NDA Exam Pattern 2025

NDA Mathematics Exam Pattern

Paper I- Mathematics	
Total Marks	300 Marks
Total No. of Questions	120
Marks awarded for Correct answer	2.5 marks
Marks deducted for the wrong answer	-0.83
Exam Duration	2.5 Hours

General Ability Test Exam Pattern

Paper-II- General Ability Test	
Total Marks	600 marks
Total No. of Questions	150
No. of questions in English Section	50
No. Of questions in the General Knowledge Section	100
Maximum Marks for English	200 marks
Maximum Marks for G.K.	400 marks
Marks for Correct Answer	4 marks in both sections
Marks for Incorrect Answer	-1.33 marks in both sections
Exam Duration	2.5 Hours

UPSC NDA Syllabus 2025

Candidates need to understand the NDA Exam Pattern before delving into the NDA Exam Syllabus. The NDA maths section covers topics such as Algebra, Calculus, Matrices and Determinants, Integral Calculus and Differential Equations, Trigonometry, Vector Algebra, Analytical Geometry of Two and Three Dimensions, Statistics and Probability. The General Ability Test (GAT)

syllabus includes subjects like English, Physics, Chemistry, Social Studies, General Science, Geography, and Current Affairs. The detailed subject-wise syllabus is discussed below.

NDA Mathematics Syllabus 2025

The chapters covered for the NDA Maths Syllabus are given in the table below.

Topic	Topic-wise Syllabus
Algebra	Concept of set, operations on sets, Venn diagrams. De Morgan laws, Cartesian product, relation, equivalence relation. Real numbers, Complex numbers, Modulus, Cube roots, Conversion of a number in a Binary system to Decimals, and vice-versa. Arithmetic, Geometric and Harmonic progressions. Quadratic equations, Linear inequations, Permutation and Combination, Binomial theorem, and Logarithms.

Calculus	Concept of a real-valued function, domain, range, and graph of a function. Composite functions, one-to-one, onto, and inverse functions. The notion of limit, Standard limits, Continuity of functions, algebraic operations on continuous functions. Derivative of function at a point, geometrical and physical interpretation of a derivative-application. Derivatives of sum, product, and quotient of functions, a derivative of a function concerning another function, the derivative of a composite function. Second-order derivatives. Increasing and decreasing functions. Application of derivatives in problems of maxima and minima
Matrices and Determinants	Types of matrices, operations on matrices.

	Determinant of a matrix, basic properties of determinants. Adjoint and inverse of a square matrix, Applications-Solution of a system of linear equations in two or three unknowns by Cramer's rule and by Matrix Method.
Integral Calculus and Differential Equations	Integration as inverse of differentiation, integration by substitution and by parts, standard integrals involving algebraic expressions, trigonometric, exponential, and hyperbolic functions. Evaluation of definite integrals—determination of areas of plane regions bounded by curves—applications.Definition of order and degree of a differential equation, formation of a differential equation by examples. General and particular solution of differential

	equations, solution of the first order, and first-degree differential equations of various types—examples. Application in problems of growth and decay.
Trigonometry	Angles and their measures in degrees and radians. Trigonometric ratios. Trigonometric identities Sum and difference formulae. Multiple and Sub-multiple angles. Inverse trigonometric functions. Applications-Height and distance, properties of triangles.
Vector Algebra	Vectors in two and three dimensions, magnitude, and direction of a vector. Unit and null vectors, the addition of vectors, scalar multiplication of a vector, scalar product, or dot product of two vectors. Vector product or cross product of two vectors. Applications—work done

	by a force and moment of a force and in geometrical problems.
Analytical Geometry Of Two and Three Dimension	Rectangular Cartesian Coordinate system. Distance formula. Equation of a line in various forms. The angle between two lines. Distance of a point from a line. Equation of a circle in standard and a general form. Standard forms of parabola, ellipse, and hyperbola. Eccentricity and axis of a conic. Point in a three-dimensional space, the distance between two points. Direction Cosines and direction ratios. Equation two points. Direction Cosines and direction ratios. Equation of a plane and a line in various forms. The angle between two lines and the angle between two planes. Equation of a sphere.

Statistics and Probability	Probability: Random experiment, outcomes, and associated sample space, events, mutually exclusive and exhaustive events, impossible and certain events. Union and Intersection of events. Complementary, elementary, and composite events. Definition of probability—classical and statistical—examples. Elementary theorems on probability—simple problems. Conditional probability, Bayes' theorem—simple problems. Random variable as function on a sample space. Binomial distribution, examples of random experiments giving rise to Binomial distribution.

The topic-wise question distribution in Maths

Topic	Questions
Calculus	20-25
Quadratic equation	20-15
Matrices & Determinants	30
Probability	10
Trigonometry	30
Complex number	10-15

NDA GAT Syllabus 2025

The NDA GAT (General Ability Test) comprises two papers, English and General Knowledge. The English paper consists of 200 Marks while the General Knowledge is of 400 Marks.

NDA English Syllabus

The question paper in English will be designed to test the candidate's understanding of English. It covers various aspects like : Grammar and usage, vocabulary, comprehension, Selecting Words etc to test the candidate's proficiency in English. The syllabus covers various topics as given below:

Topic	No. of Questions	No. of Marks
Spotting Errors	5	20

Comprehension	6	24
Selecting Words	10	40
Ordering of Words in a Sentence	9	36
Sentence Improvement	10	40
Antonyms	5	20
Synonyms	5	20
Total	50	200

NDA General Knowledge Syllabus

The question paper on General Knowledge will cover subjects such as Physics, Chemistry, General Science, Social Studies, Geography, and Current Affairs. It will also include topic-wise number of questions, mark distribution, and subject-wise syllabus topics.

Topic	No. of Questions	No. of Marks
Physics	23	92

Chemistry	16	64
General Science	11	44
History & Freedom Movement	16	64
Geography	17	68
Current Affairs	17	68
Total	100	400

NDA Physics Syllabus

NDA Syllabus For Physics	
1. Physical Properties and States of Matter	
2. Modes of transference of Heat	
3. Mass, Weight, Volume, Sound waves and their properties	
4. Simple musical instruments	
5. Rectilinear propagation of Light	
6. Density and Specific Gravity	
7. Reflection and refraction	

8. Principle of Archimedes

9. Spherical mirrors and Lenses

10. Pressure Barometer

11. Human Eye

12. Motion of objects

13. Natural and Artificial Magnets

14. Velocity and Acceleration

15. Properties of a Magnet

16. Newton's Laws of Motion

17. Earth as a Magnet

18. Force and Momentum

19. Static and Current Electricity

20. Parallelogram of Forces

21. Conductors and Non-conductors

22. Stability and Equilibrium of bodies

23. [Ohm's Law](#)

24. Gravitation

25. Simple Electrical Circuits

26. Elementary ideas of work

27. Heating, Lighting, and Magnetic effects of Current

28. Power and Energy

29. Measurement of Electrical Power

30. Effects of Heat

31. Primary and Secondary Cells

32. Measurement of Temperature and Heat

33. Use of X-Rays

34. General Principles in the working of Simple Pendulum, Simple Pulleys, Siphon, Levers, Balloon, Pumps, Hydrometer, Pressure Cooker, Thermos Flask, Gramophone, Telegraphs, Telephone, Periscope, Telescope, Microscope, Mariner's Compass; Lightning Conductors, Safety Fuses.

NDA Chemistry Syllabus

NDA Syllabus For Chemistry

1. Preparation and Properties of Hydrogen, Oxygen, Nitrogen and Carbon Dioxide, Oxidation and Reduction.

2. Acids, bases and salts.

3. Carbon— different forms

4. Physical and Chemical Changes

5. Fertilizers—Natural and Artificial

6. Elements

7. Material used in the preparation of substances like Soap, Glass, Ink, Paper, Cement, Paints, Safety Matches, and Gunpowder

8. Mixtures and Compounds

9. Elementary ideas about the structure of Atom

10. Symbols, Formulae, and simple Chemical Equation

11. Atomic Equivalent and Molecular Weights

12. Law of Chemical Combination (excluding problems)

13. Valency

14. Properties of Air and Water	

NDA General Science Syllabus

NDA Syllabus For General Science	
1. Common Epidemics, their causes, and prevention 2. Difference between the living and non-living 3. Food—Source of Energy for man 4. Basis of Life—Cells, Protoplasms, and Tissues 5. Constituents of food 6. Growth and Reproduction in Plants and Animals 7. Balanced Diet 8. Elementary knowledge of the Human Body and its important organs 9. The Solar System—Meteors and Comets, Eclipses. Achievements of Eminent Scientists	

NDA Syllabus for History, Freedom Movement

NDA Syllabus For History	
1. Forces shaping the modern world;	

2. Renaissance

3. Exploration and Discovery;

4. A broad survey of Indian History, with emphasis on Culture and Civilisation

5. Freedom Movement in India

6. French Revolution, Industrial Revolution, and Russian Revolution

7. War of American Independence,

8. Impact of Science and Technology on Society

9. Elementary study of Indian Constitution and Administration

10. Concept of one World

11. Elementary knowledge of Five Year Plans of India

12. United Nations,

13. Panchsheel,

14. Panchayati Raj, Democracy, Socialism and Communism

15. Role of India in the present world

16. Co-operatives and Community Development	
17. Bhoodan, Sarvodaya,	
18. National Integration and Welfare State	
19. Basic Teachings of Mahatma Gandhi	

NDA Syllabus for Geography

NDA Syllabus For Geography	
1. The Earth, its shape and size	
2. Ocean Currents and Tides Atmosphere and its composition	
3. Latitudes and Longitudes	
4. Temperature and Atmospheric Pressure, Planetary Winds, Cyclones, and Anticyclones; Humidity; Condensation and Precipitation	
5. Concept of time	
6. Types of Climate	
7. International Date Line	
8. Major Natural Regions of the World	
9. Movements of Earth and their effects	

10.   Regional Geography of India
11.   Climate, Natural vegetation. Mineral and Power resources;
12.   Location and distribution of agricultural and Industrial activities
13.   Origin of Earth. Rocks and their classification
14.   Important Sea ports and main sea, land, and air routes of India
15.   Weathering—Mechanical and Chemical, Earthquakes and Volcanoes
16.   Main items of Imports and Exports of India

Current Events

NDA Syllabus For Current Affairs
Knowledge of Important events that have happened in India in recent years. Prominent personalities of both Indian and International level Cultural activities and sports activities Current important world events.

NDA SSB Interview

After clearing the NDA written exam, candidates have to appear for the SSB Interview rounds. The pattern of the NDA Interview is as mentioned below:

NDA – SSB Interview Pattern		
Stage 1	Screening Test	1. Verbal and non-verbal tests. 2. PPDT
Stage 2	Psychological Test	1. Thematic Apperception Test (TAT) 2. Word Association Test (WAT) 3. Situation Reaction Test (SRT) 4. Self Description Test (SD)
	Group Testing Officers Test	1. GD 2. GPE

		3. PGT
		4. HGT
		5. IoT
		6. Command Task
		7. Snake Race/Group Obstacle Race
		8. Individual lecture
		9. FGT
	Personal Interview & Conference	_

The various tests of IO, GTO, and Psychological are designed to bring out the presence/absence of Officer-Like Qualities and their trainability in a candidate. Accordingly, candidates are recommended or Not Recommended at the SSB.