

# TARGET: INDIAN INSTITUTES OF TECHNOLOGY (IITs)



Academic Session: 2017-18

## COURSE PLANNER

For Students of

**CLASS-XI | VIKAAS (JA01)**

Target: JEE (Main + Advanced) 2019

Medium: English | Hindi

### COURSE CONCEPT

A Course which offers ample time of 2 years to become an expert in the curriculum of JEE (Main + Advanced). The course progresses with basic fundamental study; covering upon the syllabus of boards alongwith the preparation for JEE (Main + Advanced). The course helps in development of concepts, rigorous practice for board examinations as well as competitive examinations, enhancement of analytical thinking and increasing the confidence level of IIT aspirants.

Course Commencement: 03.04.2017 | Course End: 07.01.2018

### RESONANCE TEACHING METHODOLOGY

#### Preparation for JEE (Main + Advanced)

Classroom Teaching

Daily Practice Problems (DPPs)

Study Material (Sheets/Modules)

APT - Advanced Pattern Part Test

ACT - Advanced Pattern Cumulative Test

MCT - Main Pattern Cumulative Test

Doubt Classes

\*The support for Fourth subject (English), Fifth subject & Practical is provided by the institute to students on Optional & Nominal Chargeable basis.

#### Preparation for Board Examination

Classroom Teaching & NCERT Book Discussion

Resonance Board Worksheets (RBWs)

Study Material (Sheets/Modules)

Board (BPTs) Pattern Tests

Doubt Classes

Support for Fourth Subject (English)\*

Support for Fifth Subject\*

Support for Practical (Physics & Chemistry)

### TOTAL ACADEMIC HOURS

◆ **Course Duration:** 42 Weeks

◆ **Total Number of Lectures:** 430 (P: 141 | C: 148 | M: 141)

◆ **Duration of one lecture:** 1.5 hrs = 90 minutes

◆ **Total Duration of Classroom Teaching:** 645 hrs

◆ **Total Duration of Testing Hours (ACTs/APTs/ MCTs/BPTs/MT/AIOT):** 63 hrs

◆ **Total Academic Hours in VIKAAS Course:** 708 hrs

### TEACHING/ LEARNING TOOLS

- ◆ **Daily Practice Problems (DPPs):** A handout having problems for home assignment, practice and classroom discussion covering current and previous topics. A DPP for JEE (Advanced) has 7-10 problems and DPP for JEE (Main) contains upto 20 problems.
- ◆ **Board Worksheet:** Questions on board pattern with blank spaces (to write their answers) are provided to students in the form of worksheets. Students after completing the worksheet; have to submit it for evaluation. It ensures written practice of students for board examinations.
- ◆ **Study Material (Sheets/Modules):** Topic wise study material having key concepts, problems for practice in various Exercise Levels and questions asked in previous years (Board/JEE (Main)/JEE (Advanced)).
- ◆ **Periodic Tests:** Periodic Tests are conducted having part syllabus (Part Tests - PTs) with many problems of seen nature and Tests comprising of the syllabus taught till date (Cumulative Tests - CTs) with unseen problems. Both PTs and CTs are conducted on the pattern of JEE (Main and Advanced) in offline and online mode. Board Practice Tests (BPTs) are also conducted.

#### Disclaimer:

- ◆ The Institute reserves the right to increase/decrease the number of lectures allotted to any topic and also make changes in the sequence of the topics of each subject depending upon the course requirements.
- ◆ This Course Planner in all respects is applicable only at Kota (Rajasthan). At other Resonance Study Centres, Students/Parents may find some 'minor' variations to accommodate City specific features/factors.
- ◆ The Topic Start Date mentioned here might vary for batches starting on different dates of the particular course. 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 Academic Session 2017-18. The institute reserves the right to make changes in it in the interest of students.

**Holidays/ Vacations (Total: 12-Days):** 1. Independence Day: 15<sup>th</sup> August, 2017 : One Day 2. Deepawali Holidays: From 16<sup>th</sup> October, 2017 (Monday) to 25<sup>th</sup> October, 2017 (Wednesday): 10 Days 3. Republic Day: 26<sup>th</sup> January, 2018: One Day (Applicable only at Kota SC and at other SC's Deepawali vacation will be informed to students as per respective SC holiday calendar)

## SUBJECT WISE SYLLABUS PLAN

- ◆ Topic Name
- ◆ Topic Sequence

- ◆ Topic Commencement
- ◆ No. of Lectures allotted to each Topic

PHYSICS [P]				CHEMISTRY [C]				MATHEMATICS [M]			
S. No.	Topic Name/Sequence	No of Lectures	Starting Date	S. No.	Topic Name/Sequence	No of Lectures	Starting Date	S. No.	Topic Name/Sequence	No of Lectures	Starting Date
1	Mathematical Tools	12	03-Apr-17	1	Introduction to Chemistry	4	03-Apr-17	1	Sets & Relation	5	03-Apr-17
2	Rectilinear Motion	5	01-May-17	2	Atomic Structure	16	18-Apr-17	2	Fundamentals of Mathematics-I	12	17-Apr-17
3	Projectile Motion	6	09-May-17	3	Mole Concept	10	26-Jun-17	3	Quadratic Equation	11	09-May-17
4	Relative Motion	6	22-May-17	4	Gaseous state 1 (Ideal gases)	8	31-Jul-17	4	Sequence & Series	12	30-May-17
5	NLM	11	01-Jun-17	5	Chemical Equilibrium	8	28-Aug-17	5	Trigonometry	14	26-Jun-17
6	Friction	5	26-Jun-17	6	Gaseous state 2 (Real gases)	4	19-Sep-17	6	Fundamentals of Mathematics-II	11	19-Jul-17
7	Work, Power & Energy (WPE)	11	04-Jul-17	7	Thermodynamics	11	03-Oct-17	7	Binomial Theorem	7	08-Aug-17
8	Circular Motion	7	24-Jul-17	8	Ionic Equilibrium (Elementary)	6	21-Nov-17	8	Permutation & Combination	12	22-Aug-17
9	Centre of mass	11	05-Aug-17	9	Ionic Equilibrium (Advanced)	4	18-Dec-17	9	Solution of Triangle	5	12-Sep-17
10	Rigid Body Dynamics	16	26-Aug-17	10	IUPAC Nomenclature	9	03-Apr-17	10	Straight Line	14	20-Sep-17
11	Simple Harmonic Motion (SHM)	7	23-Sep-17	11	IUPAC Nomenclature & Structural Isomerism	3	09-May-17	11	Principle of Mathematical Induction	1	27-Oct-17
12	Fluid Mechanics	6	06-Oct-17	12	All basic concepts of Org. Chem (ABC)	5	21-May-17	12	Statistics	4	28-Oct-17
13	Surface Tension	4	26-Oct-17	13	Structural identification	3	12-Jun-17	13	Circle	11	06-Nov-17
14	Unit & Dimension	1	04-Nov-17	14	Periodic Table	7	26-Jun-17	14	Mathematical Reasoning	3	25-Nov-17
15	Measurement & Error	1	06-Nov-17	15	BIN	3	18-Jul-17	15	Conic Section	19	29-Nov-17
16	Elasticity & Viscosity	3	07-Nov-17	16	Chemical Bonding	20	31-Jul-17				
17	String Wave	8	13-Nov-17	17	ABC-II	3	26-Oct-17				
18	Sound Waves	8	27-Nov-17	18	GOC-I	9	30-Oct-17				
19	Kinetic Theory of Gases & Thermodynamics	8	11-Dec-17	19	ABC-III	3	20-Nov-17				
20	Calorimetry & Thermal Expansion	5	25-Dec-17	20	ABC-IV	3	28-Nov-17				
				21	s-Block Elements	4	05-Dec-17				
				22	p-Block elements	5	19-Dec-17				
<b>Total No. of Lectures</b>		<b>141</b>		<b>Total No. of Lectures</b>		<b>148</b>		<b>Total No. of Lectures</b>		<b>141</b>	

## WEEKLY LECTURE PLANNER (Per Subject)

Week No.	Week Duration		No. of Lecture					Total No. of Lectures	Week No.	Week Duration		No. of Lecture					Total No. of Lectures	Week No.	Week Duration		No. of Lecture					Total No. of Lectures
	From	To	P	C		M	P			From	To	P	C		M	P			From	To	P	C		M		
				P	O/I								P	O/I								P	O/I		P	
W-1	03/04	08/04	03	02	01	03	9	W-15	10/07	15/07	04	02	02	04	12	W-29	16/10	21/10	Diwali Vacations							
W-2	10/04	15/04	03	01	02	03	9	W-16	17/07	22/07	04	02	02	04	12	W-30	23/10	28/10	02	01	03	02	8			
W-3	17/04	22/04	03	02	01	03	9	W-17	24/07	29/07	04	02	02	04	12	W-31	30/10	04/11	03	03	03	03	12			
W-4	24/04	29/04	03	01	02	03	9	W-18	31/07	05/08	04	02	02	04	12	W-32	06/11	11/11	04	01	03	04	12			
W-5	01/05	06/05	04	02	02	04	12	W-19	07/08	12/08	04	02	02	04	12	W-33	13/11	18/11	04	01	03	04	12			
W-6	08/05	13/05	04	02	02	04	12	W-20	14/08	19/08	03	02	02	03	10	W-34	20/11	25/11	04	02	02	04	12			
W-7	15/05	20/05	03	01	02	03	9	W-21	21/08	26/08	04	02	02	04	12	W-35	27/11	02/12	04	01	03	04	12			
W-8	22/05	27/05	04	02	02	04	12	W-22	28/08	02/09	04	02	02	04	12	W-36	04/12	09/12	04	02	02	04	12			
W-9	29/05	03/06	04	03	01	04	12	W-23	04/09	09/09	04	02	02	04	12	W-37	11/12	16/12	04	02	02	04	12			
W-10	05/06	10/06	03	01	02	03	9	W-24	11/09	16/09	04	03	01	04	12	W-38	18/12	23/12	04	02	02	04	12			
W-11	12/06	17/06	03	01	02	03	9	W-25	18/09	23/09	04	02	02	04	12	W-39	25/12	30/12	04	02	02	04	12			
W-12	19/06	24/06	03	02	01	03	9	W-26	25/09	30/09	04	02	02	04	12	W-40	01/01	06/01	01	0	02	01	4			
W-13	26/06	01/07	04	02	02	04	12	W-27	02/10	07/10	04	02	02	04	12	W-41	08/01	13/01	0	0	0	03	3			
W-14	03/07	08/07	04	02	02	04	12	W-28	09/10	14/10	04	03	01	04	12	W-42	15/01	20/01	0	0	0	0	0			

# PERIODIC TEST SCHEDULE & RESULT COMMUNICATION

S. Test Type and No.	Test Pattern	Periodic Test Date	First Display (Notice Board) & Communication to parent with Centre Rank	Display & Communication of Final Result with All Resonance Rank (ARR)	Uploading of Result on Resonance Website	Physics	Periodic Test Syllabus			Testing Hours	
							Physical/ Inorganic	Chemistry	Organic		Mathematics
1	APT-1 (Advanced)	30-04-17 (Sunday)	04-05-17 (Thursday)	09-05-17 (Tuesday)	11-05-17 (Thursday)	Mathematical Tools (Upto Resolution of vector)	Introduction to Chemistry & Atomic Structure (upto History of Atom- Properties of Cathode & Anode rays, Discovery of Neutron.)	IUPAC-Nomenclature of Alkane & Cyclo alkane with simple side chain (Alky Radical)	Sets & Relation, Fundamentals of Mathematics-I (Upto Method of interval)	6	
2	MCT-1 (Main)	21-05-17 (Sunday)	25-05-17 (Thursday)	30-05-17 (Tuesday)	01-06-17 (Thursday)	Mathematical Tools, Rectilinear Motion, Projectile Motion (Section A, B, C)	Introduction to Chemistry & Atomic Structure (upto Photoelectric Effect & Blackbody radiation.)	IUPAC Nomenclature complete and Structural isomers	Sets & Relation, Fundamentals of Mathematics-I	3	
3	ACT-1 (Advanced)	11-06-17 (Sunday)	15-06-17 (Thursday)	20-06-17 (Tuesday)	22-06-17 (Thursday)	Mathematical Tools, Rectilinear Motion, Projectile Motion, Relative Motion Complete	Introduction to Chemistry & Atomic Structure (Spectral Series.)	IUPAC Nomenclature and structural isomorphism complete	Fundamentals of Mathematics-I, Quadratic Equation (Upto Maxima and Minima of quadratic)	6	
4	APT-2	09-07-17 (Sunday)	13-07-17 (Thursday)	18-07-17 (Tuesday)	20-07-17 (Thursday)	Rectilinear Motion, Projectile Motion, Relative Motion, NLM, Friction complete	Introduction to Chemistry, Atomic Structure & Mole Concept (upto Empirical & Molecular Formula, Introduction of stoichiometry.)	Structural isomers and Structural Identification & ABC, Periodic Table (upto radius)	FOM-I, Quadratic Equation, Sequence & Series, Trigonometry (Transformation of product into sum, Transformation of product into product of sine & cosine)	6	
5	MCT-2 + BPT-1	13-08-17 (Sunday)	17-08-17 (Thursday)	22-08-17 (Tuesday)	22-08-17 (Thursday)	Mathematical Tools, Rectilinear Motion, Projectile Motion, Relative Motion, NLM, Friction, WPE, Circular motion, COM (Upto Calculation of COM)	Introduction to Chemistry, Atomic Structure, Mole Concept & Gaseous state-1 (upto Barometer & faulty barometer)	Periodic table, BIN & Chemical Bonding (upto Lewis octet rule and lewis dot structure & Formal Charge)	Sets & Relation, FOM-I, Quadratic Equation, Sequence & Series, Trigonometry, Fundamentals of Mathematics-I	6	
6	ACT-2	03-09-17 (Sunday)	07-09-17 (Thursday)	12-09-17 (Tuesday)	14-09-17 (Thursday)	Mathematical Tools, Rectilinear Motion, NLM, Friction, WPE, Circular motion, COM, RBD (Upto Calculation of moment of inertia)	Introduction to Chemistry, Atomic Structure, Mole Concept & Gaseous state-1.	Periodic Table and BIN, Chemical Bonding-I (upto VSEPR theory) complete.	FOM-I, Quadratic Equation, Sequence & Series, Trigonometry, FOM-II, Binomial Theorem, Permutation & Combination (Upto Combination)	6	
7	APT-3	24-09-17 (Sunday)	28-09-17 (Thursday)	03-10-17 (Tuesday)	05-10-17 (Thursday)	WPE, Circular Motion, Centre of mass, Rigid body dynamics (Complete)	Introduction to Chem., Atomic Structure, Mole Concept, Gaseous state-1 & Chemical Equilibrium (upto Vapour Pressure and Simultaneous Equilibrium)	Chemical bonding-I & II complete (Excluding Molecular Orbital Theory)	Trigonometry, FOM-II, Binomial Theorem, Permutation & Combination of Triangle (Up to circumradius)	6	
8	MCT-3 + BPT-2	12-11-17 (Sunday)	16-11-17 (Thursday)	21-11-17 (Tuesday)	23-11-17 (Thursday)	Mathematical Tools, Rectilinear, Projectile, Relative & Circular Motion, NLM, Friction, WPE, COM, RBD, SHM, Fluids, Elasticity & viscosity	Introduction to Chemistry, Atomic Structure, Mole Concept, Gaseous state-1, Chemical Equilibrium, Gaseous State-2 & Thermodynamics (upto Second Law and Entropy Calculation (Handout))	Chemical Bonding, ABC part-II and GOC-I (upto type of Resonance & Mesomerism Effect).	Sets & Relation, FOM-I, Quadratic Equation, Sequence & Series, Trigonometry, FOM-II, Binomial Theorem, Permutation & Combination, SOT, Straight Line, Mathematical Induction, Statistics	6	
9	ACT-3	03-12-17 (Sunday)	07-12-17 (Thursday)	12-12-17 (Tuesday)	14-12-17 (Thursday)	Mathematical Tools, Rectilinear Projectile, Relative & Circular Motion, NLM, Friction, WPE, COM, RBD, SHM, Fluids, Elasticity & viscosity, String waves, Sound waves (Section A, B, C, D)	Introduction to Chemistry, Atomic Structure, Mole Concept, Gaseous state-1, Chemical Equilibrium, Gaseous State-2, Thermodynamics & Ionic Equilibrium (Elementary) (upto Properties of water.)	Chemical Bonding, GOC-I & ABC (Phenol and Aniline)	FOM-I, Quadratic Equation, Sequence & Series, Trigonometry, FOM-II, Binomial Theorem, P & C, SOT, Straight Line, Circle	6	
10	MT	05-01-18 (Friday)	11-01-18 (Thursday)	16-01-18 (Tuesday)	18-01-18 (Thursday)	Full Syllabus Class-XI	Full Syllabus Class-XI	Full Syllabus Class-XI	Full Syllabus Class-XI	3	
11	MT	07-01-18 (Sunday)	11-01-18 (Thursday)	16-01-18 (Tuesday)	18-01-18 (Thursday)	Full Syllabus Class-XI	Full Syllabus Class-XI	Full Syllabus Class-XI	Full Syllabus Class-XI	6	
12	A10T	04-03-18 (Sunday)	08-03-18 (Thursday)	13-03-18 (Tuesday)	15-03-18 (Thursday)	Full Syllabus Class-XI	Full Syllabus Class-XI	Full Syllabus Class-XI	Full Syllabus Class-XI	3	

**Date of Reshuffling of Batches:** 16-10-2017

- Note: 1. Students are advised to refer their notice board for test timings  
 2. Their will be no classes on the preceding saturday before every PIs/ CIs (except BPTs).  
 3. Student can submit their request for re-evaluation in two working days after first display of result.

**Total Testing Hours**

**63**

## RESONANCE BOARD WORKSHEET (RBW) SCHEDULE

PHYSICS		
Week No.	RBW Dist. Date	RBW No.
W-3	22-04-2017	1
W-9	03-06-2017	2
W-15	15-07-2017	3
W-21	26-08-2017	4
W-31	04-11-2017	5
W-34	25-11-2017	6
W-38	23-12-2017	7
<b>TOTAL RBWs</b>		<b>7</b>

CHEMISTRY		
Week No.	RBW Dist. Date	RBW No.
W-13	01-07-2017 (P)	1
W-22	02-09-2017 (P)	2
W-27	07-10-2017 (P)	3
W-34	25-11-2017 (P)	4
W-37	16-12-2017 (P)	5
W-08	27-05-2017 (O/I)	1
W-18	05-08-2017 (O/I)	2
W-25	23-09-2017 (O/I)	3
W-34	25-11-2017 (O/I)	4
<b>TOTAL RBWs</b>		<b>9</b>

MATHEMATICS		
Week No.	RBW Dist. Date	RBW No.
W-4	29-04-2017	1
W-8	27-05-2017	2
W-14	08-07-2017	3
W-19	12-08-2017	4
W-24	16-09-2017	5
W-31	04-11-2017	6
W-34	25-11-2017	7
W-37	16-12-2017	8
<b>TOTAL RBWs</b>		<b>8</b>

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

S. No.	Week No.	DPP No.				No. of DPPs	S. No.	Week No.	DPP No.				No. of DPPs	S. No.	Week No.	DPP No.				No. of DPPs
		P	C		M				P	C		M				P	C		M	
			P/I	O						P/I	O						P/I	O		
1	Week-1	0	0	0	0	0	15	Week-15	7,8	3	3	7,8	6	29	Week-29	Diwali Vacations				
2	Week-2	A1,2,3	A1	A1	A1,2,3	8	16	Week-16	9,10,11	4	4	9,10,11	8	30	Week-30	C1	0	C1,2	C1	4
3	Week-3	4,5,6	2	2	4,5,6	8	17	Week-17	12,13,14	5	5	12,13,14	8	31	Week-31	2,3,4	C1	3,4	2,3,4	9
4	Week-4	7,8,9	3	3	7,8,9	8	18	Week-18	15,16,17	6	6	15,16,17	8	32	Week-32	5,6	2	5	5,6	6
5	Week-5	10,11	4	4	10,11	6	19	Week-19	18,19	7	7	18,19	6	33	Week-33	7,8	3	6	7,8	6
6	Week-6	12,13,14	5	5	12,13,14	8	20	Week-20	20,21	8	8	20,21	6	34	Week-34	9,10,11	4	7	9,10,11	8
7	Week-7	15,16,17	6	6	15,16,17	8	21	Week-21	22,23,24	9	9	22,23,24	8	35	Week-35	12,13,14	5	8	12,13,14	8
8	Week-8	18,19	7	7	18,19	6	22	Week-22	25,26,27	10	10	25,26,27	8	36	Week-36	15,16,17	6	9	15,16,17	8
9	Week-9	20,21,22	8	8	20,21,22	8	23	Week-23	28,29	11	11	28,29	6	37	Week-37	18,19	7	10	18,19	6
10	Week-10	23,24,25	9	9	23,24,25	8	24	Week-24	30,31,32	12	12	30,31,32	8	38	Week-38	20,21,22	8	11	20,21,22	8
11	Week-11	26,27	10	10,11	26,27	6	25	Week-25	33,34,35	13	13	33,34,35	8	39	Week-39	23,24,25	9	12	23,24,25	8
12	Week-12	28,29,30	11	0	28,29,30	7	26	Week-26	36,37	14	14	36,37	6	40	Week-40	0	0	13	0	1
13	Week-13	B1,2,3	B1	B1	B1,2,3	8	27	Week-27	38,39,40	15	15	38,39,40	8	41	Week-41	0	0	0	0	0
14	Week-14	4,5,6	2	2	4,5,6	8	28	Week-28	41,42,43	16	0	41,42,43	7	42	Week-42	0	0	0	0	0
															<b>Total Number of DPPs</b>				<b>270</b>	

P: Physics | C (P): Chemistry (Physical) | C (I/O): Chemistry (Inorganic/Organic) | M: Mathematics

P: Physics | C (P): Chemistry (Physical) | C (I/O): Chemistry (Inorganic/Organic) | M: Mathematics

### Resonance Eduventures Ltd.

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**STUDY CENTRES (Self Owned):** Jaipur: 0141-6060661 | Bhubaneswar, Udaipur, Jodhpur, Agra, Ranchi, Allahabad, Aurangabad, Jabalpur, Raipur, Gwalior, Vadodara, Surat: (STD Code) 6060660  
Bhopal: 0755-6060660 | Indore: 0731-4046267 | Lucknow: 0522-3192222 | Nagpur: 0712-3017222 | Patna: 9304002215 | Kolkata, Mumbai, Ahmedabad: (STD Code) 6060660  
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