

## **PGT Mathematics**

1. Sets.
2. Relation & Functions.
3. Mathematical Induction
4. Combinations & Permutations.
5. Binomial Theorem
6. Sequence & Series.
7. Elementary Number Theory.
8. Quadratic Equation
9. Geometry
10. Two Dimensional Geometry.
11. Trigonometric Function.
12. Application of Derivation.
13. Vectors.
14. Three Dimensional Theory.
15. Statistics.
16. Analysis.
17. Differential Equations.
18. Integrate Calculus.
19. Complex Analysis.
20. Algebra.
21. Introduction of Topology.
22. Theory of Real Functions.
23. Group Theory.
24. Algebraic Topology.
25. Commutative Algebra.
26. Representation of Finite Groups.
27. Fourier Analysis.
28. Matrix Analysis.
29. Advanced Complex Analysis.
30. Advanced Measure Theory.
31. General Topology.
32. Computational Fluid Dynamics.
33. Computational Methods for ODEs.
34. Mathematical Programming.
35. Methods of Applied Mathematics.
36. Coding Theory.
37. Stochastic Calculus for Finance.
38. Advanced Group Theory.
39. Algebraic Number Theory.
40. Simplicial Homology Theory.
41. Theory of Noncommutative Rings.
42. Abstract Harmonic Analysis.
43. Frames and Wavelets.
44. Operators on Hardy Hilbert Spaces.
45. Theory of Unbounded Operators.
46. Differential Geometry.
47. Topological Dynamics.
48. Fluid Dynamics.
49. Metric and Determinations Spaces.
50. Linear Algebra Inequalities.
51. Probability and Statistics.

***Topics of syllabus-Teaching Education and Methodology:-***

- 1. Learning & Teaching**
- 2. Language across the curriculum**
- 3. Understanding discipline and subject**
- 4. Gender school and Society**
- 5. Pedagogy of a school subject**
- 6. Knowledge and curriculum**
- 7. Assessment for learning**
- 8. Creating an inclusive school**
- 9. Childhood and growing up**
- 10. Drama and Art in Education**