

NDA Syllabus

NDA is one of the most sought after defence entrance exams in the country. NDA recruitment is conducted for admission to Army, Navy and Air Force wings of NDA and Indian Naval Academy Course (INAC). NDA is conducted twice a year. The exam is conducted two stages - written exam and SSB Interview.

Exam name	National Defence Academy & Naval Academy Examination
Conducted by	UPSC
Exam level	National
Frequency of exam	Twice a year
Exam stages	Written Test and SSB Interview
Exam mode	Offline
Exam duration	5 hours (Mathematics - 2 ½ hours, General Ability Test (GAT) - 2 ½ hours)
Exam syllabus	Mathematics - Algebra, Matrices and Determinants, Trigonometry, Analytical Geometry of two and three dimensions, Differential Calculus, Vector Algebra, Statistics and Probability. GAT - English, General Knowledge, Physics, Chemistry, General Science, Geography, Current Events etc.
Exam pattern	GAT - 150 objective type questions Mathematics - 120 objective type questions
Language	English and Hindi

Exam purpose For admission to National Defence Academy (NDA) and Indian Naval Academy Course (INAC)

NDA Exam Pattern

Highlights	Details
Examination Mode	Offline
Type of Questions in Exam	Multiple Choice Questions in both the exams
Number of Papers	Paper -I for Mathematics Paper-II for General Ability Test
Total Marks Per Sections in Exam	Mathematics section: 300 marks, while General Ability Test: 600 marks
Language of the Paper	Hindi and English Language

The exam paper of written exam is divided into two parts - GAT and Mathematics. All the questions in the exam will be objective type. There will be total 150 questions in GAT while the Mathematics part will carry total 120 questions. Each section of the exam will be held for 2 ½ hours. The GAT section will be for 600 marks while the Mathematics section will carry 300 marks. The structure of NDA exam pattern for written exam is given below.

Code	Papers	Subject	Maximum marks	Duration
1	Paper 1	Mathematics	300	2 ½
2	Paper 2	GAT	600	2 ½
Total			900	5 hours

Marking Scheme for NDA written exam

Sections	Marks for correct answer	Marks for incorrect answer
GAT	4	1.33

Mathematics

2.5

0.83

NDA 2020 Syllabus

NDA Syllabus 2019 is prescribed by Union Public Service Commission. The syllabus is divided into parts – Mathematics and General Ability Test (GAT). Candidates appearing in the exam should check NDA 2019 syllabus thoroughly to know the topics they need to cover for the exam. With the help of the syllabus, candidates will be able to figure out the topics the most important and less important topics and plan their study accordingly. The detailed NDA syllabus is given below.

NDA Syllabus for Mathematics

According to [NDA exam pattern](#), this section has total 120 questions. Total marks allotted to this section is 300. For correct answer 2.5 marks will be awarded. For wrong answer, 0.85 marks will be deducted. [NDA question paper](#) for Mathematics section are of 10+2 level.

Algebra

Matrices and Determinants

Trigonometry

Analytical Geometry of Two and Three Dimensions

Differential Calculus

Integral Calculus and Differential Equations

Vector Algebra

Statistics and Probability

Topic-wise distribution of questions in Maths

Topic

Questions

Calculus

20-25

Quadratic equation

20-15

Matrices & Determinants

30

Probability	10
Trigonometry	30
Complex number	10-15

NDA Syllabus for GAT

The GAT syllabus is divided into two sections – English and General Knowledge. Total questions in this section will be 150. Total marks for this section is 600. Each question carries 4 marks while 1.33 marks will be deducted for wrong answer.

Physics

Physical Properties and States of Matter	Modes of transference of Heat
Mass	Sound waves and their properties
Weight	Simple musical instruments
Volume	Rectilinear propagation of Light
Density and Specific Gravity	Reflection and refraction
Principle of Archimedes	Spherical mirrors and Lenses
Pressure Barometer	Human Eye
Motion of objects	Natural and Artificial Magnets

Velocity and Acceleration

Properties of a Magnet

Newton's Laws of Motion

Earth as a Magnet

Force and Momentum

Static and Current Electricity

Parallelogram of Forces

Conductors and Non-conductors

Stability and Equilibrium of bodies

Ohm's Law

Gravitation

Simple Electrical Circuits

Elementary ideas of work

Heating, Lighting and Magnetic effects of Current

Power and Energy

Measurement of Electrical Power

Effects of Heat

Primary and Secondary Cells

Measurement of Temperature and Heat

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.

Chemistry

Preparation and Properties of Hydrogen, Oxygen, Nitrogen and Carbon Dioxide, Oxidation and Reduction. Acids, bases and salts. Carbon— different forms

Physical and Chemical Changes

Fertilizers—Natural and Artificial

Elements

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

Mixtures and Compounds

Elementary ideas about the structure of Atom

Symbols, Formulae and simple Chemical Equation

Atomic Equivalent and Molecular Weights

Law of Chemical Combination (excluding problems)

Valency

Properties of Air and Water

General Science

Common Epidemics, their causes and prevention

Difference between the living and non-living

Food—Source of Energy for man

Basis of Life—Cells, Protoplasm and Tissues

Constituents of food

Growth and Reproduction in Plants and Animals

Balanced Diet

Elementary knowledge of Human Body and its important organs

The Solar System—Meteors and Comets, Eclipses. Achievements of Eminent Scientists

History

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

Geography

The Earth, its shape and size	Ocean Currents and Tides Atmosphere and its composition
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Latitudes and Longitudes	Temperature and Atmospheric Pressure, Planetary Winds, Cyclones and Anticyclones; Humidity; Condensation and Precipitation
Concept of time	Types of Climate
International Date Line	Major Natural regions of the World
Movements of Earth and their effects	Regional Geography of India—Climate, Natural vegetation. Mineral and Power resources; location and distribution of agricultural and Industrial activities
Origin of Earth. Rocks and their classification	Important Sea ports and main sea, land and air routes of India
Weathering—Mechanical and Chemical, Earthquakes and Volcanoes	Main items of Imports and Exports of India
Current Affairs	
Knowledge of Important events that have happened in India in the recent years	Prominent personalities—both Indian and International including those connected with cultural activities and sports
Current important world events	

Topic-wise distribution of questions in GAT

English

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

General Knowledge

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 Events	17	68
Total	100	400

NDA Dates 2020

NDA I Dates 2020

NDA 1 Events	NDA 1 Dates 2020	Salient Features
Notification	January 8	The complete schedule along with other details has been released
Application form	January 8	Registrations for the written exam of NDA has started
Last date to apply	January 28	Candidates can submit their application forms online till this date
Application withdrawal	February 4-11	The facility to withdraw the application form of NDA will be available within this prescribed deadline.
Written exam	April 19	The written exam of NDA will be conducted on this date in two shifts - morning and afternoon across 41 cities spread throughout the country.
Admit card	March	NDA 1 admit card 2020 will be released online on the official website. Candidates need to enter their login credentials to download the admit card.
Declaration of written result	June	The result of written exam is declared in June. The result displays the roll numbers of shortlisted candidates.
SSB Interview	August-September	SSB Interview is conducted for the shortlisted candidates of written exam in two stages.
Final result	November	NDA 1 final result is announced in November. On the basis of final result, candidates are selected for admission to Army, Navy and Air Force wings of NDA and INAC.

NDA 2 Dates 2020

NDA 2 Events	NDA 2 Dates 2020	Salient Features
Notification	June 10	NDA 2 notification will be released
Application form	June 10	Application forms will be made available along with the notification
Last date to apply	June 30	Candidates can apply within this application deadline
Written exam	September 6	The written exam of NDA will be conducted in two shifts and comprises two papers.
Admit card	August	NDA 2 admit card 2020 will be released online in August for registered candidates.
Declaration of written result	December	The result of written exam is declared in December on the official website.
SSB Interview	February	SSB Interview is conducted in two stages.
Final result	May	NDA 2 final result is announced in May.