# Department of Computer Technology

### Vision of the Department

To be a well-known centre for pursuing computer education through innovative pedagogy, value-based education and industry collaboration.

### Mission of the Department

To establish learning ambience for ushering in computer engineering professionals in core and multidisciplinary area by developing Problem- solving skills through emerging technologies**.**

## Session 2025-2026

**Mission:** Means to achieve Vision

**Vision:** Dream of where you want.

**Program Educational Objectives of the program (PEO):** (broad statements that describe the professional and career accomplishments)

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| --- | --- | --- | --- |
| PEO1 | **Preparation** | **P: Preparation** | **Pep-CL abbreviation**  **pronounce as Pep-si-lL easy to recall** |
| PEO2 | **Core Competence** | **E: Environment (Learning Environment)** |
| PEO3 | **Breadth** | **P: Professionalism** |
| PEO4 | **Professionalism** | **C: Core Competence** |
| PEO5 | **Learning**  **Environment** | **L: Breadth (Learning in diverse areas)** |

**Program Outcomes (PO):** (statements that describe what a student should be able to do and know by the end of a program)

## Keywords of POs:

Engineering knowledge, Problem analysis, Design/development of solutions, Conduct Investigations of Complex Problems, Engineering Tool Usage, The Engineer and The World, Ethics, Individual and Collaborative Team work, Communication, Project Management and Finance, Life-Long Learning

**PSO Keywords:** Cutting edge technologies, Research

“I am an engineer, and I know how to apply engineering knowledge to investigate, analyse and design solutions to complex problems using tools for entire world following all ethics in a collaborative way with proper management skills throughout my life.” *to contribute to the development of cutting-edge technologies and Research*.

**Integrity:** I will adhere to the Laboratory Code of Conduct and ethics in its entirety.

## Name and Signature of Student and Date

(Signature and Date in Handwritten)

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| **Session** | **2025-26 (ODD)** | **Course Name** | **PE-I - Geo-Intelligence for Smart IoT Devices Lab** |
| **Semester** | **5** | **Course Code** | **23IOT1523** |
| **Roll No** | 71 | **Name of Student** | Vedant Yerne |

|  |  |
| --- | --- |
| Practical Number | Practical no 4 |
| Course Outcome | Apply and demonstrate the use of proprietary and open-source GIS tools (e.g., QGIS) for creating, visualizing, and managing spatial datasets. |
| Aim | Produce a publication-quality map from vector layers, using Data View and Layout view. |
| Problem Definition | The task involves producing a publication-quality map from vector layers by using QGIS’s Data View and Layout View to include appropriate cartographic elements such as legends, scale bars, and labels. |
| Theory (100 words) | In QGIS, a publication-quality map can be created by first preparing and styling vector layers in the Data View. Once the layers are properly visualized, the Layout View is used to design the final map layout. This includes adding key cartographic elements such as a title, legend, scale bar, and north arrow. The result is a clear, well-organized map suitable for reports, presentations, or printing. |
| Procedure and Execution  (100 Words) | Implementation Steps:  **Steps to Create a Map and Plot Vector Layers in QGIS**  1️⃣ **Open QGIS** and load your vector data (e.g., shapefiles or GeoPackage layers). 2️⃣ Use the **Layer Styling panel** to customize colors, symbols, and labels for your vector layers. 3️⃣ Arrange the layers in the **Layers panel** as needed for clear visualization. 4️⃣ Once satisfied, go to **Project > New Print Layout** to create a map layout. 5️⃣ Add a map frame in the layout window to display your map. 6️⃣ Insert essential map elements such as **legend**, **scale bar**, **north arrow**, and **title**. 7️⃣ Adjust the placement and size of these elements for balance and clarity. 8️⃣ Export the final map as an image, PDF, or print it directly. |
| Stepwise Screenshots with steps: |
| Output Analysis | Using QGIS, vector layers were styled and arranged in Data View, then exported through Layout View with added map features such as legends, scale bars, and labels, resulting in a professional-quality map suitable for publication. |
| Link of student |  |

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| Github profile where lab assignment has  been uploaded |  |
| Conclusion | Produce a publication-quality map from vector layers, using Data View and Layout view. Is perform successfully |
| Plag Report (Similarity index < 12%) | The plagiarism is the 13 % |
| Date | 19/08/25 |