



Regular Program Course Planning (Class 8th)

Academic Session 2016-17

PHYSICS

Course Name : Mission

Course Commencement : 4th April 2016

Course Completion Last Week of Jan.'17

S.No	Topic Name	Total Lectures	Lecture No.	Sub Topic Name	No. of DPPs	Misc. DPP's
1	Force	3	L-1	Effects of force, Definition of force, Balanced and Unbalanced forces, Resultant force.	2	1
			L-2	Types of force, Contact and non-contact forces(different types of force).		
			L-3	DPP/ module discussion.		
2	Pressure	4	L-4	Pressure, Units of pressure, Some facts involving pressure, Atmospheric pressure.	3	1
			L-5	Pressures exerted by fluids, Role of atmospheric pressure in our day to day life, Manometer.		
			L-6	Pascal's law, application of Pascal's law, Examples of hydraulic machines .		
			L-7	DPP/ Module discussion.		
3	Friction	3	L-8	Introduction-Friction, Causes of friction, Types of friction.	3	1
			L-9	Advantages and disadvantages of Friction, Friction is an necessary evil. Reduction of friction. Friction due to liquids and gases.		
			L-10	DPP/ module discussion.		
4	Sound Wave	6	L-11	Wave Motion, Classification of waves- differences between different classes, Sound wave.	5	2
			L-12	Propagation of sound waves-experimental verification of mechanical behaviour of sound waves, Wave terminology,		
			L-13	Characteristics of sound waves, Difference between loudness and intensity of sound, Speed of sound-affecting factors.		
			L-14	Audible, Ultrasonic and Infrasonic waves, Reflection of sound-Echo.		
			L-15	Relation between speed of sound, time of hearing echo and distance of reflecting body. Music and noise, Hearing impairment, Measure of intensity of sound, The human ear.		
			L-16	DPP/module discussion		
5	Electricity	4	L-17	Electricity, Electric charge-types, properties, units, Charging of a body, flow of charges. Earthing; Conductors, Insulators and Semiconductors.	2	1
			L-18	Electric current, Electric circuit-symbols of components, Electrical conductivity.		
			L-19	Chemical effects of current, Magnetic effect of current, Danger of electricity Safety Measures in using electricity.		
			L-20	DPP/module discussion.		
6	Light	3	L-21	Optics, Sources of Light, Medium of Light, Rectilinear propagation of Light, Behaviour of light at interface of two media, Characteristics of light.	3	1
			L-22	Reflection of light, Laws of Reflection, Types of Reflection, Images.		
			L-23	Mirror, Plane Mirror, Characteristics of Image formed by a Plane Mirror, Lateral inversion , Formation of multiple images by two plane mirrors,		
7	Light	4	L-24	Periscope, Kaleidoscope, Human Eye, Structure and Working of Human Eye.	3	1
			L-25	Defects of vision and their correction, Short Sightedness, Far Sightedness, Presbyopia, Astigmatism.		
			L-26	Care of the eyes, Braille system, Non-optical aids and optical aids.		
			L-27	DPP/ module discussion		
8	Earthquakes	3	L-28	Structure of earth, Earthquake, Plate tectonics Occurrence of earthquake.	1	1
			L-29	Seismograph, Seismogram, Richter scale, Hazards of earthquake, Earthquake data, Earthquake preparedness, Safety measures at the time of earthquake.		
			L-30	DPP/ module discussion.		
9	Rain, Thunder and lightning	2	L-31	Rain, Charged clouds, Lightning, Lightning conductors.	1	
			L-32	DPP/ module discussion		
10	Night Sky	4	L-33	The Night Sky, Astronomical distances, The stars, Galaxies, The Milky-Way Galaxy, Constellation.	5	2
			L-34	The solar system, Sun, Planets, Asteroids, Comets, Meteors.		

		L-35	Motion of earth, Satellite, Natural Satellite (Moon).		
		L-36	DPP / module discussion		



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Academic Session 2016-17

CHEMISTRY

Course Name : Mission

Course Commencement : 4th April 2016

Course Completion : Last Week of Jan.'17

S.No	Topic Name	Total Lectures	Lecture No.	Sub Topic Name	No. of DPPs	Misc. DPP's
1	Synthetic Fibre and Plastics	7	L-1	Synthetic polymers, polymerisation, Fibres, Types of fibres : Natural fibres; synthetic fibres and semi -synthetic fibres.	2	1
			L-2	Synthetic clothing material -Rayon, Nylon, Polyester, Acrylic, Spandex, Koroseal, Blended Fibres.		
			L-3	Advantages and disadvantages of synthetic fabrics, Activity-(1) to study the structure of various Fibres, Activity-(2) to determine the effect of flame on different Fibres, Activity-(3) to determine relative tensile strength of different Fibres.		
			L-4	Plastics, Types of plastics, General properties of plastics.		
			L-5	General characteristics of Synthetic Plastics & Fibres. Uses of plastics.		
			L-6	Types of waste Problems associated with plastic disposal and their solutions.		
			L-7	Module DPP discussion.		
2	Metals and Non - Metals	7	L-8	Introduction, Occurrence of metals and non -metals, Physical properties of metals.	2	1
			L-9	Physical properties of non -metals, Chemical properties of metals, Activity-(1) test the nature of rust.		
			L-10	Chemical properties of metals, Reactivity Series, Activity-(2) related to displacement reaction.		
			L-11	Experiment-to show that rusting of iron requires both air and water, Uses of common metals.		
			L-12	Uses of noble metals, Chemical properties of non -metals.		
			L-13	Activity (3) to show the nature of non-metallic oxides, Uses of non -metals.		
			L-14	Module Dpp discussion.		
3	Coal and Petroleum	6	L-15	Natural resources, Types of natural resources, Fossil fuels.	2	
			L-16	Coal -Composition, Deposits, Formation, Destructive distillation and uses.		
			L-17	Petroleum -Deposits, Formation.		
			L-18	Refining, Fractional distillation.		
			L-19	Petroleum gas, Natural gas, Uses and Conservation of fossil fuels.		
			L-20	Module Dpp discussion.		
3	Combustion and Flame	9	L-21	Combustion, Combustible and non combustible substances, Products of combustion and Types of combustion, Activity-(1) to demonstrate that burning of magnesium in air is a chemical reaction.	3	2
			L-22	Conditions necessary for combustion. Activity-(2) to show that air is essential for burning, Activity-(3) to show that attainment of ignition temperature is essential for burning, Explosion, Flame, Types of flame.		
			L-23	Combustion of a wax candle, Zones of a candle flame, Activity-(4) to show the presence of wax vapour in dark inner Zone.		
			L-24	Activity-(5) to show that luminous zone of the candle flame contains unburnt particles of carbon, Activity-(6) to show the presence of non-luminous flame of a burning candle, Activity-(7) to show that non-luminous flame is the hottest part of candle flame, Spherical flame.		
			L-25	Fuels, Types of fuels, Characteristics of fuels, Characteristics of an ideal fuel.		
			L-26	Burning of fuels lead to harmful products, Some commonly used fuels(hydrogen, CNG, LPG),		
			L-27	Green house effect.		
			L-28	Acid Rain, Sun as source of energy.		
			L-29	Module DPP discussion.		



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Academic Session 2016-17

MATHEMATICS

Course Name : Mission

Course Commencement : 4th April 2016

Course Completion : Last Week of Jan'17

S.No	Topic Name	Total Lectures	Lecture No.	Sub Topic Name	No. of DPPs	Misc. DPP's
1	Rational Number	3	L-1	Classification of numbers, Identification of Prime Number, Rational numbers, Lowest form of rational numbers, Representation of rational number on real line, Absolute value of rational number	1	1
			L-2	Comparing of two rational number, addition, subtraction of rational number and their properties(i.e. closure, commutative, associative and distributive)		
			L-3	Multiplication and division of rational number, rational number between two rational number		
2	Squares and Square roots	4	L-4	Square, perfect squares, properties	1	
			L-5	Pattern of squares, Method of finding square number(i)Column method (ii)Diagonal method		
			L-6	Square roots, methods of finding square roots (a) prime factorization		
			L-7	(b)Long division method ©Successive subtraction		
3	Cubes and cube roots	3	L-8	Cubes, perfect cubes, properties of cube numbers,	1	1
			L-9	Method of finding of cube by column method, Cube roots, method of finding the cube roots through pattern (b)using unit digit		
			L-10	(c) prime factorization, cube roots of negative numbers		
4	Linear equation in one variable	2	L-11	Equation, Linear equation, Linear equation in one variable, rules for solving linear equation in one variable	1	
			L-12	Word problems		
5	Quadrilateral	4	L-13	Quadrilateral, Convex and Concave Quadrilateral, Angle Sum property of quadrilateral, Types of Quadrilateral	1	1
			L-14 & 15	Properties of Parallelogram and theorems		
			L-16	Special type of Parallelogram(Rectangle, Rhombus and Square) and their properties		
6	Construction	2	L-17	Construction of quadrilateral when (i)1 diagonal and 4side (ii) 2 diagonal and 3side (iii) 4side and 1angle (iv) 3side and 2 included angle (v) 3 angle and 2 included side	0	
			L-18	Construction of special types of quadrilateral (parallelogram, rectangle, rhombus, square)		
7	Playing With Numbers	2	L-19	Number In general form, Divisibility Test	0	
			L-20	Alpha Numeric Puzzles, Puzzles		
8	Algebraic expressions	2	L-21	Various definitions (Literals, Constant, Variable, Algebraic Expression), Terms, factors and coefficients, Types of Algebraic expressions, Like and unlike terms, degree of an algebraic expressions, Addition, Subtraction, Multiplication of algebraic expressions.	1	1
			L-22	Division of Polynomial		
9	Algebraic Identities	2	L-23	Algebraic Identities and their applications	1	
			L-24	Factorization		
10	Exponents and power	2	L-25	Exponential notation, positive and negative integral exponent of rational number, laws of exponent	1	
			L-26	Problem based on exponents, Uses of exponents(a) to express very small and large no. in standard form (b) comparing of very large and small no.		
11	Percentage and its application	4	L-27	Percentage, Conversion of Decimal No., Fraction in to Percentage and Vice versa, Percentage Increase or Decrease	1	1
			L-28	Problems based on percentage		
			L-29	Various Terms {CP, SP, MP, Profit, Loss, Discount and VAT}, Problem based on SP, CP, Profit and Loss		
			L-30	Problems Based on Discount and VAT, Problem based on successive discount		
12	SI and CI	2	L-31	Terms{Principal, Amount, Time Period, Rate of interest, Interest }, SI and CI, Difference between SI and CI	1	1
			L-32	Problems based on CI, Growth and depreciation		

13	Direct and inverse variation	2	L-33	Direct and Inverse variation, Work and time, Pipes and Cistern	1	
			L-34	Speed, Average Speed, Relative Speed, Problem based on Trains		
14	Visualising Solid Shape	2	L-35	2D(plane figure)-3D(solid figure) figure, types of solid prism, pyramid, sphere	0	
			L-36	Polyhedron, Special types of polyhedron, Eulers formula, Nets of 3D shapes, Views of 3D shapes		
15	Mensuration	3	L-37	Area of various Plane figure(triangle, quadrilateral, polygon, trapezium, parallelogram, rectangle, Square, Rhombus , circle)	1	1
			L-38	Solid figures, surface area of cube, cuboid, cylinder		
			L-39	Volume of cube, cuboid, cylinder		
16	Introduction to graph	1	L-40	Coordinate system, Rectangular coordinate, Plotting the points, Plotting of graph, Reading of Graphs	1	
17	Statistics	3	L-41	Introduction, Data, types of data, Presentation of data : (1)tabular method{FDT, GFDT	1	1
			L-42	(2)graphical method (a)bar graph (b) histogram		
			L-43	(c)Pie Chart		
18	Probability	1	L-44	Experiment, types of experiment, Probability and problem based on it(cards, dice, coin)	1	



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Academic Session 2016-17

BIOLOGY

Course Name : Action

Course Commencement : 4th April 2016

Course Completion : Last Week of Jan.'17

S.No	Topic Name	Total Lectures	Lecture No.	Sub-topic(s) Name	No. of DPPs	Misc. DPP's
1.	Crop Production	7	L-1	Introduction, Crop plants and crop seasons, types of crop plants	1	
			L-2	Basic practices of crop production (i) Preparation of soil (ii) Sowing of seed		
			L-3	Application of fertilizers and manure, crop rotation		
			L-4	Irrigation, weeding, weed removal.		
			L-5	Harvesting, Storage, Food from animals		
			L-6	DPP discussion		
			L-7	Activities		
2.	Micro-Organism	10	L-8	Major group of micro organism (i) Bacteria (ii) Fungi (iii) Algae	1	1
			L-9	Protozoa, Viruses		
			L-10	Where do microorganism live Useful microorganism (i) Making curd (ii) Making cheese (iii) Making bread and food items		
			L-11	1. Commercial -uses 2. In Agriculture 3. Sources of food		
			L-12	Role of microorganisms in decomposition.		
			L-13	Decomposition in sewage treatment		
			L-14	Preparation of Antibiotics vaccines Harmful microorganisms		
			L-15	Disease causing microorganisms in humans. Disease causing in animals to plants		
			L-16	Food preservation, methods of food preservations		
			L-17	DPP discussion.		
3.	Conservation of Biodiversity	5	L-18	Introduction Biodiversity (2) Why conserve biodiversity (3) Causes of loss of biodiversity	1	
			L-19	Causes of deforestation, Consequences of deforestation (3) Recycling of paper and reforestation as steps to reduce deforestation.		
			L-20	Flora and fauna, Biosphere, ecosystem, endemic species, extinct & endangered species, red data book.		
			L-21	1. Protected Areas (i) National parks (ii) Wild life sanctuary (iii) Biosphere Reserve (iv) Project Tiger		
			L-22	DPP discussion		
4.	The Cell	7	L-23	1. Introduction 2. Discovery of cell 3. Organisation of cell in organisms 4. Variety in cell numbers shape and size, cells in an organism v/s Bricks in a building	1	
			L-24	1. Cell structures and functions 2. Cell wall		
			L-25	1. Cell membrane		
			L-26	1. Cytoplasm 2. Nucleus		
			L-27	Cell organelles		
			L-28	1. Comparison between plant and animal cell 2. Comparison between prokaryotic and Eukaryotic cell		
			L-29	DPP Discussion		
5.	Reproduction & Adolescence	10	L-30	1. Introduction 2. Modes of reproduction 3. Differences between asexual and sexual reproduction 4. Modes of Asexual reproduction	1	1
			L-31	1. Sexual reproduction in animals 2. Types of fertilization 3. Oviparous & Viviparous animals		

			L-32	1. Sexual reproduction in humans. 2. Male reproductive organ. 3. Female reproductive organ.		
			L-33	1. Fertilization 2. Development of embryo 3. Placenta 4. Test Tube Baby		
			L-34	1. Cloning 2. Metamorphosis 3. Determination of sex of baby.		
			L-35	1. Hormones and endocrine glands		
			L-36	1. Adolescence and puberty 2. Changes at puberty 3. Secondary sexual characteristics		
			L-37	Role of hormones in metamorphosis in insects & frogs.		
			L-38	1. Reproductive phase of life in humans 2. Reproductive health		
			L-39	DPP Discussion.		
6.	Pollution of Air and water	6	L-40	Pollution of air, sources of air pollutions	1	
			L-41	Effects of air pollutions, 1 Global warming 2. Acid rain		
			L-42	3. Depletion of ozone 4. Health problems, prevention of air pollutions		
			L-43	1. Pollution of water 2. Sources of water pollution 3. Effects of water pollution		
			L-44	1. Prevention of water pollution 2. Potable water (i) Purification of water in treatment plants. (ii) Purification of water at home		
			L-45	Case studies & DPP Discussion		



Regular Program Course Planning (Class 8th)

Academic Session 2016-17

ENGLISH

Course Name : Action & Mission

Course Commencement : 4th April 2016

Course Completion : Last Week of Jan'17

S.No	Topics Name	No. of Lectures	No. of DPPs
1	Noun	1	1
2	Pronoun	2	1
3	Verb forms	2	1
4	Notice	1	1
5	Spoken English Activity	2	1
6	One word Substitution	2	1
7	Adjective	1	1
8	Adverb	1	1
9	Informal Letter Writing	1	1
10	Spelling	2	1
11	Spoken English Activity	2	1
12	Tense	3	1
13	Diary Writing	1	1
14	Passive Voice	3	1
15	Spoken English Activity	2	1
16	Comprehension	2	1
17	Integrated Grammar	3	
18	SA-2		1
19	Preposition	2	1
20	Determiners + email	2	2
21	Synonym + Antonym	3	1
22	Conjunction+ formal letter	2	2
23	Spoken English Activity	2	1
24	Idioms & Phrases	4	1
25	Reported Speech	2	1
26	Modals	1	1
27	Proverbs	1	1
28	Spoken English Activity	2	1
29	Subject Verb Concord	2	1
30	Conditionals	1	1
31	article writing	1	1
32	Spoken English Activity	2	1
33	Integrated Grammar	2	1



Regular Program Course Planning (Class 8th)

Academic Session 2016-17

Mental Ability

Course Name : Mission

Course Commencement : 4th April 2016

Course Completion : Last Week of Jan.'17

S.No	No. of Classes	Topic(s) Name	Lecture No.	Sub-topic(s) Name	No. of DPPs	Misc DPP's
1	2	Number Series	L-1, 2	Different type of Number Series.	1	
2	1	Alphabet Series	L-3	Different type of Alphabet Series, Alpha-Numeric Series.	1	1
3	1	Letter Repeating Series	L-4	Different type of Letter Repeating Series.		
4	1	Missing term in figure	L-5	Missing term in figure.		
5	1	Mathematical operations	L-6	Application of BODMAS, Problems Solving by Substitution, Interchange of signs & Numbers, Deriving the appropriate conclusions.	1	
6	1	Alphabet Test	L-7	Alphabetical Order, Letter-word Problems, Alphabetical Quibble, Word Formation by Unscrambling Letters and Word Formation using letters of a given Word.	1	1
7	1	Coding-Decoding	L-8	Letter-Letter Coding, Letter-Number Coding, Substitution Coding, Puzzle Based Coding & Column Coding.	1	
8	1	Direction Sense Test	L-9	Direction Sense & Coordinates	1	
9	1	Sitting arrangement	L-10	Linear Seating Arrangement and Circular Seating Arrangement.	1	1
10	1	Ranking & Ordering-Test and Logical Sequence of Words	L-11	Number Quibble, Alphabetical Quibble, Alpha-Numeric Quibble, Ranking Test & Ordering Test & Logical Sequence of Words.	1	
11	1	Blood Relations	L-12	Direct Relationship, Relation Puzzle and Coded Relation	1	
12	1	Puzzle Test	L-13	Classification type Puzzles, Comparison Type Puzzles, Sequential Order of Things, Selection Based on given Conditions, Family-Based Puzzles and Miscellaneous Puzzles.	1	1
13	1	Venn Diagram	L-14	Simple Venn Diagram and Logical Venn Diagram	1	
14	1	Analogy & Pyramid Test	L-15	Kinds of Relationships, Word Analogy, Number Analogy and Alphabet Analogy.	1	
15	1	Classification	L-16	Classification of Word, Classification of Letter and Classification of Number	1	1
16	1	Dice Test	L-17	Different type of Dice test.	1	
17	1	Non-Verbal Series, Analogy and Classification	L-18	Different types of Non-Verbal Series ,Analogy and Classification .	1	
18	2	Miscellaneous	L-19, 20	Mirror & Water Image of Numbers, Letters, Words, Figures, Paper Folding and Paper Cutting, Counting number of figures generated due to partition lines, Figure , Completion, Figure Formation and Different types of embedded figure.	1	1



Regular Program Course Planning (Class 8th)

Academic Session 2016-17

SOCIAL SCIENCE

Course Name : Mission

Course Commencement : 4th April 2016

Course Completion : Last Week of Jan.

S.No	Topic Name	Total Lectures	Lecture No.	Sub Topic Name	Misc. DPP's	No. of DPPs							
1	How, When and Where	2	L-1	Importance of dates ,Periodisation	1	1							
			L-2	Sources of History and Surveys									
2	Resources, Types and Development	2	L-3	Types and Development, Types of Resources		1	1						
			L-4	Use of Resources . Sustainable Development									
3	The Indian Constitution	2	L-5	Constitution : – Meaning, Need, Key Features – Federal and Parliamentary Fundamenta			1	1					
			L-6	Rights and Directive Principles of State Policy									
4	From Trade to Territory	3	L-7	Arrival of East India company,				1	1				
			L-8	Battle of Plassey Company Rule									
			L-9	Expands, setting up of New Administration.									
5	Ruling the Country Side	3	L-10	The company becomes the diwan, the problems : related with Agriculture,					1	1			
			L-11	Mahalwari and Ryotwari.,									
			L-12	Crops for Europe, The "Blue rebellion" and after.									
6	Land, Soil, Water and Natural veg. and Wildlife Resources	2	L-13	Land, Soil and water resources,						1	1		
			L-14	Natural vegetation and wildlife, Forest types.									
7	Understanding Secularism	2	L-15	Religious discrimination, Indian constitution and secularism,							1	1	
			L-16	Indian secularism and democratic societies of world.									
8	Tribals, Dikus and the vision of a golden age	2	L-17	Tribal groups, Impact of colonial rule,								1	1
			L-18	A closer look.									
9	Mineral and Power Resource	2	L-19	Minerals, Types of minerals, Extraction, Distribution,	1								1
			L-20	Conservation, Power resources, Non-conventional sources.									
10	When people rebel	2	L-21	Policies and the people, A mutiny becomes a popular rebellion		1							1
			L-22	The rebellion spreads, Aftermath.									
11	Why do we need a parliament	2	L-23	People and their representatives,			1						1
			L-24	The role of the parliament, The people in parliament.									
12	Agriculture	2	L-25	Economic activities, Types of farming, Major Crops,				1					1
			L-26	Agricultural Development									
13	Colonialism & the story of an imperial city	3	L-27	Cities under colonial rule					1				1
			L-28	The making of new Delhi									
			L-29	Inside the old city									
14	Industries	2	L-30	Classification of industries, Factors affecting location of industries, Industrial system, distribution of major industries,						1			1
			L-31	Tata iron and steel company, Jamshedpur, Cotton textile industry, Information technology.									
15	Weavers, Iron smelters and factory owners	2	L-32	Indian textiles and the world market, The sword of Tipu sultan and wootz steel,							1		1
			L-33	Iron and steel factories.									
16	Understanding Laws	1	L-34	Do laws apply to all in india during British period,Framing of New Laws.								1	1
17	Civilising the Native, Educating the nation	2	L-35	British and education, Education for commerce, Local Schools, routines and rules,									
			L-36	The agenda for a national education.									

18	Judiciary	2	L-37	Role of Judiciary, Independent Judiciary, Structure of courts,		1
			L-38	Branches of the legal system, Access to the courts.		
19	Women, Caste and Reform	2	L-39	Present and Past, Working towards change, Caste and social reform,		1
			L-40	Organising for reform.		
20	Understanding our Criminal system	2	L-41	Role of the police, public prosecutor and judge,	1	1
			L-42	Fair Trial.		
21	Human Resources	2	L-43	Distribution of population, factors, population change,		1
			L-44	Population composition, Population pyramid		
22	Understanding Marginalisation	2	L-45	Meaning of Marginalisation, Meaning of adivasis ?,		1
			L-46	Minorities and Marginalisation.		
23	The Changing world of Visual Arts	2	L-47	Imperial paintings, Picturesque,	1	1
			L-48	New form of Imperial Art and the search for a National Art		
24	Confronting Marginalisation	1	L-49	Invoking Fundamental rights, Laws of the marginalised, Rights of dalits and adivasis : Acts of Protection.		1
25	The Making of the National Movements	3	L-50	From 1890 – 1947 & Gandhian Era		1
			L-51	From 1890 – 1947 & Gandhian Era		
			L-52	From 1890 – 1947 & Gandhian Era		
26	Water and the people of Chennai	1	L-53	Water problem, example of Chennai, Water the Fundamental right to life, Public facilities, The Government's role, Water supply to Chennai : Is it available to all ?, In search of alternatives.	1	1
27	India After Independence	2	L-54	A new and divided nation, A constitution is written,		1
			L-55	How were states to be formed?		
28	Law and Social Justice	1	L-56	Worker's worth?, Safety Laws, New Laws, Conclusion.		1