CONTENT

| CHAPTER | TITLE | PAGE NO. |
|--|---|----------|
| I Brief survey of Einstein-Cartan theory | | |
| 1. | Introduction | 1 |
| 2. | The necessity of Einstein-Cartan theory | 2 |
| 3. | Historical background of Einstein-Cartan theory | 3 |
| 4. | The structure Equations of Einstein-Cartan theo | ry 5 |
| 5. | Comparison with Einstein's theory | 8 |
| 6. | Brief survey of our investigations | 9 |
| II A cor | nformally flat Electromagnatic mass model in | |
| Einste | in-Cartan theory | |
| 1. | Introduction | 12 |
| 2. | Cartan equations of structure and the metric | |
| | with curvature | 13 |
| 3. | Energy Momentum tensor and the equations | 15 |
| 4. | Solutions of the field equations | 17 |
| 5. | The model solution (when $r << 1$) | 19 |
| 6. | Properties of solution | 21 |
| III Static fluid sphere in Einstein-Cartan theory | | |
| 1. | Introduction | 24 |
| 2. | Field equations | 25 |
| 3. | Solutions of the field equations | 26 |
| IV Conformally flat charged perfect fluid distribution | | |
| in Ein | stein-Cartan theory | |
| 1. | Introduction | 30 |
| 2. | Metric and the field equations | 32 |
| 3. | Solutions of the field equations | 35 |
| 4. | Discussion and properties of the solutions | 37 |
| V References | | 39 |