

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026*****First Semester******ME -Product Design and Development*****PRMT2411 - RESEARCH METHODOLOGY AND IPR*****Regulations - 2024******Duration: 3 Hrs.******Maximum: 100 Marks******PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	Define 'Research Design' and state its primary purpose	L1	1	2
2.	Name the key characteristic that distinguishes a true experiment from other study designs	L2	1	2
3.	What are the four primary levels of measurement scales? Give an example for each.	L2	2	2
4.	Name two common methods for displaying data visually.	L1	2	2
5.	What is the purpose of hypothesis testing in research?	L2	3	2
6.	List the key elements that should be included in a written research report.	L2	3	2
7.	What is a 'Trade Secret'? Provide one example.	L1	4	2
8.	What role does the WTO play in the context of IPR?	L2	4	2
9.	What are the three primary criteria for an invention to be patentable?	L1	5	2
10.	Who is a 'Patent Agent'?	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11. a	Explain the various steps involved in the research process with a neat flowchart. Discuss the importance of a well-defined research design with in this process.	L 4	1	16
	Or			
b	Describe the situations where qualitative research is most appropriate. Explain any two common qualitative research techniques in detail.	L 4	1	16
12. a	Explain the different types of measurement scales with suitable examples from an engineering context. Why is it important to identify the correct scale of measurement?	L3	2	16
	Or			
b	Outline the steps involved in the data preparation process, from raw data collection to it being ready for analysis	L 3	2	16

13.	a	Explain the step-by-step process of hypothesis testing, including the concepts of null hypothesis, alternative hypothesis, and p-value.	L4	3	16
Or					
	b	What are the key factors for delivering an effective oral presentation of research findings? Discuss the role of visual aids in such presentations.	L 4	3	16
14.	a	Explain the different types of Intellectual Property Rights (IPRs). Discuss the role of UNESCO in the maintenance and promotion of IPR.	L 3	4	16
Or					
	b	Explain the connection between Intellectual Property Rights and Biodiversity. Why is this an important area of discussion in international forums?	L 3	4	16
15.	a	Describe the complete process of obtaining a patent in India, starting from the E-filing of an application to the grant of the patent.	L5	5	16
Or					
	b	Explain the concepts of 'Specification' and 'Inventive Step' in detail. Why are they critical components of a patent application?	L 5	5	16
