Reg. No.															

Question Paper Code	14270

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

First Semester

M.E. - Big Data Analytics

24PBDMC101 - RESEARCH METHODOLOGY AND IPR

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Selecting a problem without understanding existing work results in: (a) Better clarity (b) Improved methodology (c) Errors in problem selection (d) Faster documentation	1	K1	CO1
2.	A common error in selecting a research problem is: (a) Reviewing literature (b) Selecting a topic beyond available resources (c) Setting clear objectives (d) Using proper data collection methods	1	K1	CO1
3.	The main purpose of a literature review is to: (a) Copy previous research (b) Increase the length of the report (c) Avoid reading research papers (d) Summarize and evaluate existing knowledge	1	K1	CO2
4.	Research ethics mainly focus on: (a) Reducing paper length (b) Fabrication, falsification, and honesty (c) Increasing publication count (d) Avoiding peer review	1	K1	CO2
5.	Which section of a research paper usually contains methodology? (a) Conclusion (b) Abstract (c) Introduction (d) Main body	1	K1	CO3
6.	During a presentation, good slides should be: (a) Filled with long paragraphs (b) Minimal text with key points (c) Full of clipart (d) Without titles	1	K1	CO3
7.	Which of the following protects inventions? (a) Copyright (b) Trademark (c) Patent (d) Industrial Design	1	K1	CO4
8.	Which international system allows a single patent application for multiple countries? (a) WTO (b) PCT (c) TRIPS (d) WIPO-RIO	1	K1	CO4
9.	Patent databases are mainly used for: (a) Finding historical places (b) Tracking research funding (c) Searching existing patents and prior art (d) Checking product marketing	1	K1	CO5
10.	IITs are known for: (a) Filing a significant number of patents and licensing technologies (b) GI registration (c) Only teaching undergraduate students (d) Not having any research outcomes	1	K1	CO5

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

		Marks	K – Level	CO
11.	Identify the scope of a research problem.	2	K1	CO1
12.	Name the instruments used for data measurement.	2	K1	CO1
13.	State the purpose of a literature review.	2	K1	CO2
14.	What is meant by citation?	2	K1	CO2
15.	List the parts of a research proposal.	2	K1	CO3
16.	Identify the visual aid used in presentations.	2	K1	CO3
17.	Define the term technological research in the context of patent development.	2	K2	CO4
18.	Write the significance of the Patent Cooperation Treaty (PCT).	2	K1	CO4

19.	Classify different types of patent information databases.	2	K2	CO5
20.	List any two examples of Geographical Indications (GI) in India.	2	K1	CO5
21.	Outline the role of innovation in the development of patentable products.	2	K2	CO4
22.	State the characteristics of a good research problem.	2	K1	CO1

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Explain the various sources from which a research problem can be identified.	11	K2	CO1
		OR			
	b)	Classify the different approaches used to investigate solutions for a research problem.	11	K2	CO1
24.	a)	Discuss the different approaches used for literature study and compare various sources in it.	11	K2	CO2
		OR			
	b)	Explain plagiarism, types of plagiarism and write the methods to avoid it.	11	K2	CO2
25.	a)	Illustrate the structure and components of a good technical report and explain them.	11	K3	CO3
		OR			
	b) (i)	Identify the techniques for effective technical presentation.	5	K3	CO3
	(ii)	Illustrate how a review committee evaluates a research presentation.	6	K3	CO3
26.	a)	Explain the concepts of patents, trademarks, industrial designs and copyrights with examples.	11	K2	CO4
		OR			
	b)	Explain the significance of filing patents under the Patent Cooperation Treaty (PCT).	11	K2	CO4
27.	a)	Develop the steps involved in licensing and technology transfer with suitable industrial case studies.	11	K3	CO5
		OR			
	b)	Examine the challenges in protecting computer software under IPR.	11	K3	CO5
28.	a)	Illustrate the IPR issues related to biological systems and biotechnology.	11	K3	CO5
		OR			
	b)	Identify the new developments and emerging trends in IPR at the global level.	11	K3	CO3