**Lesson Plan of Semester – 3**

 **CBCS SYSTEM**

 **YEAR -2023-2024**

 **Topic-Real Analysis**

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| **SL. NO** | **TOPIC** | **CLASSES** |
| 1. 1
 | Finite and infinite set,countable and uncountable set | 4 |
|  | Real line,bounded set,suprema and infima,completeness property of R,Archemedean property of R,intervals | 5 |
|  | Concept of cluster points and statement of Bolzano Weierstrass theorem | 4 |
|  | Real sequence,bounded sequence Cauchy convergence criterion for sequence | 6 |
|  | Cauchy’s theorem on limits,order preservation and squeeze theorem | 4 |
|  | Monotone sequence and their convergence | 4 |
|  | Infinite series | 2 |
|  | Cauchy convergence criterion for series,positive term series,geometric series | 4 |
|  | Comparison test,convergence of p series, root test,Ration test | 7 |
|  | Alternating series,Leibnitz’s test | 4 |
|  | Definition and examples of absolute and conditional convergence | 5 |
|  | Sequence and series of function | 4 |
|  | Pointwise and uniform convergence | 5 |
|  | Mn test,M test | 5 |
|  | Statement of the result about uniform convergence and integrability and differentiability of functions | 4 |
|  | Power series and radius of convergence | 5 |
|  | Class Test | 10 |
|  | Tutorial class | 10 |
|  | total | 90 |