



## JEE (MAIN) DIVISION

# COURSE PLANNER

For Students of

**CLASS-XI | COURSE NAME: NDA**

**Target: NDA 2023**

Academic Session: **2021-22** | Medium: **English**

Mode: **Online / Hybrid**

### COURSE CONCEPT

NDA exam is the prominent examination among the students who want to join Indian Defence Forces and it is very important to start preparation in right direction with smart study plan.

**Course Commencement: 19.07.2021 (Monday) | Course Ends: 15.02.2022 (Tuesday)**

### VIBRANT TEACHING METHODOLOGY

#### Preparation for NDA

- Classroom Teaching & NCERT Book Discussion
- Study Material (Modules/DPPs)
- Regular Doubt Classes
- NDA Pattern: Part Tests (PTs)
- NDA Pattern: Full Syllabus Tests (FSTs)

### TEACHING/ LEARNING TOOLS

- **Interactive Classroom Learning & Support Model:** Our classroom model is interactive & constantly developing to suit individual needs by providing abundant mental stimulation.
- **Testing Assessment & Feedback Mechanism:** Our Topic-wise Tests, Full Syllabus Tests & rigorous feedback mechanism helps the students to know their level of understanding.
- **Study Material (Modules/DPPs):** Topic wise study material having key concepts, problems for practice in various exercise levels and questions asked in previous years of NDA examination.
- **Doubt Removal Sessions:** The teaching methodology at Vibrant Academy has the necessary ingredient of regular doubt removal sessions in every class for the problems encountered in the practice material and tests.
- **Sheet Discussion:** Problem Sheets are discussed regularly in classes which also include discussion on question banks and special assignments. These classes help students in clarifying doubts and help them in understanding the concepts. This enables them for appropriate NDA preparation for better results.

**Holidays/ Vacations (Total: 11-Days):** 1. Independence Day: 15<sup>th</sup> August, 2021 (One Day) | 2. Deepawali Holidays: From 1<sup>st</sup> November, 2021 to 9<sup>th</sup> November, 2021: (9 Days) | 3. Republic Day: 26<sup>th</sup> January, 2022 (One Day)

### TOTAL ACADEMIC HOURS

**Course Duration: 31 Weeks | 177 Days (approx)**

**Total No. of Lectures: 588 (P: 165 | C: 150 | M: 173 | SST: 50 | E: 50)**

**Duration of One Lecture: 1.5 Hrs = 90 Minutes**

**Total Duration of Classroom Teaching: 882 Hrs**

**Total No. of Tests: 10 (7 PTs & 3 FSTs) | 5 Hrs each**

**Total Duration of Testing Hours (PTs/FSTs): 50 Hrs**

**Total Academic Hours: 932 Hrs (882 Hrs. + 50 Hrs.)**

### No. of Questions in DPPs/Sheets/Test Papers

No. of DPPs: **250** | Qs in each DPP: **12 (Avg.)** | Total Qs: **3000 (Approx.)**

No. of Sheets: **115** | Qs in each Sheet: Min. **100** & Max. **250** | Total Qs: 9090+

No. of Test Papers: **10 (PT: 7 | FST: 3)** | Qs in each Test Paper: PT: **270** | FST: **270**

Total Qs: **2700 (PT: 1890 | FST: 810)**

Grand Total Qs.: **14790 (DPPs: 3000 | Sheets: 9090 | Test Paper: 2700)**

### DISCLAIMERS

- Vibrant Academy reserves rights to increase or decrease the number of lectures allotted to any topic and also to make changes in the sequence of the topics of each subject depending upon the course requirements.
- The topic start date mentioned here might vary. However the coverage of the content in any topic shall remain the same. It is done by altering the frequency of proposed/planned lectures in a particular week.
- The information given in this Course Planner is proposed for the NDA 2023. The institute reserves the right to make changes in it in the interest of students.

# SUBJECT WISE SYLLABUS & SHEET (MODULE) PLAN

## PHYSICS [P]

S. No.	Topic Name/Sequence	No of Lectures	Starting Date
1	<b>Projectile Motion &amp; Relative Motion</b>	19	19-Jul-21
2	Laws of Motion & Friction	18	10-Aug-21
3	Work, Power, Energy & Friction	12	31-Aug-21
4	<b>Centre of Mass, Momentum &amp; Collision</b>	12	14-Sep-21
5	Rotational Motion	14	28-Sep-21
6	<b>Simple Harmonic Motion (SHM) &amp; Collision</b>	10	14-Oct-21
7	Waves	15	26-Oct-21
8	Properties of Matter	4	19-Nov-21
9	<b>Fluid Mechanics</b>	10	24-Nov-21
10	Heat & Transfer	7	6-Dec-21
11	<b>Thermal Expansion</b>	5	14-Dec-21
12	Gravitation	10	20-Dec-21
13	<b>XI Class Revision</b>	6	03-Jan-22
14	Rectilinear Propagation of Light	1	10-Jan-22
15	Reflection and refraction	4	11-Jan-22
16	Spherical Mirrors & Lenses	1	12-Jan-22
17	Human Eye	1	13-Jan-22
18	Natural & Artificial Magnets	1	14-Jan-22
19	Properties of a Magnet	1	15-Jan-22
20	Earth as a Magnet	1	17-Jan-22
21	Static and Current Electricity	1	18-Jan-22
22	Conductors and Non-conductors	1	19-Jan-22
23	Ohm's Law	1	20-Jan-22
24	Simple Electrical Circuits	1	21-Jan-22
25	Heating, Lighting & Magnetic Effects of Current	1	22-Jan-22
26	Measurement of Electrical Power	1	24-Jan-22
27	Primary and Secondary Cells	1	25-Jan-22
28	Use of X-Rays	1	27-Jan-22
29	<b>General Principles in the working of the following: Siphon, Levers, Balloon, Pumps, Hydrometer, Pressure Cooker, Thermos Flask, Gramophone, Telegraphs, Telephone, Periscope, Telescope, Microscope, Mariner's Compass; Lightning Conductors, Safety Fuses.</b>	5	28-Jan-22
<b>Total No. of Lectures</b>		<b>165</b>	

## CHEMISTRY [C]

S. No.	Topic Name/Sequence	No of Lectures	Starting Date
1	Mole Concept	18	19-Jul-21
2	Atomic Structure	10	10-Aug-21
3	<b>Gaseous Chemistry</b>	8	21-Aug-21
4	Redox Mole, <b>Equivalent and Volumetric Analysis</b>	9	31-Aug-21
5	<b>Chemical Equilibrium</b>	12	10-Sep-21
6	Ionic Equilibrium	12	24-Sep-21
7	<b>Thermochemistry &amp; Thermodynamics</b>	12	6-Oct-21
8	p-Block Elements (Boron, Carbon, Oxygen, Nitrogen, Formula)	10	22-Oct-21
9	<b>s-Block Elements</b>	4	12-Nov-21
10	Hydrogen & Its Compounds	3	17-Nov-21
11	<b>General Organic Chemistry</b>	10	20-Nov-21
12	<b>XI Class Revision</b>	34	
13	Fertilizers-Natural & Artificial	2	10-Jan-22
14	Material used in the preparation of substances like Soap, Glass, Ink, Paper, Cement, Paints, Safety Matches and Gunpowder	4	12-Jan-22
15	Properties of Air and Water	2	17-Jan-22
<b>Total No. of Lectures</b>		<b>150</b>	
IUPAC & Nomenclature (That will be conducted parallel to regular Classes)		10	
<b>SOCIAL SCIENCE [SS]</b>			
S. No.	Topic Name/Sequence	No of Lectures	Starting Date
1	Nationalism in India	3	16-Aug-21
2	Indian History : Culture & Civilisation	4	19-Aug-21
3	Indian Constitution & Its Administration	3	24-Aug-21
4	Elementary Knowledge of Five Year Plans of India	1	27-Aug-21
5	Panchayati Raj	1	28-Aug-21
6	Independence War of America	3	30-Aug-21
7	Exploration of Discovery: French Revolution, Russian Revolution, Industrial Revolution	4	2-Sep-21
8	Concept of One World: United Nations, Panchsheel, Democracy, Socialism and Communism	2	7-Sep-21
9	Basic Teachings of Mahatma Gandhi	1	9-Sep-21
<b>Total No. of Lectures</b>		<b>50</b>	

## MATHEMATICS [M]

S. No.	Topic Name/Sequence	No of Lectures	Starting Date
1	Trigonometric Equation	6	19-Jul-21
2	<b>Height and Distance</b>	2	26-Jul-21
3	<b>Property of Triangle</b>	5	28-Jul-21
4	Point, Straight Line	17	3-Aug-21
5	Circle	14	23-Aug-21
6	Parabola	11	8-Sep-21
7	<b>Ellipse</b>	5	21-Sep-21
8	<b>Hyperbola</b>	5	27-Sep-21
9	<b>Binomial Theorem</b>	12	2-Oct-21
10	<b>Permutation &amp; Combination</b>	11	16-Oct-21
11	Function	6	29-Oct-21
12	<b>Limit</b>	6	15-Nov-21
13	Statistics	3	22-Nov-21
14	<b>Mathematical Reasoning</b>	3	25-Nov-21
15	<b>Three Dimensional Geometry</b>	3	29-Nov-21
16	<b>XI Class Revision</b>	33	
17	Matrices And Determinants	7	10-Jan-22
18	Integral & Differential Calculus	10	18-Jan-22
19	Vector Algebra	7	31-Jan-22
20	Probability	7	08-Feb-22
<b>Total No. of Lectures</b>		<b>173</b>	
Trigonometric Ratio (That will be conducted parallel to regular Classes)		14	

## English [E]

S. No.	Topic Name/Sequence	No of Lectures	Starting Date
1	Parts of Speech	3	16-Aug-21
2	Noun	1	19-Aug-21
3	Practice Session (Noun)	1	20-Aug-21
4	Pronoun	2	21-Aug-21
5	Practice Session (Pronoun)	1	24-Aug-21
6	Subject Verb Agreement	1	25-Aug-21
7	Practice Session (SVA)	1	26-Aug-21
8	Tenses	3	27-Aug-21
9	Practice Session (Tenses)	1	31-08-21
10	Reading Comprehension	2	1-Sep-21
11	Synonyms & Antonyms	2	3-Sep-21
12	Prepositions	2	6-Sep-21
13	Practice Session (Prepositions)	1	8-Sep-21
14	Conjunctions	2	9-Sep-21
15	Practice Session (Conjunctions)	1	11-Sep-21
16	Idioms & Phrases	2	13-Sep-21
17	Sentence Completion	2	15-Sep-21
18	Para Jumbles	2	17-Sep-21
19	One Word Substitution	2	20-Sep-21
20	Determiners	2	22-Sep-21
21	Practice Session (Determiners)	1	23-Sep-21
22	Modals	2	24-Sep-21
23	Practice Session (Modals)	1	27-Sep-21
24	Transition Words	3	28-Sep-21
25	Practice Session (Transition)	1	1-Oct-21
26	Active & Passive Voice	2	2-Oct-21
27	Practice Session (A&P Voice)	1	5-Oct-21
28	Direct & Indirect Speech	2	6-Oct-21
29	Practice Session (D&I Speech)	1	8-Oct-21
30	Error Spotting	2	9-Oct-21
<b>Total No. of Lectures</b>		<b>50</b>	

\*The Syllabus not highlighted refers particularly to the NDA Course.

# PERIODIC TEST SCHEDULE & RESULT COMMUNICATION | PAPER PATTERN: NDA

S. No.	Periodic Test Type and No.	Test Mode	Periodic Test Date	First Display & Communication (Notice Board) to parent with Centre Rank	Display & Communication of Final Result with All Vibrant	Uploading of Result on Vibrant Website	Periodic Test Syllabus				Testing Hours	
							PHYSICS	CHEMISTRY	MATHEMATICS	SOCIAL SCIENCE		ENGLISH
1	PT-1	CBT	29-08-21 (Sunday)	01-09-21 (Wednesday)	01-09-21 (Wednesday)		Laws of Motion & Friction (Till Completion), Motion in One Dimension	Mole Concept, Atomic Structure	Trigonometric Equation	Nationalism in India, Indian History: Culture and Civilisation, Indian Constitution and its Administration, Elementary Knowledge of Five Year Plans of India, Panchayati Raj	Parts of Speech, Noun, Practice Session (Noun), Pronoun, Practice Session (Pronoun), Subject-Verb Agreement, Practice Session (SVA)	5
2	PT-2	PBT	04-07-21 (Sunday)	07-07-21 (Wednesday)	07-07-21 (Wednesday)		Laws of Motion & Friction	Redox Mole	Point, Straight Line, Circle	Independence War of America, Exploration of Discovery; French Revolution, Russian Revolution, Industrial Revolution, Concept of One World: United Nations, Panchsheel, Democracy, Socialism and Communism, Basic teachings of Mahatma Gandhi, Miscellaneous, Origin of Earth, Atmosphere, Rocks and their Classification, Wind and its types	Tenses, Practice Session (Tenses), Reading Comprehension, Synonyms & Antonyms, Prepositions, Practice Session (Prepositions), Conjunctions, Practice Session (Conjunctions), Idioms & Phrases, Sentence Completion, Para Jumbles, One Word Substitution, Determiners, Practice Session (Determiners)	5
3	PT-3	CBT	31-10-21 (Sunday)	03-11-21 (Wednesday)	03-11-21 (Wednesday)		Work, Power, Energy & Friction	Ionic Equilibrium	Parabola	Cyclone and Anticyclone, Humidity, Condensation and Precipitation, Drainage, Important Ports, Sea Ports, Air Ports, Types of Climate, Earth: Shape, Size, Latitudes, Longitudes, International Date Line, India: Climate & Natural Vegetation, Mineral & Power Resources, Agriculture	Modals, Practice Session (Modals), Transition Words, Practice Session (Transition), Active & Passive Voice, Practice Session (A&P Voice), Direct & Indirect Speech, Practice Session (D&I Speech), Error-Spotting	5
4	PT-4	CBT	28-11-21 (Sunday)	01-12-21 (Wednesday)	01-12-21 (Wednesday)		Simple Harmonic Motion, Waves Properties of Matter	p-Block Elements (Boron, Carbon, Oxygen, Nitrogen Formula)(Till Completion), IUPAC & Nomenclature	Parabola, Function, Statistics, Trigonometric Ratio	Longitudes, International Date Line, India: Climate & Natural Vegetation, Mineral & Power Resources, Agriculture	Practice Session (A&P Voice), Direct & Indirect Speech, Practice Session (D&I Speech), Error-Spotting	5
5	PT-5	CBT	26-12-21 (Sunday)	29-12-21 (Wednesday)	29-12-21 (Wednesday)		Heat & Transfer, Gravitation (Till Completion)	p-Block Elements (Boron, Carbon, Oxygen, Nitrogen and Hydrogen and Its Compounds)	Three Dimensional Geometry	Full Syllabus	Full Syllabus	5
6	PT-6	CBT	23-01-21 (Sunday)	27-01-21 (Wednesday)	27-01-21 (Wednesday)		Rectilinear propagation of light, Reflection and Refraction, Spherical Mirrors and Lenses, Human Eye, Natural & Artificial Magnets, Properties of a Magnet, Earth as a Magnet, Static & Current Electricity	Fertilizers - Natural & Artificial, Material used in the preparation of substances like Soap, Glass, Ink, Paper, Cement, Paints, Safety Matches & Gunpowder, Properties of Air and Water	Matrices And Determinants, Integral and Differential Calculus	Full Syllabus	Full Syllabus	5
7	PT-7	CBT	20-02-22 (Sunday)	23-02-21 (Wednesday)	23-02-21 (Wednesday)		Conductors and Non-conductors, Ohm's Law, Simple Electrical Circuits, Heating, Lighting & Magnetic effects of Current, Measurement of Electrical Power; Primary and Secondary Cells, Use of X-Rays General Principles in the working of the following: Siphon, Levers, Ballons, Pumps, Hydrometer, Pressure Cooker, Thermos Flask, Gramophone, Telegraphs, Telephone, Penicillin, Telescope, Microscope, Mariner's Compass, Lightning Conductors, Safety Fuses.	Full Syllabus	Vector Algebra, Probability	Full Syllabus	Full Syllabus	5
8	FST-1	CBT	22-02-21 (Tuesday)	25-02-21 (Friday)	25-02-21 (Friday)					NDA Pattern Full Syllabus Test		5
9	FST-2	CBT	25-02-21 (Friday)	28-02-21 (Monday)	28-02-21 (Monday)					NDA Pattern Full Syllabus Test		5
10	FST-3	CBT	28-02-21 (Monday)	03-03-21 (Thursday)	03-03-21 (Thursday)					NDA Pattern Full Syllabus Test		5
<b>Total Testing Hours</b>											<b>50</b>	

## WEEKLY LECTURE PLAN (Per Subject)

Week No.	Week Duration		No. of Lectures					Total No. of Lectures	Week No.	Week Duration		No. of Lectures					Total No. of Lectures	Week No.	Week Duration		No. of Lectures					Total No. of Lectures
	From	To	P	C	M	SST	E			From	To	P	C	M	SST	E			From	To	P	C	M	SST	E	
W-1	19/7	24/7	6	6	6	-	-	18	W-12	4/10	9/10	6	6	6	6	6	30	W-23	20/12	25/12	6	6	6	-	-	18
W-2	26/7	31/7	6	6	6	-	-	18	W-13	11/9	16/10	6	6	6	2	2	22	W-24	27/12	1/1/22	6	6	6	-	-	18
W-3	2/8	7/8	6	6	6	-	-	18	W-14	18/10	23/10	6	6	6	-	-	18	W-25	3/1	8/1	6	6	6	-	-	18
W-4	9/8	14/8	6	6	6	-	-	18	W-15	25/10	30/10	6	6	6	-	-	18	W-26	10/1	15/1	6	6	6	-	-	18
W-5	16/8	21/8	6	6	6	6	6	30	W-16	1/11	6/11	DIWALI HOLIDAYS					W-27	17/1	22/1	6	2	6	-	-	14	
W-6	23/8	28/8	6	6	6	6	6	30	W-17	8/11	13/11	4	4	4	-	-	12	W-28	24/1	29/1	5	-	5	-	-	10
W-7	30/8	4/9	6	6	6	6	6	30	W-18	15/11	20/11	6	6	6	-	-	18	W-29	31/1	5/2	6	-	6	-	-	12
W-8	6/9	11/9	6	6	6	6	6	30	W-19	22/11	27/11	6	6	6	-	-	18	W-30	7/2	12/2	-	-	6	-	-	6
W-9	13/9	18/9	6	6	6	6	6	30	W-20	29/11	4/12	6	6	6	-	-	18	W-31	14/2	15/2	-	-	2	-	-	2
W-10	20/9	25/9	6	6	6	6	6	30	W-21	6/12	11/12	6	6	6	-	-	18	Total No. of Lectures					588			
W-11	27/9	2/10	6	6	6	6	6	30	W-22	13/12	18/12	6	6	6	-	-	18									

## Discussion Schedule of Daily Practice Problems (DPPs):

S. No.	Week No.	DPP No.					No. of DPPs
		P	C	M	SST	E	
1	W-1	1,2,3	1,2,3	1,2,3	-	-	9
2	W-2	4,5,6	4,5,6	4,5,6	-	-	9
3	W-3	7,8,9	7,8,9	7,8,9	-	-	9
4	W-4	10,11,12	10,11,12	10,11,12	-	-	9
5	W-5	13,14,15	13,14,15	13,14,15	1,2	1,2	13
6	W-6	16,17,18	16,17,18	16,17,18	3,4	3,4	13
7	W-7	19,20,21	19,20,21	19,20,21	5,6	5,6	13
8	W-8	22,23,24	22,23,24	22,23,24	7,8	7,8	13
9	W-9	25,26,27	25,26,27	25,26,27	9,10	9,10	13
10	W-10	28,29,30	28,29,30	28,29,30	11,12	11,12	13
11	W-11	31,32,33	31,32,33	31,32,33	13,14	13,14	13
12	W-12	34,35,36	34,35,36	34,35,36	15,16	15,16	13
13	W-13	37,38,39	37,38,39	37,38,39	17,18	17,18	13
14	W-14	40,41,42	40,41	40,41,42	-	-	8
15	W-15	43,44,45	42,43	43,44,45	-	-	8
16	W-16	46,47,48	44,45	46,47,48	-	-	8

S. No.	Week No.	DPP No.					No. of DPPs	
		P	C	M	SST	E		
17	W-17	DIWALI HOLIDAYS						
18	W-18	49,50,51	46,47,48	49,50,51	-	-	9	
19	W-19	52,53,54	49,50,51	52,53,54	-	-	9	
20	W-20	55,56,57	52,53,54	55,56,57	-	-	9	
21	W-21	58,59,60	55,56,57	58,59,60	-	-	9	
22	W-22	61,62,63	11 <sup>th</sup> Revision			-	-	3
23	W-23	64,65,66				-	-	3
24	W-24	67,68,69				-	-	3
25	W-25	70,71,72				-	-	3
26	W-26	11 <sup>th</sup> Revision				-	-	-
27	W-27	73,74,75	58,59	61,62,63	-	-	8	
28	W-28	76,77	60,61	64,65,66	-	-	7	
29	W-29	78,79	-	67,68,69	-	-	5	
30	W-30	-	-	70,71,72	-	-	3	
31	W-31	-	-	73,74	-	-	2	
Total Number of DPPs							250	