Govt. College for Girls, Padha (Karnal)

Lesson Plan for Even Semester

(January - April, 2024)

Name of the teacher-

Class- BA 4TH SEM

Subject- Maths

Paper- SEQUENCES AND SERIES

1st Week **1-6 January**	Boundedness of the set of real numbers.
7 January	**Sunday**
2nd Week **8-13 January**	Least upper bound , greatest lower bound of a set of neighbourhoods , interior points.
14 January	**Sunday**
3rd Week **15-16 January**	Isolated points, limit points,open sets,open sets,closed ser , interior of a set, closure of a set in real numbers and their properties.
17 January	**Shri Guru Gobind Singh Jayanti**
18-20 January	Bolzano-Weierstrass theorem, open covers.
21 January	**Sunday**
4th Week **22-25 January**	*Compact sets and Heine-Borne theorem.*
26 January	**Republic Day**
28 January	**Sunday**
5th Week **29 January-3 February**	Sequence:Real sequences and their convergence
4 February	**Sunday**
2nd Week **5-10 February**	Theorems on limits of a sequence,Bounded and Monotonic sequences.

11 February	**Sunday**
3rd Week **12-13 February**	Cauchy's sequence, Cauchy general priniciple of convergence.
14 February	**Basant Panchmi/ Sir Chotu Ram Jayanti**
15-17 February	Subsequences,Subsequentiaal limits.
18 February	**Sunday**
4th Week **19-23 February**	Infinite series: Convergence and divergence of infinite series.
24 February	**Guru Ravidas Jayanti**
25 February	**Sunday**
5th Week **26 February-2 March**	Comparison tests of positive terms infinite series.
3 March	**Sunday**
2nd Week **4-7 March**	Cauchy's general principle of convergence of series.
8 March	**Mahashivratri**
9 March	Convergence and Divergence of geometric series, Hyper Harmonic series or p-series
10 March	**Sunday**
3rd Week **11-16 March**	Infinite series : D'Alembert's Ratio test, Raabe's test, Logarithmic test.
17 March	**Sunday**
4th Week **18-22 March**	De Morgan and Bertrand's test , Cauchy nth root test, Gauss test.
23 March	**Vacations (Holi)**
24 March	
5th Week	

25-30 March	
31 March	
1ˢᵗ Week **1-6 April**	Cauchy's integral test , Cauchy's condensation test.
7 April	**Sunday**
2ⁿᵈ Week **8-10 April**	Alternating series : Leibnitz's test , absolute and conditional convergence Arbitrary series: Abel's lemma , Abel's test.
11 April	**Id-Ul-Fitar**
12 April	Dirichlet's test, Insertion and removal of parenthesis ,re-arrangement of terms in a series, Dirichlet's theorem .
13 April	**Baisakhi**
14 April	**Sunday**
3ʳᵈ Week **15-16 April**	Riemann's Re-arrangement theorem, Pringsheim's theorem(statement only).
17 April	**Ramnavmi**
18-20 April	Multiplication of series , Cauchy product of series.
21 April	**Sunday**
4ᵗʰ Week **22-27 April**	Convergence and absolute convergence of infinite products.
28 April	**Sunday**
5ᵗʰ Week **29-30 April**	Test and Revision.