ALLEN CAREER INSTITUTE KOTA (RAJASTHAN) ™

path to success

Syllabus for DISTANCE LEARNING Courses [Academic Session : 2011 - 12]

STUDY MATERIAL | NURTURE Test Series / Joint Package | LEADER Test Series / Joint Package

IIT-JEE

STUDY MATERIAL

PHYSICS

Unit No.	Topic
01	Basic mathematics used in physics, Vectors, Unit & Dimensions; Kinematics.
02	Laws of motion and Friction, Work, Energy & Power.
03	Centre of Mass & Collisions and Rotational Motion.
04	Gravitation and Fluid Mechanics.
05	Thermal Physics.
06	SHM and Wave Motion.
07	Electrostatics; Capacitors.
08	Current electricity.
09	Magnetic effect of current and Magnetism.
10	Electromagnetic Induction (EMI), Alternating current (AC).
11	Ray optics and optical Instruments, Wave optics (Nature of Light & Interference).
12	Atomic and Nuclear Physics; Practical Physics.

CHEMISTRY

Unit No.	Topic
01	Mole Concept and Atomic Structure
02	Periodic Properties & Chemical Bonding
03	State of Matter (Gaseous State), Redox & Equivalent Concept
04	s & p-Block Elements
05	Organic Nomenclature & Basic Principles-Isomerism, GOC
06	Chemical Thermodynamics & Thermochemistry
07	Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory
08	Chemical Kinetics, Nuclear Chemistry, Electrochemistry and Solution
09	Transition Element and Metallurgy
10	Alkane, Alkene, Alkyne, Aromatic Hydrocarbon
11	Organic Compound Containing Halogen, Oxygen and Nitrogen
12	Solid State, Surface Chemistry, Carbohydrates, Amino Acids & Peptides, Practical Organic Chemistry, Principles of Qualitative Analysis

MATHEMATICS

Unit No.	Topic
01	Logarithms, Quadratic Equations, Trignometric Ratios and Identities
02	Matrices & Determinants and Trigonometric Equations
03	Functions and Inverse Trignometric Function
04	Differential Calculus (Limit, Continuity, Differentiability, Differentiation)
05	Solution of Triangles, Sequences and Series, Application of Derivatives (Maxima & Minima, Monotonicity, Tangent & Normal)
06	Indefinite & Definite integration
07	Point, Straight Line & Circle
08	Area under the curve and Differential Equations
09	Parabola, Ellipse & Hyperbola
10	Vectors and Three Dimensional geometry
11	Binomial Theorem and Complex Numbers
12	Permutation & Combination and Probability

Test No.	Test Date	NURTURE TEST SERIES / JOINT PACKAGE			LEADER TEST SERIES / JOINT PACKAGE		
		PHYSICS	CHEMISTRY	MATHEMATICS	PHYSICS	CHEMISTRY	MATHEMATICS
01	24 - 07 - 2011	Basic Mathematics used in Physics, Vectors, Unit & Dimensions.	Mole Concept	Logarithms, Trigonometric Ratios and Identities	Basic mathematics used in Physics, Vectors, Unit & Dimensions; Kinematics.	Mole Concept and Atomic Structure	Logarithms, Quadratic Equations, Trignometric Ratios and Identities
02	07 - 08 - 2011	Kinematics.	Atomic Structure	Quadratic Equations	Laws of motion and Friction, Work, Energy & Power.	Periodic Properties & Chemical Bonding	Matrices & Determinants and Trigonometric Equations
03	21 - 08 - 2011	Laws of Motion and Friction.	Periodic Properties	Solution of Triangles, Trigonometric Equations	Centre of Mass & Collisions and Rotational Motion.	State of Matter (Gaseous State), Redox & Equivalent Concept	Functions and Inverse Trignometric Function
04	04 - 09 - 2011	Work, Energy & Power.	Chemical Bonding	Functions, Limits	Gravitation and Fluid Mechanics.	s & p-Block Elements	Differential Calculus (Limit, Continuity, Differentiability, Differentiation)
05	18 - 09 - 2011	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4
06	02 - 10 - 2011	Centre of Mass & Collisions.	State of Matter (Gassous state), Redox & Equivalent Concept	Point and Straight Line	Thermal Physics.	Organic Nomenclature & Basic Principles-Isomerism, GOC	Application of Derivatives(Maxima & Minima, Monotonicity, Tangent & Normal)
07	16 - 10 - 2011	Rotational Motion.	s & p-Block Elements	Circle	SHM and Wave Motion.	Chemical Thermodynamics & Thermochemistry	Indefinite & Definite integration
08	30 - 10 - 2011	Gravitation.	Organic Nomenclature & Basic Principles-Isomerism and Practical organic Chemistry	Parabola	Electrostatics; Capacitors.	Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory	Area under the curve and Differential Equations
09	13 - 11 - 2011	Fluid Mechanics.	General organic Chemistry (GOC)	Permutation & Combination and Binomial Theorem	Current electricity.	Chemical Kinetics, Nuclear Chemistry, Electrochemistry and Solution	Point, Straight Line & Circle
10	27 - 11 - 2011	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9
11	11 - 12 - 2011	Thermal Physics - I (Thermal Expansion, Calorimetry & Heat Transfer) .	Chemical Thermodynamics & Thermochemistry	Complex Numbers	Magnetic effect of current and Magnetism.	Transition Element and Metallurgy	Parabola, Ellipse & Hyperbola
12	25 -12 - 2011	Thermal Physics - II (KTG & Thermodynamics).	Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory	Ellipse & Hyperbola and Three Dimensional Geometry (Elementary)	Electromagnetic Induction (EMI), Alternating current (AC).	Alkane, Alkene, Alkyne, Aromatic Hydrocarbon	Vectors and Three Dimensional geometry, Solution of Triangles
13	08 - 01 - 2012	SHM.	Alkane & Alkene	Probability	Ray optics and optical Instruments, Wave optics (Nature of Light & Interference).	Organic Compound Containing Halogen, Oxygen and Nitrogen	Binomial Theorem and Complex Numbers, Sequences and Series
14	22 - 01 - 2012	Wave Motion.	Alkyne, Aromatic Hydrocarbon	Sequences and Series	Atomic and Nuclear Physics; Practical Physics.	Solid State, Surface Chemistry, Carbohydrates, Amino Acids & Peptides, Practical Organic Chemistry, Principles of Qualitative Analysis	Permutation & Combination and Probability
15	05 - 02 - 2012	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14

NOTE (Only for Joint Package Students) : Test Sequence may not coincide with the sequence of topic in which Study Material is delivered, however best efforts are done to deliver the study material prior to the test day for any particular topic.

Special Note : There will be Two Question Papers in Minor Test No.05, 10 & 15 [Paper-1 : 8:00 AM to 11:00 AM, Paper-2 : 12:00 PM to 03:00 PM]

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STUDY MATERIAL | NURTURE Test Series / Joint Package | LEADER Test Series / Joint Package

AIEEE

STUDY MATERIAL

PHYSICS

Unit No.	Topic
01	Basic mathematics used in physics, Vectors, Units, Dimensions and Measurement; Kinematics.
02	Laws of motion and Friction, Work, Energy & Power.
03	Centre of Mass & Collisions and Rotational Motion.
04	Gravitation and Fluid Mechanics.
05	Thermal Physics (K. T. G., Thermodynamics & Heat Transfer).
06	SHM and Wave Motion.
07	Electrostatics; Capacitors.
08	Current electricity.
09	Magnetic effect of current and Magnetism.
10	Electromagnetic Induction (EMI), EM Waves, Alternating current.
11	Ray optics and optical Instruments, Wave optics (Nature of Light & Interference).
12	Modern Physics and Nuclear Physics; Practical Physics, Electronics and Principle of Comunication.

CHEMISTRY

Unit No.	Topic
01	Mole Concept and Atomic Structure
02	Periodic Properties & Chemical Bonding
03	State of Matter (Gaseous State & Solid State) Redox & Equivalent Concept
04	s & p-Block Elements; Hydrogen
05	Organic Nomenclature & Basic Principles-Isomerism, GOC
06	Chemical Thermodynamics
07	Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory
08	Chemical Kinetics, Electrochemistry and Solution
09	Transition Element and Metallurgy
10	Alkane, Alkene, Alkyne, Aromatic Hydrocarbon
11	Organic Compound Containing Halogen, Oxygen and Nitrogen, Polymers
12	Surface Chemistry, Purification and characterisation of organic compounds, Biomolecules, Chemistry in Everyday Life and Principles related to practical chemistry.

MATHEMATICS

Unit No.	Topic
01	Quadratic Equations, Sequences and Series
02	Matrices & Determinants, Set, Relation
03	Functions, Limit & Continuity
04	Differential Calculus (Differentiability, Differentiation, Maxima & Minima, Monotonicity, Tangent & Normal)
05	Trigonometry, Binomial Theorem and Principle of Mathematical Induction
06	Indefinite & Definite integration
07	Point, Straight Line & Circle
08	Parabola, Ellipse & Hyperbola
09	Area under the curve and Differential Equations
10	Vectors and Three Dimensional geometry
11	Complex Numbers, Mathematical Reasoning, Statistics
12	Permutation & Combination and Probability

Test No.	Test Date	NURTURE TEST SERIES / JOINT PACKAGE			LEADER TEST SERIES / JOINT PACKAGE		
		PHYSICS	CHEMISTRY	MATHEMATICS	PHYSICS	CHEMISTRY	MATHEMATICS
01	24 - 07 - 2011	Basic Mathematics used in Physics, Vectors, Units, Dimensions and Measurement.	Mole Concept	Quadratic Equations	Basic mathematics used in physics, Vectors, Units, Dimensions and Measurement; Kinematics.	Mole Concept and Atomic Structure	Quadratic Equations, Sequences and Series
02	07 - 08 - 2011	Kinematics.	Atomic Structure	Sequences and Series	Laws of motion and Friction, Work, Energy & Power.	Periodic Properties & Chemical Bonding	Matrices & Determinants, Set, Relation
03	21 - 08 - 2011	Laws of Motion and Friction.	Periodic Properties	Trignometric Ratios and Identities	Centre of Mass & Collisions and Rotational Motion.	State of Matter (Gaseous State& Solid State), Redox & Equivalent Concept	Functions, Limit & Continuity
04	04 - 09 - 2011	Work, Energy & Power.	Chemical Bonding	Trigonometric Equations	Gravitation and Fluid Mechanics.	s & p-Block Elements; Hydrogen	Differential Calculus (Differentiability, Differentiation, Maxima & Minima, Monotonicity, Tangent & Normal)
05	18 - 09 - 2011	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4	Syllabus of Test # 1,2,3,4
06	02 - 10 - 2011	Centre of Mass & Collisions.	State of Matter (Gassous state), Redox & Equivalent Concept	Point and Straight Line	Thermal Physics (K. T. G., Thermodynamics & Heat Transfer).	Organic Nomenclature & Basic Principles-Isomerism, GOC	Trigonometry, Binomial Theorem and Principle of Mathematical Induction
07	16- 10 - 2011	Rotational Motion.	s & p-Block Elements (Boron & Carbon Family)	Circle	SHM and Wave Motion.	Chemical Thermodynamics	Indefinite & Definite integration
08	30 - 10 - 2011	Gravitation.	Organic Nomenclature & Basic Principles-Isomerism and Practical organic Chemistry	Parabola, Ellipse & Hyperbola	Electrostatics; Capacitors.	Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory	Point, Straight Line & Circle
09	13 - 11 - 2011	Fluid Mechanics.	General organic Chemistry (GOC)	Binomial Theorem and Principle of Mathematical Induction	Current electricity.	Chemical Kinetics, Electrochemistry and Solution	Parabola, Ellipse & Hyperbola
10	27 -11 - 2011	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9	Syllabus of Test # 6,7,8,9
11	11 - 12 - 2011	Thermal Physics - I (Thermal Expansion, Calorimetry & Heat Transfer).	Chemical Thermodynamics & Thermochemistry	Complex Numbers	Magnetic effect of current and Magnetism.	Transition Element and Metallurgy	Area under the curve and Differential Equations
12	25 - 12 - 2011	Thermal Physics - II (KTG & Thermodynamics).	Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory	Three Dimensional Geometry, Mathematical Reasoning, Statistics	Electromagnetic Induction (EMI), EM Waves, Alternating current .	Alkane, Alkene, Alkyne, Aromatic Hydrocarbon	Vectors and Three Dimensional geometry
13	08 - 01 - 2012	SHM.	Alkane & Alkene	Permutation & Combination and Probability	Ray optics and optical Instruments, Wave optics (Nature of Light & Interference).	Organic Compound Containing Halogen, Oxygen and Nitrogen, Polymers	Complex Numbers, Mathematical Reasoning, Statistics
14	22 - 01 - 2012	Wave Motion.	Alkyne, Aromatic Hydrocarbon	Functions, Limits & Differentiation	Modern Physics and Nuclear Physics; Practical Physics, Electronics and Principle of Comunication.	Surface Chemistry, Purification and characterisation of organic compounds, Biomolecules, Chemistry in Everyday Life and Principles related to practical chemistry.	Permutation & Combination and Probability
15	05 - 02 - 2012	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14	Syllabus of Test # 11,12,13,14

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