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# COURSE PLANNER FOR STUDENTS

## CLASS-XIII | AJAY (01ER)

**Target: JEE (Main) 2020**

**Medium: English | Hindi**

### COURSE CONCEPT

A Course which offers ample time of 1 year to become an expert in the curriculum of JEE (Main). The course progresses with basic fundamental study (At Kota study centre) alongwith the preparation for JEE (Main). The course helps in development of concepts, enhancement of analytical thinking and increasing the confidence level of aspirant.

**Course Commencement: 10.06.2019 | Course Ends: 07.03.2020**

**Reshuffling in 01ER Date: 1 September, 2019**

### RESONANCE TEACHING METHODOLOGY

#### Preparation for JEE (Main)

Classroom Teaching	MPT - Main Pattern Part Test
Daily Practice Problems (DPPs)	MCT - Main Pattern Cumulative Test
Study Material (Sheets/Modules)	Doubt Classes

### TEACHING/ LEARNING TOOLS

- ♦ **Daily Practice Problems (DPPs):** A handout having problems for home assignment, practice and classroom discussion covering current and previous topics. Most of the DPPs contains upto 10 problems or more.
- ♦ **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) along with school exam material is provided.
- ♦ **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) in offline and online mode. Board Practice Tests (BPTs) are also conducted.

### TOTAL ACADEMIC HOURS

- ♦ **Course Duration: 39 Weeks**
- ♦ **Total Number of Lectures: 548** (P: 179 | C: 190 | M: 179)
- ♦ **Duration of one lecture: 1.75 hrs = 105 minutes**
- ♦ **Total Duration of Classroom Teaching: 959 hrs**
- ♦ **Total Duration of Testing Hours (MCTs/MPTs/MT/AIOT): 48 hrs**
- ♦ **Total Academic Hours in AJAY Course: 1007 hrs**

#### 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 2019-20. The institute reserves the right to make changes in it in the interest of students.

**Holidays/ Vacations (Total: 11 Days):** 1. Independence Day: 15<sup>th</sup> August, 2019 : One Day 2. Deepawali Holidays: From 24<sup>th</sup> October, 2019 (Thursday) to 02<sup>nd</sup> November, 2019 (Wednesday): 09 Days 3. Republic Day: 26<sup>th</sup> January, 2020: One Day (Applicable only at Kota SC and at other SCs 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 (PI)				CHEMISTRY (IC)				MATHEMATICS (MI)			
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	RECTILINEAR MOTION	4	10-06-19	<b>PHYSICAL/INORGANIC</b>				1	FUNDAMENTALS OF MATHEMATICS	12	10-06-19
2	PROJECTILE MOTION	3	17-06-19	1	MOLE CONCEPT	6	10-06-19	2	QUADRATIC EQUATION	7	28-06-19
3	RELATIVE MOTION	4	20-06-19	2	QUANTUM MECHANICAL MODEL OF ATOM (QMM)	2	24-06-19	3	RELATION, FUNCTION & ITF	13	09-07-19
4	GEOMETRICAL OPTICS	15	27-06-19	3	PERIODIC TABLE	3	26-06-19	4	STATISTICS	2	26-07-19
5	NEWTON'S LAWS OF MOTION	6	18-07-19	4	REAL GASES	4	03-07-19	5	SEQUENCE & SERIES	5	30-07-19
6	FRICTION	3	26-07-19	5	CHEMICAL BONDING	12	15-07-19	6	MATRICES & DETERMINANT	8	06-08-19
7	WORK, POWER, ENERGY	5	31-07-19	6	CHEMICAL EQUILIBRIUM	6	08-08-19	7	STRAIGHT LINE	10	19-08-19
8	ELECTROSTATICS	14	07-08-19	7	IONIC EQUILIBRIUM (ELEMENTARY)	8	26-08-19	8	CIRCLE	6	02-09-19
9	GRAVITATION	4	27-08-19	8	COORDINATION COMPOUNDS	9	11-09-19	9	LIMITS, CONTINUITY & DERIVABILITY	10	10-09-19
10	CURRENT ELECTRICITY	6	02-09-19	9	ELECTROCHEMISTRY	8	26-09-19	10	APPLICATION OF DERIVATIVES	12	21-09-19
11	CAPACITANCE	7	10-09-19	10	METALLURGY	3	14-10-19	11	MATHEMATICAL REASONING	2	07-10-19
12	CIRCULAR MOTION	5	18-09-19	11	S-BLOCK (ELEMENT)	3	17-10-19	12	CONIC SECTION	13	09-10-19
13	CENTRE OF MASS	8	24-09-19	12	P-BLOCK (B & C FAMILY)	4	04-11-19	13	INDEFINITE INTEGRATION	6	05-11-19
14	RIGID BODY DYNAMICS	12	03-10-19	13	EQUIVALENT CONCEPT	4	11-11-19	14	DEFINITE INTEGRATION & ITS APPLICATION	11	14-11-19
15	SIMPLE HARMONIC MOTION	6	19-10-19	14	CHEMICAL KINETICS	7	18-11-19	15	DIFFERENTIAL EQUATION	4	28-11-19
16	DIWALI HOME WORK DISCUSSION	2	04-11-19	15	P-BLOCK(N & O)	4	02-12-19	16	VECTOR & 3-D	11	03-12-19
17	STRING WAVE	5	11-11-19	16	SOLUTION & COLLIGATIVE PROPERTIES	8	09-12-19	17	COMPLEX NUMBER	10	17-12-19
18	SOUND WAVE	7	16-11-19	17	SURFACE CHEMISTRY	3	24-12-19	18	CIRCLE	1	13-01-20
19	WAVE OPTICS	4	26-11-19	18	SOLID STATE	6	13-01-20	19	LIMITS, CONTINUITY & DERIVABILITY	1	14-01-20
20	EM WAVE	1	30-11-19	19	HALOGEN NOBLE GAS	5	22-01-20	20	SOLUTION OF TRIANGLE	3	15-01-20
21	SEMICONDUCTOR	3	02-12-19	20	THERMODYNAMICS & THERMOCHEMISTRY	10	30-01-20	21	BINOMIAL THEOREM	6	21-01-20
22	POC	2	05-12-19	21	D-BLOCK ELEMENT	4	18-02-20	22	APPLICATION OF DERIVATIVES	2	28-01-20
23	EMF	7	07-12-19	<b>ORGANIC</b>				23	CONIC SECTION	2	30-01-20
24	EMI	6	17-12-19	1	IUPAC NOMENCLATURE	4	10-06-19	24	PERMUTATION & COMBINATION	10	03-02-20
25	ALTERNATING CURRENT	4	24-12-19	2	STRUCTURAL ISOMERISM	1	01-07-19	25	DEFINITE INTEGRATION & ITS APPLICATION	2	17-02-20
26	MODERN PHYSICS-I	5	13-01-20	3	STRUCTURE IDENTIFICATION & POC-I	4	02-07-19	26	DIFFERENTIAL EQUATION	1	19-02-20
27	NUCLEAR PHYSICS	4	21-01-20	4	GOC-I	6	16-07-19	27	PROBABILITY	5	20-02-20
28	FLUID MECHANICS	4	25-01-20	5	GOC-II	6	06-08-19	28	VECTOR & 3-D	2	26-02-20
29	SURFACE TENSION	3	30-01-19	6	POLYMER	1	27-08-19	29	REVISION	2	28-02-20
30	ELASTICITY AND VISCOSITY	2	04-02-20	7	STEREISOMERISM	6	02-09-19				
31	KTG AND THERMODYNAMICS	8	06-02-20	8	ORM-I	5	23-09-19				
32	CALORIMETRY & THERMAL EXPANSION	3	20-02-20	9	ORM-II	6	08-10-19				
33	HEAT TRANSFER	7	24-02-20	10	REDUCTION, OXIDATION & HYDROLYSIS	3	06-11-19				
				11	ORM-III	4	18-11-19				
				12	ORM-IV	3	02-12-19				
				13	AROMATIC	3	10-12-19				
				14	CARBONYL COMPOUNDS	4	23-12-19				
				15	ACID & DERIVATIVES	1	20-01-20				
				16	BIOMOLECULES	4	21-01-20				
				17	PHYSICAL PROPERTIES & CHEMISTRY IN EVERYDAY LIFE	1	03-02-19				
				18	CHEMISTRY IN EVERYDAY LIFE	1	04-02-20				
				19	ENVIRONMENTAL CHEMISTRY	1	10-02-19				
				20	REVISION	5	11-02-19				
<b>Total No. of Lectures</b>				<b>Total No. of Lectures</b>				<b>Total No. of Lectures</b>			
<b>179</b>				<b>190</b>				<b>179</b>			

## WEEKLY LECTURE PLANNER (Per Subject)

Week No.	Week Duration		No. of Lecture				Total No. of Lectures
	From	To	P	C	O	M	
W1	10/06	15/06	4	3	1	4	12
W2	17/06	22/06	4	3	1	4	12
W3	24/06	29/06	5	3	2	5	15
W4	01/07	06/07	5	3	2	5	15
W5	08/07	13/07	5	3	2	5	15
W6	15/07	20/07	5	3	2	5	15
W7	22/07	27/07	5	3	2	5	15
W8	29/07	03/08	5	3	2	5	15
W9	05/08	10/08	6	4	2	6	18
W10	12/08	17/08	4	2	2	4	12
W11	19/08	24/08	5	3	2	5	15
W12	26/08	31/08	5	3	2	5	15
W13	02/09	07/09	5	3	2	5	15

Week No.	Week Duration		No. of Lecture				Total No. of Lectures
	From	To	P	C	O	M	
W14	09/09	14/09	6	4	2	6	18
W15	16/09	21/09	6	4	2	6	18
W16	23/09	28/09	6	4	2	6	18
W17	30/09	05/10	4	4	2	5	15
W18	07/10	12/10	6	4	2	6	18
W19	14/10	19/10	6	4	2	6	18
W20	21/10	26/10	2	2	2	2	8
W21	28/10	02/11	0	0	0	0	0
W22	04/11	09/11	5	4	2	4	15
W23	11/11	16/11	6	4	2	6	18
W24	18/11	23/11	5	3	2	5	15
W25	25/11	30/11	6	4	2	6	18
W26	02/12	07/12	6	4	2	6	18

Week No.	Week Duration		No. of Lecture				Total No. of Lectures
	From	To	P	C	O	M	
W27	09/12	14/12	5	3	2	5	15
W28	16/12	21/12	6	4	2	6	18
W29	23/12	28/12	5	3	2	5	15
W30	30/12	04/01	0	0	0	0	0
W31	06/01	11/01	0	0	0	0	0
W32	13/01	18/01	4	4	2	4	14
W33	20/01	25/01	6	4	2	6	18
W34	27/01	01/02	5	4	2	4	15
W35	03/02	08/02	4	4	2	5	15
W36	10/02	15/02	4	4	2	5	15
W37	17/02	22/02	6	4	2	6	18
W38	24/02	29/02	5	3	2	5	15
W39	02/03	07/03	2	2	0	1	5

# PERIODIC TEST SCHEDULE & RESULT COMMUNICATION

S. No.	Periodic 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	Periodic Test Syllabus			Testing Hours	
							Physics	Chemistry			Mathematics
								Physical/ Inorganic	Organic		
1	MPT-1	JEE (MAIN)	14-07-19 (SUNDAY)				Rectilinear Motion, Projectile Motion, Relative Motion	Mole concept + QMM	IUPAC Nomenclature & Structural isomerism	Fundamentals of Mathematics, Quadratic Equation (upto nature of roots)	3
2	MCT-1	JEE (MAIN)	04-08-19 (SUNDAY)				Rectilinear Motion, Projectile Motion, Relative motion, Geometrical Optics, NLM	Mole concept, QMM, Periodic Table & Real Gas, Chemical Bonding-1 (All Cheminfos and Handouts Till date)	IUPAC Nomenclature, Structural isomerism, Structure Identification & POC-I, GOC-I (upto Mesomeric effect)	Fundamentals of Mathematics, Quadratic Equation, Relation, Function & IIF (Excepts Inverse Trigonometric function)	3
3	MPT-2	JEE (MAIN)	18-08-19 (SUNDAY)				Geometrical Optics, Newtons laws of Motion, Friction, Work Power & Energy	Mole concept + QMM, Periodic table, Real Gas & Chemical bonding (upto Hybridization)	Structure Identification, POC & GOC-I Complete	Quadratic Equation, Relations, Function & IIF, Statistics, Sequence & Series	3
4	MCT-2	JEE (MAIN)	08-09-19 (SUNDAY)				Rectilinear Motion, Projectile Motion, Relative motion, Geometrical Optics, NLM, Friction, WPE, Electrostatics, Gravitation, Current electricity up to Electric power and battery	Mole concept, QMM, Periodic Table & Real Gas, Chemical Bonding, Chemical Equilibrium (All Cheminfos and Handouts Till date)	POC-I, GOC-I & GOC-II (upto Basic strength of organic compounds)	Fundamentals of Mathematics, Quadratic Equation, Relation, Function & IIF, Statistics, Sequence & Series, Matrices & Determinant, Straight Line	3
5	MPT-3	JEE (MAIN)	29-09-19 (SUNDAY)				Electrostatics, Gravitation, Current electricity, Capacitance, Circular Motion	Chemical bonding + Chemical equilibrium + ionic equilibrium + coordination compound Nomenclature	GOC-II, Polymers, Stereoisomerism & ORM - I Full Acid base reaction	Matrices & Determinant, Straight Line, Circle, Limits, Continuity & Derivability (Up to Limits only)	3
6	MCT-3	JEE (MAIN)	24-11-19 (SUNDAY)		Within 1 Week of Test Conduction	Within 2 Weeks of Test Conduction	Rectilinear Motion, Projectile Motion, Relative motion, Geometrical Optics, NLM, Friction, WPE, Electrostatics, Gravitation, Current electricity, Capacitance, Circular Motion, Centre of mass, RBD, SHM, String wave, Sound wave up to speed of sound waves	Mole concept, QMM, Periodic table, Real Gas, Chemical Bonding, Chemical Equilibrium, Ionic Equilibrium (elementary), Coordination compounds, Electrochemistry, Metallurgy, Qualitative Analysis-I, p-Block(Halogen & Noble gases) (All Cheminfos and Handouts Till date)	Stereoisomerism (Mains), ORM-I & ORM-II, Reduction, Oxidation	Fundamentals of Mathematics, Quadratic Equation, Relations, Function & IIF, Statistics, Sequence & Series, Matrices & Determinant, Straight Line, Circle, Limits, Continuity & Derivability, Mathematical Reasoning, Application of Derivatives, Conic Section, Indefinite Integration	3
7	MPT-4	JEE (MAIN)	15-12-19 (SUNDAY)		Within 4 (Four) Days of Test Conduction		Centre of mass, RBD, SHM, String wave, Sound wave, Wave Optics, EMW, Solid & Semi Conductor, POC, Error & Measurement	Coordination compound + electrochemistry + metallurgy + s-Block + p-Block (B & C) family + equivalent concept + Chemical kinetics	ORM-II, ORM-III & Reduction-Oxidation	Limits, Continuity & Derivability, Application of Derivatives, Mathematical Reasoning, Conic Section, Indefinite Integration, Definita Integration & Its Application	3
8	AJOT 1 (MAIN)	JEE (MAIN)	29-12-19 (SUNDAY)				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
9	MJMT 1	JEE (MAIN)	31-12-19				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
10	MJMT 2	JEE (MAIN)	02-01-20				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
11	MCT-4	JEE (MAIN)	02-02-20 (SUNDAY)				Rectilinear Motion, Projectile Motion, Relative motion, Geometrical Optics, NLM, Friction, WPE, Electrostatics, Gravitation, Current electricity, Capacitance, Circular Motion, Centre of mass, RBD, SHM, String wave, Sound Wave, Wave Optics, EMW, Solid & Semi Conductor, POC, EMF EMI, AC	Mole Concept + Quantum Mechanical model of atom (QMM) + Periodic Table + Real Gases + Chemical Bonding + Chemical Equilibrium + Ionic Equilibrium (Elementary) + Coordination compounds + Electrochemistry + Metallurgy + s-Block (Element) + p-Block (B & C family) + Equivalent Concept	ORM-I, III, IV, Aromatic Compounds	Fundamentals of Mathematics, Quadratic Equation, Relations, Function & IIF, Statistics, Sequence & Series, Matrices & Determinant, Straight Line, Circle, Limits, Continuity & Derivability, Application of Derivatives, Mathematical Reasoning, Conic Section, Indefinite Integration, Definita Integration & Its Application, Vector & 3-D, Complex Number	3
12	AJOT-2 (MAIN)	JEE (MAIN)	16-02-20				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
13	MT (MAIN)	JEE (MAIN)	06-03-20				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
14	JPT-1 (MAIN)	SAME AS 01JR	15-03-20				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
15	JPT-2 (MAIN)	SAME AS 01JR	22-03-20				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
16	JPT-3 (MAIN)	SAME AS 01JR	29-03-20				Full syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
										<b>Total Testing Hours</b>	<b>48</b>

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 PTs/ CIs (except BPTs).  
3. Student can submit their request for re-evaluation in two working days after first display of result.

## 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	W1	A1,2	A1,2	0	A1,2	6	14	W14	4,5	3,4	2	4,5	7	27	W27	31,32	23,24	14	31,32	7
2	W2	3,4	3,4	A1	3,4	7	15	W15	6,7,8	5,6	3	6,7,8	9	28	W28	33,34	25	15	33,34	6
3	W3	5,6	5	2	5,6	6	16	W16	9,10,11	7,8	4	9,10,11	9	29	W29	35,36	26	16	35,36	6
4	W4	7,8,9	6	3	7,8,9	8	17	W17	12,13,14	9,10	5	12,13,14	9	30	W30	0	0	0	0	0
5	W5	10,11,12	7	4	10,11,12	8	18	W18	15,16	11,12	6	15,16	7	31	W31	0	0	0	0	0
6	W6	13,14	8	5	13,14	6	19	W19	17,18,19	0	7	17,18,19	7	32	W32	37,38	27	17	37,38	6
7	W7	15,16,17	9	6	15,16,17	8	20	W20	20	0	8	20	3	33	W33	39,40,41	28	18	39,40,41	8
8	W8	18,19,20	10	7	18,19,20	8	21	W21	<b>DIWALI VACATIONS</b>				34	W34	42,43	29	19	42,43	6	
9	W9	21,22	11	8	21,22	6	22	W22	21,22	13,14	9	21,22	7	35	W35	44,45	30	0	44,45	5
10	W10	23,24,25	12	9	23,24,25	8	23	W23	23,24	15,16	10	23,24	7	36	W36	46,47	0	20	46,47	5
11	W11	26,27	13,14	10	26,27	7	24	W24	25,26	17,18	11	25,26	7	37	W37	48,49	0	21	48,49	5
12	W12	28,29,30	15,16	11	28,29,30	9	25	W25	27,28	19,20	12	27,28	7	38	W38	50,51	0	22	50,51	5
13	W13	B1,2,3	B1,2	B1	B1,2,3	9	26	W26	29,30	21,22	13	29,30	7	<b>Total Number of DPPs</b>					<b>241</b>	

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

### RESONANCE EDUVENTURES LTD.

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