

# AIR FORCE SCHOOL, BAMRAULI

## ANNUAL SPLIT UP OF SYLLABUS

ACADEMIC SESSION 2025-26

CLASS & SEC: XII –A

SUBJECT: - MATHS (041)

BOOK NAME: NCERT

| Month      | Chapter/Unit lesson | Topic/Sub topic                                                                                                                                                                                                                                                                                                            | No. of Period | Activity |
|------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|
| April      | 1                   | Relation and Function: Types of relation, Types of function, Composition of function.                                                                                                                                                                                                                                      | 10            |          |
| April      | 2                   | Inverse Trigonometry: Domain and range of inverse trigonometry. Properties of inverse trigonometric function                                                                                                                                                                                                               | 5             |          |
| April      | 3                   | Matrices:<br>Order of matrix, Construction of matrix, Algebra of matrices, Multiplication of matrices, Transpose of matrix, Properties of transpose of matrix                                                                                                                                                              | 8             |          |
| May        | 4                   | Determinant:<br>Determinant by expansion, Area of triangle, Minors and cofactor, Adjoint and inverse of matrix, Application of determinant and matrices.                                                                                                                                                                   | 10            |          |
| May & June | 5                   | Continuity and differentiability: Continuity, Differentiability, Derivative of composite function, Derivative of implicit function, Derivative of inverse trigonometric function, Exponential and logarithmic function, Logarithmic differentiation, Derivatives of function in parametric form, Second order derivatives. | 18            |          |

# AIR FORCE SCHOOL, BAMRAULI

## ANNUAL SPLIT UP OF SYLLABUS

### ACADEMIC SESSION 2025-26

|           |    |                                                                                                                                                                                                                                                                          |    |  |
|-----------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|
| July      | 6  | Application of derivative:<br>Derivative as rate measure,<br>Increasing and decreasing<br>function, Maxima and minima.<br>Integral:<br>Integration as inverse process of<br>differentiation, Substitution<br>method, Trigonometric function,                             | 30 |  |
| August    | 7  | Integral of some Particular<br>function, Integration by partial<br>fraction, Integration by parts,<br>Integral of some of more types,<br>Definite integral, Properties of<br>definite integral.                                                                          | 28 |  |
|           | 8  | Application of integral:<br>Area under simple curves                                                                                                                                                                                                                     |    |  |
| September | 9  | Differential equation:<br>Order and degree of differential<br>equation, General and particular<br>solution of differential equation,<br>First order and first-degree<br>differential equation,<br>Homogeneous differential<br>equation, Linear differential<br>equation. | 12 |  |
| September | 10 | Vector Algebra:<br>Types of vectors, Algebra of<br>vectors, Scalar product. Vector<br>product.                                                                                                                                                                           | 6  |  |

# AIR FORCE SCHOOL, BAMRAULI

## ANNUAL SPLIT UP OF SYLLABUS

### ACADEMIC SESSION 2025-26

|                                |    |                                                                                                                                                                                                              |    |  |
|--------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--|
| September & October            | 11 | Three-dimensional geometry: Direction ratio and direction cosine of a line, "Straight line", Equation of line, Angle between two lines, shortest distance between two skew lines and b/w two parallel lines. | 6  |  |
| October                        | 12 | Linear programming: Linear programming problem and its mathematical formulation, Graphical method of solving L P P. Up to three non- trivial constraints.                                                    | 5  |  |
| October                        | 13 | Probability: Conditional probability, Multiplication theorem on probability, Theorem of total probability, Bayes' theorem, Random variable and probability distribution                                      | 12 |  |
| November, December and January |    | Revision, Pre- Board, CBSE Sample Papers and Practice papers                                                                                                                                                 |    |  |