all the suggested books are recommended.***

SEMINAR ON REVIEW OF LITERATURE

COURSE CODE: RMGT171

OBJECTIVE: The main objective of this course is to undertake a thorough review of available literature on the topic selected by the research scholar

COURSE CONTENTS:

The research scholar will review the important studies conducted at the national and international level either by individuals or organizations including government agencies and present the methodology adopted and important findings emerged from these studies. Based on this review of literature the researcher will identify the research gaps existing in the available literature and thus justifying the need for the present study.

The researcher is supposed to follow the pattern adopted in the standard national and international research journals. However, as an illustration the pattern for reporting review of literature is as under:

- Tiwari and Sinha (1971) gave productivity trends and factor compensation in Indian textiles industry for the period 1946-65 comprising of two sub-periods (1946- 1955 and 1956-1965). The marginal productivity of capital on an average for the industry as a whole is found to be lower in the sub-period (1946-55) and higher during (1956- 65). On the contrary, the estimates of the marginal productivity of labour again on average exhibit an actual decline from 2.9 percent to 2.5 percent.
- Menon (1971) in his review article examines the concepts associated with measurement of productivity at various dimensions of output and input, which are the major elements involved in the exercise of measuring productivity.
- Kumar, Anil and Khurana (2007) in their paper have examined trends in productivity of labour and capital in dairy industry in India during pre and post-reform periods. The results in the study conclude that labour productivity at national level has shown considerable improvement during post-reform period. But variations have been observed in case of growth rate of labour productivity at state-level. On the other hand, capital productivity has declined during post-reform period at national and state levels.
- Kumar and Bala (2007) in their study on “An evaluation of the impact of economic reforms on the growth and productivity of Indian small scale sector” has concluded that economic reforms process initiated in the early nineties has had a downbeat impact on the growth and productivity of small scale sector.

MANAGEMENT PHILOSOPHY AND PRACTICES

COURSE CODE: RMGT171

OBJECTIVE: To acclimatise the research scholar about the philosophy and fundamental principals of management.

COURSE CONTENTS:

Introduction: meaning and nature of management, evolution of management thoughts, contribution of experts and eminent management thinkers like - Kautilya, Robert Owen, Charles Babbage, F.W. Taylor, Henry Fayol, Urwick, Max Weber, Mary Parker Follett, George Elton Mayo and Chester Irving Barnard, Principles of management enshrined in Bhagwad Gita.

Management Functions: basic understanding of nature, scope, significance, objectives, processes and theories of major management functions such as planning, organizing, leading and controlling.

Modern Management Approaches: Maslow, Herzberg, Blake & Mouton and Hersey Blanchard approaches, decision making with special reference to Herbert Simon, management by objectives (MBO), management science approach, systems approach, contingency approach, quality and excellence movements, corporate social responsibility, ethics at work.

Suggested Readings:

1. Stoner, Freeman, Gilbert Jr., Management, Pearson Education, New Delhi
2. Wren, Daniel A, Evolution of Management, McGraw Hill Publication, New York
3. Singh, R N, Management Thought and Thinkers, Sultan Chand & Sons, New Delhi

****Latest editions of all the suggested books are recommended.***

RESEARCH AND PUBLICATIONS ETHICS

COURSE CODE: CPE-RPE101

OBJECTIVE: This course has total 6 units focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on-sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools will be introduced in this course.

COURSE CONTENTS:

- 1. Pedagogy:** Class room teaching, guest lectures, group discussions, and practical sessions.
- 2. Evaluation:** Continuous assessment will be done through tutorials, assignments, quizzes, and group discussions. Weightage will be given for active participation. Final written examination will be conducted at the end of the course.
- 3. Course structure:** The course comprises of six modules listed in table below. Each module has 4-5 units.

MODULES	UNIT TITLE	TEACHING HOURS
Theory		
RPE 01	Philosophy and Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publication Ethics	7
Practice		
RPE 04	Open Access Publishing	4
RPE 05	Publication Misconduct	4
RPE 06	Databases and Research Metrics	7
	Total	30

SYLLABUS IN DETAIL

THEORY

- RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)
 1. Introduction to philosophy: definition, nature and scope, concept, branches
 2. Ethics: definition, moral philosophy, nature of moral judgments and reactions
- RPE 02: SCIENTIFIC CONDUCT (5 hrs.)
 1. Ethics with respect to science and research
 2. Intellectual honesty and research integrity
 3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
 4. Redundant publications: duplicate and overlapping publications, salami slicing
 5. Selective reporting and misrepresentation of data
- RPE 03: PUBLICATION ETHICS (7 hrs.)
 1. Publication ethics: definition, introduction and importance
 2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
 3. Conflicts of interest
 4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
 5. Violation of publication ethics, authorship and contributorship
 6. Identification of publication misconduct, complaints and appeals
 7. Predatory publishers and journals

PRACTICE

- RPE 04: OPEN ACCESS PUBLISHING (4 hrs.)
 1. Open access publications and initiatives
 2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
 3. Software tool to identify predatory publications developed by SPPU
 4. Journal finder/journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggested, etc.

 - RPE 05: PUBLICATION MISCONDUCT (4hrs.)
 - (A) Group Discussions (2 hrs.)
 1. Subject specific ethical issues, FFP, authorship
 2. Conflicts of interest
 3. Complaints and appeals: examples and fraud from India and abroad
 - (B) Software tools (2 hrs.) :Use of plagiarism software like Turnitin, iThenticate and other open source software tools

 - RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)
 - (A) Databases (4 hrs.)
 1. Indexing databases
 2. Citation databases: Web of Science, Scopus, etc.
 - (B) Research Metrics (3 hrs.)
 1. Impact Factor of journal as per Journal Citation Report, SNIP, SIR, IPP, Cite Score
 2. Metrics: h-index, g index, i10 index, altmetrics
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