



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR
(AUTONOMOUS)**

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QUESTION BANK (DESCRIPTIVE)

Subject with Code: RESEARCH METHODOLOGY AND IPR
(25MC9109)

Course & Branch: MCA

Year & Sem: I-MCA & I-Sem

Regulation: R25

UNIT –I

INTRODUCTION RESEARCH PROBLEM

1	a)	Define research problem with a suitable example.	[L1][CO1]	[6M]
	b)	Explain the importance of identifying a research problem in research process.	[L2][CO1]	[6M]
2	a)	List five sources of research problems with illustrations.	[L1][CO1]	[6M]
	b)	Discuss the criteria for selecting a good research problem.	[L2][CO1]	[6M]
3	a)	Explain common errors made in selecting a research problem.	[L2][CO1]	[6M]
	b)	Illustrate the scope and objectives of a research problem with an example.	[L2][CO1]	[6M]
4	a)	Apply the same scope/objectives framework to a real-life case study.	[L3][CO1]	[6M]
	b)	Describe approaches to investigate solutions for research problems.	[L2][CO1]	[6M]
5	a)	Compare experimental and analytical approaches to problem-solving.	[L4][CO1]	[6M]
	b)	Explain primary and secondary data collection methods.	[L2][CO1]	[6M]
6	a)	Differentiate between qualitative and quantitative research data.	[L4][CO1]	[6M]
	b)	Explain the steps of data analysis in research.	[L2][CO1]	[6M]
7	a)	Apply data interpretation methods to a hypothetical dataset.	[L3][CO1]	[6M]
	b)	Describe the role of instrumentation in research.	[L2][CO1]	[6M]
8	a)	Identify tools/software required for data collection in social science research.	[L1][CO1]	[6M]
	b)	Illustrate the role of instrumentation in engineering/scientific research.	[L3][CO1]	[6M]
9	a)	Analyze the relationship between research problem and research objectives.	[L4][CO1]	[6M]
	b)	Critically evaluate a poorly defined research problem and suggest improvements.	[L5][CO1]	[6M]
10	a)	Justify why clarity and feasibility are essential in selecting a research problem.	[L5][CO1]	[6M]
	b)	Design a framework to select a research problem in your domain.	[L6][CO1]	[6M]

UNIT –II**LITERATURE REVIEW AND RESEARCH ETHICS**

1	a)	Define literature review in research.	[L1][CO2]	[6M]
	b)	Explain the importance of literature review in framing a research problem.	[L2][CO2]	[6M]
2	a)	List different sources of literature for research studies.	[L1][CO2]	[6M]
	b)	Describe effective approaches to conduct literature surveys.	[L2][CO2]	[6M]
3	a)	Explain plagiarism and its types with examples.	[L1][CO2]	[6M]
	b)	Define research ethics and explain its importance.	[L1][CO2]	[6M]
4	a)	Apply ethical principles to a real-world research scenario.	[L3][CO2]	[6M]
	b)	Describe the qualities of effective technical writing.	[L2][CO2]	[6M]
5	a)	Differentiate between technical writing and general writing.	[L4][CO2]	[6M]
	b)	Explain the structure of a standard research paper.	[L2][CO2]	[6M]
6	a)	Discuss common mistakes in technical report writing.	[L2][CO2]	[6M]
	b)	Explain the steps involved in preparing a research proposal.	[L2][CO2]	[6M]
7	a)	Develop a short sample research proposal format.	[L3][CO2]	[6M]
	b)	Analyze the role of proper citation in avoiding plagiarism.	[L4][CO2]	[6M]
8	a)	Identify different referencing styles (APA, MLA, IEEE) and explain their use.	[L1][CO2]	[6M]
	b)	Evaluate the importance of peer review in research publications.	[L5][CO2]	[6M]
9	a)	Critically assess the need for maintaining transparency in research reports.	[L5][CO2]	[6M]
	b)	Compare the process of writing a thesis, dissertation, and journal paper.	[L4][CO2]	[6M]
10	a)	Justify why research proposals must undergo committee review before approval.	[L5][CO2]	[6M]
	b)	Design a checklist for plagiarism-free research writing.	[L6][CO2]	[6M]

UNIT –III**NATURE OF INTELLECTUAL PROPERTY (IP)**

1	a)	Define Intellectual Property (IP) and explain its significance.	[L1][CO3]	[6M]
	b)	List different types of Intellectual Property Rights (IPR).	[L1][CO3]	[6M]
2	a)	Explain patents with suitable examples.	[L2][CO3]	[6M]
	b)	Differentiate between patents, designs, trademarks, and copyrights.	[L2][CO3]	[6M]
3	a)	Describe the process of patenting from innovation to grant.	[L2][CO3]	[6M]
	b)	Explain the importance of technological research in IP creation.	[L2][CO3]	[6M]
4	a)	Apply patenting principles to an example of a new invention.	[L3][CO3]	[6M]
	b)	Discuss the role of innovation in patent development.	[L2][CO3]	[6M]
5	a)	Explain the importance of development in the IP lifecycle.	[L2][CO3]	[6M]
	b)	Define PCT and explain its relevance in international patenting.	[L1][CO3]	[6M]
6	a)	Describe the international cooperation mechanisms for IPR protection.	[L2][CO3]	[6M]
	b)	Explain the procedure for grant of patents in India.	[L2][CO3]	[6M]
7	a)	Illustrate the process of patenting under PCT with an example.	[L3][CO3]	[6M]
	b)	Analyze the difference between national patent systems and international patent systems.	[L4][CO3]	[6M]
8	a)	Identify the requirements for filing a patent application.	[L1][CO3]	[6M]
	b)	Evaluate the importance of copyrights in academic research.	[L5][CO3]	[6M]
9	a)	Critically assess the role of trademarks in business growth.	[L5][CO3]	[6M]
	b)	Compare the IP policies of India with those of developed nations.	[L4][CO3]	[6M]
10	a)	Justify the need for global IP protection mechanisms.	[L5][CO3]	[6M]
	b)	Design a flowchart showing the process of obtaining a patent.	[L6][CO3]	[6M]

UNIT –IV
PATENT RIGHTS.

1	a)	Define patent rights and explain their importance.	[L1][CO4]	[6M]
	b)	List the scope and limitations of patent rights.	[L1][CO4]	[6M]
2	a)	Explain licensing in the context of patents.	[L2][CO4]	[6M]
	b)	Describe different types of technology transfer.	[L2][CO4]	[6M]
3	a)	Discuss the importance of patent information systems.	[L2][CO4]	[6M]
	b)	Explain the role of patent databases in research and innovation.	[L2][CO4]	[6M]
4	a)	Demonstrate a simple search strategy in a patent database.	[L3][CO4]	[6M]
	b)	Explain geographical indications with two Indian examples.	[L2][CO4]	[6M]
5	a)	Compare patent rights with geographical indications.	[L4][CO4]	[6M]
	b)	Analyze how licensing agreements help in commercialization of patents.	[L4][CO4]	[6M]
6	a)	Identify challenges in transferring technology from lab to industry.	[L1][CO4]	[6M]
	b)	Explain the process of licensing a patented invention.	[L2][CO4]	[6M]
7	a)	Apply licensing principles to a real-world industrial example.	[L3][CO4]	[6M]
	b)	Evaluate the role of geographical indications in rural development.	[L5][CO4]	[6M]
8	a)	Critically assess the effectiveness of Indian patent databases.	[L5][CO4]	[6M]
	b)	Justify the importance of protecting geographical indications globally.	[L5][CO4]	[6M]
9	a)	Differentiate between patent assignment and patent licensing.	[L4][CO4]	[6M]
	b)	Illustrate a case study of successful technology transfer.	[L3][CO4]	[6M]
10	a)	Design a framework for effective technology transfer from universities to industries.	[L6][CO4]	[6M]
	b)	Propose a strategy for SMEs to utilize patent information for innovation.	[L6][CO4]	[6M]

UNIT –V
NEW DEVELOPMENTS IN IPR

1	a)	Define administration of patent system.	[L1][CO5]	[6M]
	b)	List the key functions of patent administration in India.	[L1][CO5]	[6M]
2	a)	Explain new developments in IPR related to biological systems.	[L2][CO5]	[6M]
	b)	Describe the application of IPR in computer software.	[L2][CO5]	[6M]
3	a)	Discuss the importance of protecting traditional knowledge under IPR.	[L2][CO5]	[6M]
	b)	Explain the role of IPR in digital innovations.	[L2][CO5]	[6M]
4	a)	Apply IPR rules to an example of mobile app development.	[L3][CO5]	[6M]
	b)	Illustrate the significance of case studies in understanding IPR.	[L3][CO5]	[6M]
5	a)	Explain how IITs contribute to IPR through research innovations.	[L2][CO5]	[6M]
	b)	Differentiate between IPR for biological systems and traditional knowledge.	[L4][CO5]	[6M]
6	a)	Analyze the role of WIPO in new developments of IPR.	[L4][CO5]	[6M]
	b)	Explain the challenges in protecting software under IPR.	[L2][CO5]	[6M]
7	a)	Suggest solutions to overcome these challenges.	[L5][CO5]	[6M]
	b)	Evaluate the effectiveness of India's traditional knowledge digital library (TKDL).	[L5][CO5]	[6M]
8	a)	Critically assess recent amendments in Indian IPR laws.	[L5][CO5]	[6M]
	b)	Identify emerging challenges in global patent administration.	[L1][CO5]	[6M]
9	a)	Compare IPR developments in India and other Asian countries.	[L4][CO5]	[6M]
	b)	Justify the need for IPR reforms in the era of AI and biotechnology.	[L5][CO5]	[6M]
10	a)	Design a framework for protecting indigenous knowledge in your region.	[L6][CO5]	[6M]
	b)	Propose strategies for effective IPR administration in academic institutions.	[L6][CO5]	[6M]

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