

# NDA 1 2024 EXAM

## ALL INDIA TEST SERIES



NDI NATIONAL  
DEFENCE  
INSTITUTE

ALL INDIA NDA 2024 TEST SERIES AND  
MENTORING PROGRAM

# 36 TESTS

## Equip 100%

Boost your NDA Score



Test Mode : Online & Classroom

10

MATHEMATICS

**FULL LENGTH MOCK TEST**

(Complete syllabus)

10

GENERAL ABILITY TEST

**FULL LENGTH MOCK TEST**

(Complete syllabus)

16

SUBJECT-WISE TEST

**SECTIONAL-WISE TEST**

(Maths-8 & GAT-8)

TEST  
BATCH

**10<sup>th</sup> MARCH**  
2024

**5260+** MCQs Covered  
through **EXPLANATIONS**



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## NDA Mock Test Features



### Comprehensive NDA Mock Test Series

- UPSC Standard Mock Tests covering the entire NDA syllabus of Maths & GAT.
- Tests replicating the pattern and trend of the UPSC NDA/NA Examination.



### Individualized Personal Mentoring

- Dedicated mentors assigned to each student for continuous performance enhancement.
- Mentorship for devising preparation strategies and addressing areas for improvement.



### Adaptable Test Schedule

- Well designed schedule for optimal revision, practice, and performance enhancement.
- Flexibility in test scheduling to accommodate student preferences.



### Convenient Student Portal Access

- Seamless test-taking experience for both online and distance learning students.
- Access to additional resources like YUKTI Daily Answer Writing Program, Daily CAPF Quiz, NDI Study Notes, Current Affairs, etc.



## Test Series Outcomes



Enhanced Exam Readiness



Developing Critical Thinking, Analytical and Problem Solving Skills



Integration and Application of Current Affairs



Performance Improvement and Strategy Refinement



Effective Time and Resource Management



Peer Comparison and Self Assessment

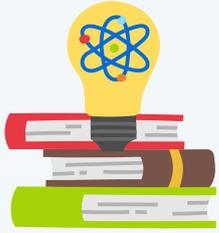


Simulated Exam Experience and Psychological Readiness

### Note

- Validity until UPSC NDA-1 2024.
- Question Papers and Answers & Explanations provided digitally.
- NDI Study Notes for individual subscribers only.
- No refunds or transfers once fees are paid.
- NDI reserves rights for schedule changes
- Test Centers open 7 days a week, except on notified holidays. (classroom)





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## (Syllabi of the Written Papers)

### • Paper I : MATHEMATICS (Maximum Marks-300)

#### 1. ALGEBRA :

Concept of set, operations on sets, Venn diagrams. De Morgan laws, Cartesian product, relation, equivalence relation.

Representation of real numbers on a line. Complex numbers—basic properties, modulus, argument, cube roots of unity. Binary system of numbers. Conversion of a number in decimal system to binary system and vice-versa. Arithmetic, Geometric and Harmonic progressions. Quadratic equations with real coefficients. Solution of linear inequations of two variables by graphs. Permutation and Combination. Binomial theorem and its applications. Logarithms and their applications.

#### 2. 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

#### 3. TRIGONOMETRY

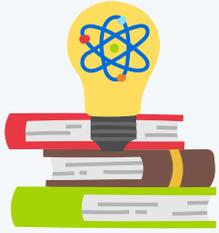
Angles and their measures in degrees and in radians. Trigonometrical ratios. Trigonometric identities Sum and difference formulae. Multiple and Sub-multiple angles. Inverse trigonometric functions. Applications-Height and distance, properties of triangles

#### 4. ANALYTICAL GEOMETRY OF TWO AND THREE DIMENSIONS

Rectangular Cartesian Coordinate system. Distance formula. Equation of a line in various forms. Angle between two lines. Distance of a point from a line. Equation of a circle in standard and in general form. Standard forms of parabola, ellipse and hyperbola. Eccentricity and axis of a conic. Point in a three dimensional space, 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. Angle between two lines and angle between two planes. Equation of a sphere.

#### 5. DIFFERENTIAL CALCULUS

Concept of a real valued function—domain, range and graph of a function. Composite functions, one to one, onto and inverse functions. Notion of limit, Standard limits—examples. Continuity of functions—examples, algebraic operations on continuous functions. Derivative of function at a point, geometrical and physical interpretation of a derivative—applications. Derivatives of sum, product and quotient of functions, derivative of a function with respect to another function, derivative of a composite function. Second order derivatives. Increasing and decreasing functions. Application of derivatives in problems of maxima and minima.



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## (Syllabi of the Written Papers)

### • Paper I : MATHEMATICS (Maximum Marks-300)

#### 6. INTEGRAL CALCULUS AND DIFFERENTIAL EQUATIONS

Concept of a real valued function—domain, range and graph of a function. Composite functions, one to one, onto and inverse functions. Notion of limit, Standard limits—examples. Continuity of functions—examples, algebraic operations on continuous functions. Derivative of function at a point, geometrical and physical interpretation of a derivative—applications. Derivatives of sum, product and quotient of functions, derivative of a function with respect to another function, derivative of a composite function. Second order derivatives. Increasing and decreasing functions. Application of derivatives in problems of maxima and minima.

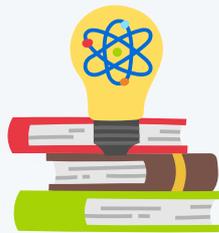
#### 7. VECTOR ALGEBRA

Vectors in two and three dimensions, magnitude and direction of a vector. Unit and null vectors, 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.

#### 8. STATISTICS AND PROBABILITY

**Statistics** : Classification of data, Frequency distribution, cumulative frequency distribution—examples. Graphical representation—Histogram, Pie Chart, frequency polygon— examples. Measures of Central tendency—Mean, median and mode. Variance and standard deviation—determination and comparison. Correlation and regression.

**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 Binominal distribution.



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### (Syllabi of the Written Papers)

- **PAPER-II: GENERAL ABILITY TEST (Maximum Marks—600)**

#### Part 'A'—ENGLISH (Maximum Marks—200)

The question paper in English will be designed to test the candidate's understanding of English and workman like use of words. The syllabus covers various aspects like : Grammar and usage, vocabulary, comprehension and cohesion in extended text to test the candidate's proficiency in English.

#### Part 'B'—GENERAL KNOWLEDGE (Maximum Marks—400)

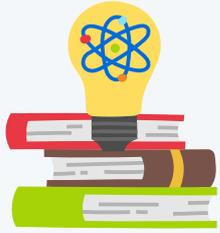
The question paper on General Knowledge will broadly cover the subjects : Physics, Chemistry, General Science, Social Studies, Geography and Current Events. - The syllabus given below is designed to indicate the scope of these subjects included in this paper. The topics mentioned are not to be regarded as exhaustive and questions on topics of similar nature not specifically mentioned in the syllabus may also be asked. Candidate's answers are expected to show their knowledge and intelligent understanding of the subject

#### Section 'A' (Physics)

Physical Properties and States of Matter, Mass, Weight, Volume, Density and Specific Gravity, Principle of Archimedes, Pressure Barometer. Motion of objects, Velocity and Acceleration, Newton's Laws of Motion, Force and Momentum, Parallelogram of Forces, Stability and Equilibrium of bodies, Gravitation, elementary ideas of work, Power and Energy. Effects of Heat, Measurement of Temperature and Heat, change of State and Latent Heat, Modes of transference of Heat. Sound waves and their properties, Simple musical instruments. Rectilinear propagation of Light, Reflection and refraction. Spherical mirrors and Lenses, Human Eye. Natural and Artificial Magnets, Properties of a Magnet, Earth as a Magnet. Static and Current Electricity, conductors and Nonconductors, Ohm's Law, Simple Electrical Circuits, Heating, Lighting and Magnetic effects of Current, Measurement of Electrical Power, Primary and Secondary Cells, Use of X-Rays. General Principles in the working of the following: 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.

#### Section 'B' (Chemistry)

Physical and Chemical changes. Elements, Mixtures and Compounds, Symbols, Formulae and simple Chemical Equations, Law of Chemical Combination (excluding problems). Properties of Air and Water. Preparation and Properties of Hydrogen, Oxygen, Nitrogen and Carbondioxide, Oxidation and Reduction. Acids, bases and salts. Carbon—different forms. Fertilizers—Natural and Artificial. Material used in the preparation of substances like Soap, Glass, Ink, Paper, Cement, Paints, Safety Matches and Gun-Powder. Elementary ideas about the structure of Atom, Atomic Equivalent and Molecular Weights, Valency.



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## (Syllabi of the Written Papers)

### Section 'C' (General Science)

Difference between the living and non-living. Basis of Life—Cells, Protoplasm and Tissues. Growth and Reproduction in Plants and Animals. Elementary knowledge of Human Body and its important organs. Common Epidemics, their causes and prevention. Food—Source of Energy for man. Constituents of food, Balanced Diet. The Solar System—Meteors and Comets, Eclipses. Achievements of Eminent Scientists

### Section 'D' (History, Freedom Movement etc.)

A broad survey of Indian History, with emphasis on Culture and Civilisation. Freedom Movement in India. Elementary study of Indian Constitution and Administration. Elementary knowledge of Five Year Plans of India. Panchayati Raj, Co-operatives and Community Development. Bhoodan, Sarvodaya, National Integration and Welfare State, Basic Teachings of Mahatma Gandhi. Forces shaping the modern world; Renaissance, Exploration and Discovery; War of American Independence. French Revolution, Industrial Revolution and Russian Revolution. Impact of Science and Technology on Society. Concept of one World, United Nations, Panchsheel, Democracy, Socialism and Communism. Role of India in the present world.

### Section 'E' (Geography)

The Earth, its shape and size. Latitudes and Longitudes, Concept of time. International Date Line. Movements of Earth and their effects. Origin of Earth. Rocks and their classification; Weathering—Mechanical and Chemical, Earthquakes and Volcanoes. Ocean Currents and Tides Atmosphere and its composition; Temperature and Atmospheric Pressure, Planetary Winds, Cyclones and Anti-cyclones; Humidity; Condensation and Precipitation; Types of Climate, Major Natural regions of the World. Regional Geography of India—Climate, Natural vegetation. Mineral and Power resources; location and distribution of agricultural and Industrial activities. Important Sea ports and main sea, land and air routes of India. Main items of Imports and Exports of India

### Section 'F' (Current Events)

Knowledge of Important events that have happened in India in the recent years. Current important world events. Prominent personalities—both Indian and International including those connected with cultural activities and sports

**NOTE :** Out of maximum marks assigned to part 'B' of this paper, questions on Sections 'A', 'B', 'C', 'D', 'E' and 'F' will carry approximately 25%, 15%, 10%, 20%, 20% and 10% weightages respectively.

Papers	Test	No. of Questions	Duration (hr.)
Mathematics	Sectional Test	8*120=960 Qs	2.30 hrs
	Full Mock Test	10*120=1200 Qs	2.30 hrs
General Ability Test	Sectional Test	8*200=1600 Qs	3.00 hrs
	Full Mock Test	10*150=1500 Qs	2.30 hrs



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## NDA 1 2024 EXAM TEST SERIES (COMPLETE TEST SCHEDULE)

### NDA-1 2024 EXAM TEST SERIES (COMPLETE SCHEDULE)

Total Test: 36 (Mathematics & General Ability Test)

#### SECTIONAL TEST (16) : (Maths 8 + GAT 8)

S.NO	CODE	DATE	MATHEMATICS	GENERAL ABILITY TEST
1	MAT241201 GAT241201	10-03-2024 (Sunday)	<b>Sectional Test-01 (Maths)</b> Topic: ALGEBRA Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-02 (GAT)</b> PHYSICS & ENGLISH & CA Afternoon: 02.30pm-05.30pm No. of Questions: 200
2	MAT241202 GAT241202	13-03-2024 (Wednesday)	<b>Sectional Test-03 (Maths)</b> Topic: MATRICES & DETERMINANTS Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-04 (GAT)</b> GEOGRAPHY & ENGLISH & CURRENT AFFAIRS Afternoon: 02.30pm-05.30pm No. of Questions: 200
3	MAT241203 GAT241203	15-03-2024 (Friday)	<b>Sectional Test-05 (Maths)</b> Topic: TRIGONOMETRY Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-06 (GAT)</b> BIOLOGY & ENGLISH & CURRENT AFFAIRS Afternoon: 02.30pm-05.30pm No. of Questions: 200
4	MAT241204 GAT241204	17-03-2024 (Sunday)	<b>Sectional Test-07 (Maths)</b> Topic: ANALYTICAL GEOMETRY Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-08 (GAT)</b> HISTORY & ENGLISH & CURRENT AFFAIRS Afternoon: 02.30pm-05.30pm No. of Questions: 200
5	MAT241205 GAT241205	18-03-2024 (Monday)	<b>Sectional Test-09 (Maths)</b> Topic: VECTOR ALGEBRA Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-10 (GAT)</b> CHEMISTRY & ENGLISH & CURRENT AFFAIRS Afternoon: 02.30pm-05.30pm No. of Questions: 200
6	MAT241206 GAT241206	20-03-2024 (Wednesday)	<b>Sectional Test-11 (Maths)</b> Topic: STATISTICS & PROBABILITY Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-12 (GAT)</b> POLITY & ENGLISH & CURRENT AFFAIRS Afternoon: 02.30pm-05.30pm No. of Questions: 200
7	MAT241207 GAT241207	22-03-2024 (Friday)	<b>Sectional Test-13 (Maths)</b> Topic: DIFFERENTIAL CALCULUS Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-14 (GAT)</b> SCIENCE (FULL) & ENGLISH Afternoon: 02.30pm-05.30pm No. of Questions: 200
8	MAT241208 GAT241208	24-03-2024 (Sunday)	<b>Sectional Test-15 (Maths)</b> Topic: INTEGRAL CALCULUS Morning: 11.00am-01.30pm No. of Questions: 120	<b>Sectional Test-16 (GAT)</b> SOCIAL (FULL) ENGLISH Afternoon: 02.30pm-05.30pm No. of Questions: 200

#### NDA 1 2024 EXAM FULL MOCK TEST (20) Maths 10 + GAT 10

1	MAT241209 GAT241209	31-03-2024 (Sunday)	<b>NDA/NA FULL MOCK TEST-1 &amp; 2 (COMPLETE SYLLABUS)</b> Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)	
2	MAT241210 GAT241210	03-04-2024 (Wednesday)	<b>NDA/NA FULL MOCK TEST-3 &amp; 4 (COMPLETE SYLLABUS)</b> Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)	
3	MAT241211 GAT241211	05-04-2024 (Friday)	<b>NDA/NA FULL MOCK TEST-5 &amp; 6 (COMPLETE SYLLABUS)</b> Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)	
4	MAT241212 GAT241212	07-04-2024 (Sunday)	<b>NDA/NA FULL MOCK TEST-7 &amp; 8 (COMPLETE SYLLABUS)</b> Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)	
5	MAT241213 GAT241213	08-04-2024 (Monday)	<b>NDA/NA FULL MOCK TEST-9 &amp; 10 (COMPLETE SYLLABUS)</b> Morning Session: 10.00am-12.30pm (MATHS)	



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## NDA 1 2024 EXAM TEST SERIES (COMPLETE TEST SCHEDULE)

			Evening Session: 2.00pm-04.30pm (GAT)
6	MAT241214 GAT241214	<b>10-04-2024</b> (Wednesday)	<b>NDA/NA FULL MOCK TEST-11 &amp; 12</b> (COMPLETE SYLLABUS) Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)
7	MAT241215 GAT241215	<b>12-04-2024</b> (Friday)	<b>NDA/NA FULL MOCK TEST-13 &amp; 14</b> (COMPLETE SYLLABUS) Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)
8	MAT241216 GAT241216	<b>14-04-2024</b> (Sunday)	<b>NDA/NA FULL MOCK TEST-15 &amp; 16</b> (COMPLETE SYLLABUS) Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)
9	MAT241217 GAT241217	<b>16-04-2024</b> (Tuesday)	<b>NDA/NA FULL MOCK TEST-17 &amp; 18</b> (COMPLETE SYLLABUS) Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)
10	MAT241218 GAT241218	<b>18-04-2024</b> (Thursday)	<b>NDA/NA FULL MOCK TEST-19 &amp; 20</b> (COMPLETE SYLLABUS) Morning Session: 10.00am-12.30pm (MATHS) Evening Session: 2.00pm-04.30pm (GAT)

## NDA/NA (I) 2024 EXAMINATION

**April 21, 2024 (Sunday)**