

SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF MANAGEMENT STUDIES

QUESTION BANK

III SEMESTER

BA3371 RESEARCH METHODOLOGY AND INTELLECTUAL PROPERTY RIGHTS

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DEPARTMENT OF MECHANICAL ENGINEERING

BA3371

RESEARCH METHODOLOGY AND INTELLECTUAL PROPERTY RIGHTS

UNIT I – INTRODUCTION TO RESEARCH AND ITS DESIGN

The concept of research – Characteristics of good research – The hallmarks of scientific research – Building blocks of science in research – Concept of applied and basic research – Quantitative and Qualitative Research techniques – Need for theoretical frame work – Hypothesis development and testing. Research design – Purpose of the study: Exploratory, Descriptive, Experimental Research Design, Hypothesis Testing, Measurement of variables - Scales and measurements of variables - Factorial Design in Research – Taguchi method in Research, Developing scales.

PART - A (2 Marks)

Q.No.	Questions	BT Level	Competence
1.	Define research.	BT-1	Remembering
2.	Write down the steps involved in the research process.	BT-1	Remembering
3.	What is historical research?	BT-2	Understanding
4.	What is applied research?	BT-2	Understanding
5.	What is pure research?	BT-2	Understanding
6.	What is operational research?	BT-2	Understanding
7.	What are the main characteristics of the hallmarks of scientific research?	BT-1	Remembering
8.	Draw a diagram of the building blocks of science in research.	BT-1	Remembering
9.	Illustrate the review of literature.	BT-3	Applying
10.	List out the sources for the review of literature.	BT-1	Remembering
11.	What do you understand by exploratory research?	BT-2	Understanding
12.	What is empirical research?	BT-1	Remembering

13.	What is the research objective?	BT-1	Remembering
14.	Define research design.	BT-1	Remembering
15.	List out the components of the research design.	BT-1	Remembering
16.	What is an exploratory research design? List out the methods of exploratory research design.	BT-2	Understanding
17.	What is descriptive research? List out the methods for descriptive studies.	BT-2	Understanding
18.	What is experimental design?	BT-1	Remembering
19.	Write about any four differences between Exploratory and Descriptive research designs.	BT-2	Understanding
20.	What is qualitative research?	BT-1	Remembering
21.	What is quantitative research?	BT-1	Remembering
22.	What do you mean by the Quasi experiment?	BT-2	Understanding
23.	What are the features of the cause and effect method of research?	BT-3	Applying
24.	List out the factors affecting research design.	BT-2	Understanding
25.	What are variables?	BT-1	Remembering

PART - B (16 Marks)

Q.No.	Questions	Marks	BT Level	Competence
1.	What is the difference between basic research and applied research?	16	BT-2	Understanding
2.	Distinguish between Research methods and Research methodology.	16	BT-2	Understanding
3.	Clearly point out the difference between an experiment and a survey.	16	BT-4	Analyzing
4.	Explain in detail the different steps involved in the research process.	16	BT-4	Analyzing
5.	Describe the classification of research.	16	BT-2	Understanding
6.	Why is it important to define the research problem appropriately?	16	BT-5	Evaluating

7.	Why is hypothesis required in research? What are the different types of hypothesis? Give examples.	16	BT-5	Evaluating
8.	Explain the different types of research, clearly pointing out the differences between exploratory research and descriptive research.	16	BT-4	Analyzing
9.	What is the purpose and importance of a literature survey in research?	16	BT-2	Understanding
10.	Describe various measurement scales. Point out the possible sources of errors in measurement. Describe the test of sound management.	16	BT-5	Evaluating
11.	Compare the Likert scale and the semantic differential scale. What are the special features of the semantic differential scale?	16	BT-5	Evaluating
12.	What is a measurement scale? Explain the different types of measuring scales and describe the construction of a scale.	16	BT-4	Analyzing
13.	Reliability or Validity – which is more Important in RM?	16	BT-5	Evaluating
14.	Illustrate the factors influencing internal validity.	16	BT-3	Applying
15.	Illustrate the factors influencing external validity.	16	BT-3	Applying
16.	Classify the types of variables and Explain them.	16	BT-4	Analyzing
17.	Explain the measurement of the validity test.	16	BT-2	Understanding
18.	Point out the features of Taguchi method with suitable example.	16	BT-5	Evaluating

UNIT II – DATA COLLECTION METHODS AND ANALYSIS TECHNIQUES

Types of data – Primary Vs secondary data, Advantages and Disadvantages of various Data-Collection Methods, Sampling plan - Sampling Techniques – Probability and non – probability Sampling, Determination of Optimal sample size, Data Analysis – Factor Analysis – Cluster Analysis – Discriminant Analysis – Multiple Regression and Correlation – Canonical Correlation – Application of Statistical (SPSS) Software Package in Research.

PART - A (2 Marks)

Q.No.	Questions	BT Level	Competence
1.	What are the two types of data?	BT-1	Remembering
2.	What is primary data? List the sources of primary data.	BT-2	Understanding
3.	What is the observation method?	BT-1	Remembering
4.	List out the types of observation.	BT-2	Understanding
5.	Give two suggestions to make the observation successful.	BT-3	Applying
6.	Write about the importance of an interview method.	BT-3	Applying
7.	What is a focus group interview?	BT-1	Remembering
8.	Write about any two advantages of interviews.	BT-2	Understanding
9.	Write about any two disadvantages of interviews.	BT-2	Understanding
10.	What is a questionnaire?	BT-1	Remembering
11.	What is schedule?	BT-1	Remembering
12.	What is secondary data?	BT-1	Remembering
13.	List the sources of secondary data.	BT-2	Understanding
14.	What are the types of correlations?	BT-1	Remembering
15.	What is discriminant analysis?	BT-2	Understanding
16.	What is cluster analysis?	BT-2	Understanding

17.	What is factor analysis?	BT-2	Understanding
18.	What is multi-dimensional scaling?	BT-1	Remembering
19.	Explain the term factor loading.	BT-3	Applying
20.	What does R^2 represent?	BT-1	Remembering
21.	List down any two widely used statistical software for data analysis.	BT-3	Applying
22.	List out any four differences between qualitative and quantitative data.	BT-1	Remembering
23.	List out the generic applications for SPSS.	BT-1	Remembering
24.	Write the uses of MINITAB.	BT-3	Applying
25.	Write short notes about MATLAB.	BT-2	Understanding

PART - B (16 Marks)

Q.No.	Questions	Marks	BT Level	Competence
1.	What are the methods available for collecting primary data? Explain in detail the construction of a questionnaire.	16	BT-1	Remembering
2.	Enumerate the different methods of collecting data. Explain its merits and demerits.	16	BT-4	Analyzing
3.	What are the relative advantages and disadvantages of observation? Explain.	16	BT-4	Analyzing
4.	What are the advantages and disadvantages of the structured direct survey method?	16	BT-4	Analyzing
5.	Explain the different types of interviews.	16	BT-2	Understanding
6.	Explain the different types of survey.	16	BT-2	Understanding
7.	Explain stratified random sampling.	16	BT-2	Understanding
8.	Explain the different techniques that fall under probability and non-probability sampling.	16	BT-3	Applying

9.	Discuss the merits and demerits of various probability sampling techniques.	16	BT-3	Applying
10.	Explain cluster analysis and write about its uses and limitations.	16	BT-2	Understanding
11.	Differentiate between regression analysis and discriminant analysis	16	BT-2	Understanding
12.	What is a correlation? Write the properties of the correlation coefficient and list out the types of correlation.	16	BT-3	Applying
13.	Explain the procedure for performing multi-dimensional scaling.	16	BT-2	Understanding
14.	Illustrate the Centroid method of factor analysis.	16	BT-4	Analyzing
15.	Illustrate the Principal-Components method of factor analysis.	16	BT-4	Analyzing
16.	Illustrate the Maximum Likelihood (ML) method of factor analysis.	16	BT-4	Analyzing
17.	What is SPSS? Write about its importance in data analysis and research.	16	BT-5	Evaluating
18.	Discuss the application of the statistical (SPSS) software package in research.	16	BT-5	Evaluating

UNIT III – REPORT WRITING AND CODE OF ETHICS FOR RESEARCH

Research report – Layout of the Research Report- Steps in Writing Report- Types of Reports – Contents of report - Significance of Report Writing- Report Presentation –Mechanics of Writing a Research Report - Precautions for Writing Report, Code of Ethics in research.

PART - A (2 Marks)

Q.No.	Questions	BT Level	Competence
1.	What is a research report?	BT-1	Remembering
2.	List down the types of reports.	BT-1	Remembering
3.	What are the steps in writing research reports?	BT-2	Understanding
4.	What is a problem statement?	BT-1	Remembering
5.	What do you understand by methodology?	BT-2	Understanding
6.	List out three important points for writing research reports.	BT-1	Remembering
7.	What are the types of audiences?	BT-1	Remembering
8.	What do you understand by appendix?	BT-1	Remembering
9.	What is an executive summary?	BT-1	Remembering
10.	What is the classification of chapters in a research report?	BT-3	Applying
11.	What are the elements of the scientific research report?	BT-2	Understanding
12.	What are the table of contents?	BT-1	Remembering
13.	What is the need for an executive summary in a report?	BT-2	Understanding
14.	How do findings differ from conclusions in a research report?	BT-3	Applying
15.	Write notes about the Bibliography.	BT-2	Understanding
16.	What are the research objectives?	BT-1	Remembering

17.	Point out the importance of an executive summary in a report.	BT-1	Remembering
18.	What do you understand by limitations?	BT-1	Remembering
19.	Write any four important principles of good report writing.	BT-2	Understanding
20.	What is abstract?	BT-1	Remembering
21.	Why is abstract needed?	BT-3	Applying
22.	Who are the target audience?	BT-2	Understanding
23.	What is a footnote?	BT-1	Remembering
24.	What is Code of Ethics?	BT-3	Applying
25.	What are acknowledgements?	BT-1	Remembering

PART - B (16 Marks)

Q.No.	Questions	Marks	BT Level	Competence
1.	Illustrate the layout of a research report, covering all relevant points.	16	BT-4	Analyzing
2.	Write a short note on 'Documentation' in the context of a research report.	16	BT-2	Understanding
3.	Mention the different types of reports, particularly pointing out the difference between a technical report and a popular report.	16	BT-4	Analyzing
4.	Describe a commonly used format for writing a research report.	16	BT-2	Understanding
5.	How should the data items be arranged in a table? Explain.	16	BT-4	Analyzing
6.	Explain the features to be adopted while writing a technical research report.	16	BT-4	Analyzing
7.	Evaluate the ethical issues involved in research.	16	BT-5	Evaluating

8.	Explain the significance of a research report and narrate the various steps involved in writing such a report.	16	BT-3	Applying
9.	Explain the components of a research report. How would you do the final proof reading? Explain.	16	BT-3	Applying
10.	Illustrate the purpose of oral presentation. What guidelines should be followed in an oral presentation?	16	BT-4	Analyzing
11.	Illustrate the guidelines for report writing.	16	BT-4	Analyzing
12.	Explain the types of research reports and the precautions for writing research reports.	16	BT-3	Applying
13.	In general, explain how the results of research are to be presented. What are the different types of reports?	16	BT-5	Evaluating
14.	Explain the research-writing process.	16	BT-2	Understanding
15.	Explain the process of writing a good research report.	16	BT-2	Understanding
16.	Explain the steps involved in an executive summary.	16	BT-2	Understanding
17.	Summarize the features of code of ethics.	16	BT-5	Evaluating
18.	Classify the types of audiences and illustrate the role of audiences.	16	BT-5	Evaluating

UNIT IV – INTELLECTUAL PROPERTY RIGHTS

Nature of Intellectual Property - Patents, Designs, Trade mark and Copyright. Process of Patenting and Development: technological research, innovation, patenting & development. Procedure for grants of patents, Patenting under PCT.

PART - A (2 Marks)

Q.No.	Questions	BT Level	Competence
1.	Define IPR.	BT-1	Remembering
2.	What is a Patent?	BT-1	Remembering
3.	What is innovation?	BT-2	Understanding
4.	What are the criteria of patentability?	BT-2	Understanding
5.	Elucidate various type of innovation.	BT-1	Remembering
6.	Write short notes on Patents.	BT-1	Remembering
7.	Brief the Process of Patenting and Development.	BT-1	Remembering
8.	What do you mean by invention? Give an example.	BT-1	Remembering
9.	Write short notes on Trade Marks.	BT-1	Remembering
10.	What are the objectives of IPR?	BT-1	Remembering
11.	Define creativity and novelty.	BT-1	Remembering
12.	Write short notes on Copyright.	BT-1	Remembering
13.	Write short notes on industrial designs.	BT-1	Remembering
14.	Differentiate the process and product innovation.	BT-1	Remembering
15.	List the forms required for patent filing.	BT-2	Understanding
16.	Define technological research.	BT-2	Understanding
17.	Write short notes on incubation centers.	BT-2	Understanding

18.	What kind of information is presented in a typical patent document?	BT-1	Remembering
19.	What is the purpose of a trademark?	BT-1	Remembering
20.	How can industrial designs be protected?	BT-1	Remembering
21.	Describe briefly how the online patent data is organized.	BT-3	Applying
22.	How to select a good trademark?	BT-1	Remembering
23.	List out the forms for industrial design.	BT-1	Remembering
24.	What are the objectives of IPR?	BT-1	Remembering
25.	List the benefits of IPR.	BT-2	Understanding

PART - B (16 Marks)

Q.No.	Questions	Marks	BT Level	Competence
1.	Examine the need for intellectual property laws in a developing country like India.	16	BT-4	Analyzing
2.	Explain the need and scope areas for the effective implementation of Intellectual Properties (IP) and the associated rights in India.	16	BT-3	Applying
3.	Express your views about IPR necessity for the country?	16	BT-4	Analyzing
4.	Explain the different approaches, merits and demerits of patent and non-patent practices in the commercial business world.	16	BT-2	Understanding
5.	Discuss Breakthrough Innovation and Incremental Innovation by quoting real time examples.	16	BT-2	Understanding

6.	Describe why Trade Secrets are necessary. How do they function?	16	BT-4	Analyzing
7.	Describe the importance of International organisation. When it was established?	16	BT-3	Applying
8.	Explain why the International Organization, Agencies and Treaties were established.	16	BT-2	Understanding
9.	Explain the features of International organizations, Agencies and treaties.	16	BT-4	Analyzing
10.	Express your views about the Intellectual Property Rights necessity for Countries	16	BT-2	Understanding
11.	Explain about different types of copy rights.	16	BT-2	Understanding
12.	Explain when the terminations of transfers of copyrights take place.	16	BT-3	Applying
13.	Explain the functions of international intellectual property organization.	16	BT-2	Understanding
14.	Explain the reasons for increasing importance for Intellectual Property Rights.	16	BT-2	Understanding
15.	Bring out the characteristics features of intellectual property.	16	BT-4	Analyzing
16.	Explain the different forms of patents.	16	BT-4	Analyzing
17.	Briefly trace the history of IPR. (or) Evolution of IP.	16	BT-5	Evaluating
18.	Explain the importance of Patenting under PCT.	16	BT-5	Evaluating

UNIT V – INTELLECTUAL PATENT RIGHTS AND NEW DEVELOPMENT

Patent Rights: Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications, New Developments in IPR: Administration of Patent System.

PART - A (2 Marks)

Q.No.	Questions	BT Level	Competence
1.	Write a note on patent rights.	BT-1	Remembering
2.	Brief about license rules in patent.	BT-1	Remembering
3.	Point out the significance of patent rights.	BT-2	Understanding
4.	List the rights of an intellectual property owner.	BT-1	Remembering
5.	Brief about Patent information.	BT-2	Understanding
6.	Classify Patent information.	BT-1	Remembering
7.	Write a note on patent data base.	BT-1	Remembering
8.	List the New Developments in IPR.	BT-1	Remembering
9.	What is the relevance of Lisbon Agreement?	BT-1	Remembering
10.	Explain the basic objectives of WTO.	BT-1	Remembering
11.	What are Copyrights and other Related Rights?	BT-2	Understanding
12.	Why do Trade Secrets need protection?	BT-1	Remembering
13.	What options are given for <i>Plant Variety Protection</i> by the TRIPS Agreement?	BT-1	Remembering
14.	Name the objectives of WIPO.	BT-1	Remembering
15.	What does Marrakesh treaty relate to?	BT-2	Understanding
16.	What is the difference between International Conventions and Treaties?	BT-1	Remembering

17.	Which issues were addressed in the Uruguay Round?	BT-1	Remembering
18.	What is Rome Convention?	BT-1	Remembering
19.	When did the TRIPS Agreement came into force?	BT-2	Understanding
20.	What is GATT?	BT-1	Remembering
21.	What is Nice Agreement?	BT-1	Remembering
22.	Brief about Geographical Indications.	BT-2	Understanding
23.	Write a note on Administration of Patent System.	BT-1	Remembering
24.	What is traditional knowledge as per WIPO?	BT-3	Applying
25.	Name some GI tags.	BT-1	Remembering

PART - B (16 Marks)

Q.No.	Questions	Marks	BT Level	Competence
1.	Explain why agencies are responsible for Intellectual Property Registration with any two examples.	16	BT-4	Analyzing
2.	Describe the importance of International organisations for IPR? When it was established?	16	BT-2	Understanding
3.	Explain why the International Organization, Agencies and Treaties were established.	16	BT-4	Analyzing
4.	Analyze Vessel Hull Protection in Copyright aspect.	16	BT-4	Analyzing
5.	Explain the reasons for increasing importance for Intellectual Property Rights.	16	BT-4	Analyzing
6.	Summarize the legal aspects of International organizations, Agencies and treaties.	16	BT-4	Analyzing
7.	Express your views about the Intellectual Property Rights necessity for countries.	16	BT-5	Evaluating

8.	Give any Five International agreements and treaties that affect IPR management.	16	BT-3	Applying
9.	Why is there a need for Intellectual Property System? And how does the international community coordinate IP protection?	16	BT-3	Applying
10.	Write a detailed note on Administration of Patent System.	16	BT-4	Analyzing
11.	Explain the “Transitional Arrangements” under the TRIPS Agreement.	16	BT-4	Analyzing
12.	Which intellectual properties are covered under the TRIPS Agreement? Explain the basic concepts of each of them.	16	BT-3	Applying
13.	Elaborate about GI tags. Also explain the salient features.	16	BT-5	Evaluating
14.	What are the aims and objectives of WIPO? Discuss its functioning.	16	BT-2	Understanding
15.	Analyze the need for patent rights and their implications.	16	BT-2	Understanding
16.	Discuss the “Most-favoured Nation Treatment” principle in the context of global trade.	16	BT-2	Understanding
17.	Explain the “Transitional Arrangement” of India under the TRIPS Agreement.	16	BT-5	Evaluating
18.	Discuss the ‘term of protection’ given to the IPRs by the TRIPS Agreement.	16	BT-5	Evaluating
