

**Academic Session: 2017-18**

## COURSE PLANNER

For Students of

# CLASS-XIII | AJAY (ER04)

**Target: JEE (Main) 2018**

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: 03.07.2017** (Batch will get merged with ER01 on 12<sup>th</sup> Nov '17) | **Course Ends: 03.03.2018**

### 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

### TOTAL ACADEMIC HOURS

- ◆ **Course Duration:** 35 Weeks
- ◆ **Total Number of Lectures: 521** (P: 167 | C: 187 | M: 167)
- ◆ **Duration of one lecture:** 1.5/1.75 hrs = 90/105 minutes
- ◆ **Total Duration of Classroom Teaching:** 853 hrs
- ◆ **Total Duration of Testing Hours (MCTs/MPTs/MT/AIOT):** 45 hrs
- ◆ **Total Academic Hours in AJAY Course:** 898 hrs

### 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 contain 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 (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.

#### 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	Rectilinear Motion	4	03-Jul-17	1	Mole Concept	7	03-Jul-17	1	Fundamentals of Mathematics	8	03-Jul-17
2	Projectile Motion	3	07-Jul-17	2	Quantum Number, Mechanical Model	2	18-Jul-17	2	Quadratic Equation	6	14-Jul-17
3	Relative Motion	4	12-Jul-17	3	Periodic Table	3	24-Jul-17	3	Matrices & Determinant	8	21-Jul-17
4	Geometrical Optics	14	18-Jul-17	4	Real Gases	3	31-Jul-17	4	Statistics	2	02-Aug-17
5	Newton's Laws of Motion	6	07-Aug-17	5	Chemical Bonding	14	07-Aug-17	5	Straight Line	10	03-Aug-17
6	Friction	3	14-Aug-17	6	Chemical Equilibrium	7	04-Sep-17	6	Circle	6	18-Aug-17
7	Work, Power & Energy	6	18-Aug-17	7	Ionic Equilibrium	7	18-Sep-17	7	Binomial Theorem	5	25-Aug-17
8	Circular Motion	4	25-Aug-17	8	Coordination Compounds	7	02-Oct-17	8	Permutation & Combination	9	01-Sep-17
9	Electrostatics	14	31-Aug-17	9	Surface Chemistry	3	27-Oct-17	9	Probability	6	12-Sep-17
10	Gravitation	3	18-Sep-17	10	s-block Elements	4	04-Nov-17	10	Sets & Relation	2	20-Sep-17
11	Current Electricity	6	21-Sep-17	11	Electrochemistry	9	10-Nov-17	11	Function & Inverse Trigonometric Function	11	22-Sep-17
12	Capacitance	5	28-Sep-17	12	Metallurgy	3	27-Nov-17	12	Limits, Continuity & Derivability	10	05-Oct-17
13	Centre of Mass	6	04-Oct-17	13	Chemical Kinetics	7	01-Dec-17	13	Application of Derivatives	12	28-Oct-17
14	Rigid Body Dynamics	11	11-Oct-17	14	p-block elements (Group 13,14)	4	14-Dec-17	14	Indefinite Integration	6	13-Nov-17
15	Simple harmonic motion	6	06-Nov-17	15	Solution & Colligative properties	6	21-Dec-17	15	Definite Integration & Its application	10	22-Nov-17
16	Wave on String	5	13-Nov-17	16	p-block elements (Group 15,16)	4	01-Jan-18	16	Differential Equation	6	07-Dec-17
17	Sound Wave	6	21-Nov-17	17	Solid State	6	08-Jan-18	17	Vector & 3-D	13	18-Dec-17
18	Electro Magnetic Field	8	29-Nov-17	18	p-block elements (17-18)	3	18-Jan-18	18	Complex Number	10	06-Jan-18
19	Electro Magnetic Induction (EMI)	6	12-Dec-17	19	Thermodynamics	6	23-Jan-18	19	Conic Section	12	22-Jan-18
20	Alternating Current	3	21-Dec-17	20	Thermochemistry	4	03-Feb-18	20	Mathematical Reasoning	3	10-Feb-18
21	Modern Physics -I	6	26-Dec-17	21	Equivalent Concept	4	10-Feb-18	21	Sequence & Series	6	14-Feb-18
22	Nuclear Physics	4	06-Jan-18	22	d-block elements	4	17-Feb-18	22	Solution of Triangle	6	22-Feb-18
23	Wave Optics	4	10-Jan-18	23	f-block elements	2	26-Feb-18				
24	EM Wave	1	17-Jan-18	24	IUPAC Nomenclature	4	03-Jul-17				
25	Fluid mechanics	6	18-Jan-18	25	Structural Isomerism	1	17-Jul-17				
26	Surface Tension	2	29-Jan-18	26	Structure Identification & POC-I	3	22-Jul-17				
27	Elasticity & Viscosity	1	01-Feb-18	27	GOC-I	5	31-Jul-17				
28	KTG & Thermodynamics	7	02-Feb-18	28	GOC-II	7	19-Aug-17				
29	Calorimetry & Thermal Expansion	3	13-Feb-18	29	Stereoisomerism	9	11-Sep-17				
30	Heat Transfer	3	17-Feb-18	30	ORM-I	6	07-Oct-17				
31	Semiconductor	3	21-Feb-18	31	ORM-II	7	06-Nov-17				
32	Principle of communication	2	26-Feb-18	32	Reduction, Oxidation & Hydrolysis	2	04-Dec-17				
33	Error & Measurement	2	01-Mar-18	33	ORM-III	4	11-Dec-17				
				34	ORM-IV	2	25-Dec-17				
				35	Aromatic Compounds	5	01-Jan-18				
				36	Hydrocarbon	1	16-Jan-18				
				37	Carbonyl Compounds	3	22-Jan-18				
				38	Acid & Derivatives	2	01-Feb-18				
				39	Biomolecule	3	06-Feb-18				
				40	Polymer	1	19-Feb-18				
				41	Chemistry in Everyday Life & Discussion	3	20-Feb-18				
<b>Total No. of Lectures</b>				<b>Total No. of Lectures</b>				<b>Total No. of Lectures</b>			
<b>167</b>				<b>187</b>				<b>167</b>			

## WEEKLY LECTURE PLANNER (Per Subject)

Week No.	Week Duration		No. of Lecture				Total No. of Lectures
	From	To	P	C	O	M	
W-1	03/07	08/07	05	03	02	05	15
W-2	10/07	15/07	05	03	02	05	15
W-3	17/07	22/07	05	03	02	05	15
W-4	24/07	29/07	05	03	02	05	15
W-5	31/07	05/08	05	03	02	05	15
W-6	07/08	12/08	06	04	02	06	18
W-7	14/08	19/08	05	03	02	05	15
W-8	21/08	26/08	05	03	02	05	15
W-9	28/08	02/09	06	04	02	06	18
W-10	04/09	09/09	06	04	02	06	18
W-11	11/09	16/09	05	03	02	05	15
W-12	18/09	23/09	06	03	03	06	18

Week No.	Week Duration		No. of Lecture				Total No. of Lectures	
	From	To	P	C	O	M		
W-13	25/09	30/09	06	04	02	06	18	
W-14	02/10	07/10	06	03	03	06	18	
W-15	09/10	14/10	05	03	02	05	15	
W-16	16/10	21/10	Diwali Vacations					
W-17	23/10	28/10	03	02	01	03	09	
W-18	30/10	04/11	05	03	02	05	15	
W-19	06/11	11/11	06	04	02	06	18	
W-20	13/11	18/11	04	04	02	04	14	
W-21	20/11	25/11	05	04	02	05	16	
W-22	27/11	02/12	04	04	02	04	14	
W-23	04/12	09/12	05	04	02	05	16	
W-24	11/12	16/12	04	04	02	04	14	

Week No.	Week Duration		No. of Lecture				Total No. of Lectures
	From	To	P	C	O	M	
W-25	18/12	23/12	05	04	02	05	16
W-26	25/12	30/12	04	04	02	04	14
W-27	01/01	06/01	05	04	02	05	16
W-28	08/01	13/01	04	04	02	04	14
W-29	15/01	20/01	05	04	02	05	16
W-30	22/01	27/01	04	04	02	04	14
W-31	29/01	03/02	05	04	02	05	16
W-32	05/02	10/02	04	04	02	04	14
W-33	12/02	17/02	05	04	02	05	16
W-34	19/02	24/02	05	03	02	05	15
W-35	26/02	03/03	04	02	02	04	12

## PERIODIC TEST SCHEDULE & RESULT COMMUNICATION

S. Test Type and No.	Periodic Test Date	Test Pattern	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
							Chemistry		Mathematics	
							Physical/ Inorganic	Organic		
1	MPT-1 06-08-17 (Sunday)	JEE (Main)	10-08-17 (Thursday)	15-08-17 (Tuesday)	17-08-17 (Thursday)	Rectilinear Motion, Projectile Motion, Relative Motion, Geometrical optics	Mole concept, GMM	IUPAC Nomenclature, Structural isomerism & Structure identification	Fundamentals of Mathematics, Quadratic Equation, Matrices and Determinants (Upto multiplication of Determinant)	3
2	MCT-1 27-08-17 (Sunday)	JEE (Main)	31-08-17 (Thursday)	05-09-17 (Tuesday)	07-09-17 (Thursday)	Rectilinear motion, Projectile motion, Relative motion, GO, NLM, Friction, WPE,	Mole concept, GMM, Periodic table, Real Gas, Chemical Bonding (resonance)	IUPAC Nomenclature, Structural isomerism, Structure identification, POC & GOC-I	Fundamentals of Mathematics, Quadratic Equation, Matrices & determinant, Statistics, Straight Line (Upto Family of Line)	3
3	MPT-2 17-09-17 (Sunday)	JEE (Main)	21-09-17 (Thursday)	26-09-17 (Tuesday)	28-09-17 (Thursday)	NLM, Friction, WPE, Circular motion, Electrostatics	Periodic table, Real Gas, Chemical Bonding	Structure Identification, POC-I, GOC-I & II	Straight Line, Circle, Binomial Theorem, P & C (Up to multinomial theorem)	3
4	MPT-3 08-10-17 (Sunday)	JEE (Main)	12-10-17 (Thursday)	17-10-17 (Tuesday)	19-10-17 (Thursday)	Electrostatic, Gravitation, Current electricity, Capacitance	Chemical Bonding, Chemical Equilibrium, Ionic Equilibrium	GOC-I & II, Stereoisomerism (upto Geometrical Isomers)	Straight Line, Circle, Binomial Theorem, P & C, Probability, Function & IFF (Upto Even/Odd function)	3
5	MCT-2 05-11-17 (Sunday)	JEE (Main)	09-11-17 (Thursday)	14-11-17 (Tuesday)	16-11-17 (Thursday)	Rectilinear motion, Projectile motion, Relative motion, Geometrical optics, NLM, Friction, WPE, Circular motion, Electrostatic, Gravitation, Current electricity, Capacitance, Centre of mass, RBD	Mole concept, GMM, Periodic table, Real Gas, Chemical Bonding, Chemical Equilibrium, Ionic Equilibrium (telemetry), Coordination compounds, Surface Chemistry, s-block elements (All Chemifits and Handouts Till date)	Stereoisomerism, Organic reaction mechanisms-I (upto reaction of acidic hydrogen)	Fundamentals of Mathematics, Quadratic Equation, Matrices & determinant, Statistics, Straight Line, Circle, Binomial Theorem, P & C, Probability, Sets & Relation, Function & IFF, Limits, Continuity & Derivability	3
6	MPT-4 26-11-17 (Sunday)	JEE (Main)	30-11-17 (Thursday)	05-12-17 (Tuesday)	07-12-17 (Thu.)	Electrostatics, Gravitation, Current electricity, Capacitance, Centre of mass, RBD, SHM, String wave	Surface chemistry, s-block, Metallurgy, Electrochemistry (upto Electrolysis)	Stereoisomerism, Organic reaction mechanisms-II (upto Friedel craft reactions)	Limits, Continuity & Derivability, Application of Derivatives, Indefinite Integration (Upto integration by part)	3
7	MCT-4 10-12-17 (Sunday)	JEE (Main)	14-12-17 (Thursday)	19-12-17 (Tuesday)	21-12-17 (Thu.)	Rectilinear motion, Projectile motion, Relative motion, GO, NLM, Friction, WPE, Circular motion, Electrostatics, Gravitation, Current electricity, Capacitance, COM, RBD, SHM, String wave, sound wave, EMF upto Biot savart's law	Mole concept, GMM, Periodic table, Real Gas, Chemical Bonding, Chemical Equilibrium, Ionic Equilibrium (telemetry), Coordination compounds, Surface Chemistry, s-block elements, electrochemistry, Metallurgy (All Chemifits and Handouts Till date)	Stereoisomerism, Organic reaction mechanisms-I & II	FOM, Quadratic Equation, Matrices & Determinant, Statistics, Straight Line, Circle, Binomial Theorem, P & C, Probability, Sets & Relation, Function & IFF, ADD, Limits, Continuity & Derivability, Indefinite Integration, Definite Integration (Upto P-5)	3
8	MPT-5 31-12-17 (Sunday)	JEE (Main)	04-01-18 (Thursday)	09-01-18 (Tuesday)	11-01-18 (Thu.)	String wave, sound wave, EMF complete	Chemical Kinetics, p-Block (13-14), Solution colligative properties (upto Osmotic pressure)	ORM-I & II, reduction oxidation, hydrolysis	Application of Derivatives, Indefinite Integration, Definite Integration	3
9	MCT-5 14-01-18 (Sunday)	JEE (Main)	18-01-18 (Thursday)	23-01-18 (Tuesday)	25-01-18 (Thu.)	Rectilinear motion, Projectile motion, Relative motion, GO, NLM, Friction, WPE, Circular motion, Electrostatics, Gravitation, Current electricity, Capacitance, COM, RBD, SHM, String wave, sound wave, EMF, EMI, AC	Metalurgy, p-Block (13-14), Solution colligative, P-Block (15 & 16 groups)	Reduction oxidation, hydrolysis, ORM-III & IV	FOM, Quadratic Equation, Statistics, Matrices and Determinants, Straight Line, Circle, Binomial Theorem, P & C, Probability, Sets & Relations, Functions & IFF, Limit, Continuity & Derivability, ADD, Indefinite & Definite integration, Differential equation, Vector and 3D (up to vector-product of two vectors)	3
10	AIDT 28-01-18 (Sunday)	JEE (Main)	01-02-18 (Thursday)	06-02-18 (Tuesday)	08-02-18 (Thu.)	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
11	MPT-6 11-02-18 (Sunday)	JEE (Main)	15-02-18 (Thursday)	20-02-18 (Tuesday)	22-02-18 (Thu.)	Modern Physics-I, Nuclear Physics, Wave optics, Fluid mechanics, Surface Tension	Solid State, p-Block (17-18) group, Thermodynamics (upto Third Law of thermodynamics & DG)	ORM-III, IV, Aromatic compound, Carbonyl compounds	Differential Equation, Vector & 3-D, Complex Number, Conic Section (Upto lecture No. 6)	3
12	MT 04-03-18 (Sunday)	JEE (Main)	08-03-18 (Thursday)	13-03-18 (Tuesday)	15-03-18 (Thu.)	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
13	JPT-1 11-03-18 (Sunday)	JEE (Main)	15-03-18 (Thursday)	20-03-18 (Tuesday)	22-03-18 (Thu.)	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3
14	JPT-2 18-03-18 (Sunday)	JEE (Main)	22-03-18 (Thursday)	27-03-18 (Tuesday)	29-03-18 (Thu.)	Full Syllabus	Full Syllabus	Full Syllabus	Full Syllabus	3

Note: 1. Students are advised to refer their notice board for test timings 2. There will be no classes on the preceding Saturday before every Pts/ Cts (except BPTs).

3. Student can submit their request for re-evaluation in two working days after first display of result.

**Total Testing Hours**

**42**

## 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	A1	A1	A1	A1	4	13	Week-13	20,21	13	13	20,21	6	25	Week-25	14,15	10,11	6	14,15	7
2	Week-2	2,3	2	2	2,3	6	14	Week-14	22,23	14	14	22,23	6	26	Week-26	16,17	12,13	7	16,17	7
3	Week-3	4,5	3	3	4,5	6	15	Week-15	24	15	15	24	4	27	Week-27	18,19	14,15	8	18,19	7
4	Week-4	6,7	4	4	6,7	6	16	Week-16	<b>Diwali Vacations</b>				28	Week-28	20,21,22	16,17	9	20,21,22	9	
5	Week-5	8,9	5	5	8,9	6	17	Week-17	25,26	0	16	25,26	5	29	Week-29	23,24	18,19	10	23,24	7
6	Week-6	10	6	6	10	4	18	Week-18	27,28	16	17	27,28	6	30	Week-30	25,26,27	20,21	0	25,26,27	8
7	Week-7	11	7	7	11	4	19	Week-19	29	17	18	29	4	31	Week-31	28,29	22,23	11	28,29	7
8	Week-8	12,13	8	8	12,13	6	20	Week-20	B1,2	B1,2	B1	B1,2	7	32	Week-32	30,31,32	24	12	30,31,32	8
9	Week-9	14	9	9	14	4	21	Week-21	3,4,5	3	2	3,4,5	8	33	Week-33	33,34	25	13	33,34	6
10	Week-10	15,16	10	10	15,16	6	22	Week-22	6,7	4,5	3	6,7	7	34	Week-34	35,36	0	14	35,36	5
11	Week-11	17,18	11	11	17,18	6	23	Week-23	8,9,10	6,7	4	8,9,10	9	<b>Total Number of DPPs</b>					<b>204</b>	
12	Week-12	19	12	12	19	4	24	Week-24	11,12,13	8,9	5	11,12,13	9							

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  
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