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REGIONAL OFFICE: TINSUKIA

SPLIT UP SYLLABUS CLASS X

ENGLISH SPLIT-UP SYLLABUS OF CLASS X (2014-15) 1st Term

S.No	Month	Topic	No. of Periods
1	April	1. Two Gentlemen of Verona (Prose)	7
		2. The Frog and the Nightingale (Poem)	7
		3. Grammar(Determiners, Tenses) Writing Skills Informal letter	7
		4.Novel(Helen Keller (1,2 & 3 Chapters)	7
2	May & June	1. Mrs Pakletide's Tiger(Prose)	5
		2. The Mirror (Poem)	2
		3. Grammar(Verb Agreement)	3
		4.Novel(Helen Keller (4 & 5 Chapters)	4
3	July	1.Health and Medicine (MCB)	8
		2. Dear Departed (Drama)	7
		3. Grammar (Non-finites and Relatives)	4
		4. Writing Skills (E-mail,Message,Diary Entry)	5
		5.Novel(Helen Keller (6,7 & 8 Chapters)	5
4	August	1. The Letter (Prose)	6
		2. Education (MCB)	8
		3.Not Marble, nor the Gilded Movements (Poem)	3
		4. Grammar (Connectors and Conditionals)	3
		5. Writing Skills (Dialogue Writing and Debate)	4
		6.Novel(Helen Keller (9,10 & 11 Chapters)	4
5	September	1. Science (MCB)	8
		2. Writing Skills(Advertisement and Process Descrption)	2
		3.Novel(Helen Keller (12,13 & 14 Chapters)	4

ENGLISH SPLIT-UP SYLLABUS OF CLASS X (2014-15) 2nd Term

1	October	1. A Shady Plot (Prose)	3
		2. Ozymandias (Poem)	4
		3. Julius Caesar (Drama)	4
		4. Grammar(Comaparision,Avoiding repetatition) Writing Skill Formal Letter	4
		5.Novel(Helen Keller (15 &16 Chapters)	3
2	November	1. Environment (MCB)	7
		2. Patol Babu (Prose)	4
		3. The Rime of the Ancient Mariner (Poem)	4
		4. Grammar(Nominilization,Modals)	3
		5. Writing Skills (Formal Letters,Report Writing, Poster Making)	3
		6.Novel(Helen Keller (17 &18 Chapters)	3
3	December	1. Virtually True (Prose)	6

		2. Travel and Tourism (MCB)	5
		3. Grammar(Active ,Passive Voice,Reported Speech)	4
		4. Writing Skills (Article Writing , Notice Writing)	4
		5.Novel(Helen Keller (19 & 20 Chapters)	4
4	January	1. National Integration (MCB)	7
		2. Snake (Poem)	3
		3. Grammar(Pre-positions)	4
		4. Writing Skills (Diary Entry,Formal Letter (Editor))	4
		5.Novel(Helen Keller (21,22 & 23 Chapters)	4

Note : Suggested break-up of units for Grammar is for the purpose class room teaching only - NOT FOR TESTING (refer to page no.83)

SPLIT UP SYLLABUS (2014-15) SCIENCE CLASS X TERM I

S.No	Month	Branch of Science	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No.of Periods
1	April	Physics	12. Electricity	Electric current, potential difference and electric current. Ohm's law; Resistance, Resistivity, Factors on which the resistance, of a conductor depends. Series combination of resistors, parallel combination of resistors and its applications in daily life	8	2	10
		Chemistry	1.chemical reactions nature and behavior	Chemical reactions : Chemical equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions : combination, decomposition, displacement, double displacement,	6	2	8
		Biology	6. Life process	Living Being. Basic concept of nutrition, respiration, transport and Excretion in plants and animals.	4	2	6
2	May & June	Physics	12. Electricity (Contd.)	Heating effect of electric current and its applications in daily life. Electric power, Interrelation between P, V, I and R	3	1	4
		Chemistry	1.chemical reactions nature and behavior (Contd.)	Precipitation, neutralization, oxidation and reduction.	2	1	3
		Biology	7. Control and co-ordination in animals and	Tropic movements in plants(Introduction)	2	1	3

			plants(Introduction)				
3	July	Physics	13.Magnetic Effects of Currents	Magnetic field, field lines, field due to a current carrying conductor, field due to current carrying coil or solenoid; Force on current carrying conductor, Fleming's Left Hand Rule. Electromagnetic induction	8	2	10
		Chemistry	2.Acids, bases and salts	Their definitions in terms of furnishing of H+ and OH– ions, General properties, examples and uses, concept of pH scale(Definition relating to logarithm not required), importance of pH in everyday life	6	1	7
		Biology	7. Control and co-ordination in animals and plants	Introduction to plant hormones; Tropic movements in plants control and co-ordination in animals : nervous system; voluntary, involuntary and reflex action	6	2	8
4	August	Physics	13.Magnetic Effects of Currents (Contd.)	Induced potential difference, Induced current. Fleming's Right Hand Rule, Direct current. Alternating current: frequency of AC. Advantage of AC over DC. Domestic electric circuits	6	2	8
			14.Sources of energy	Sources of energy : Different forms of energy, conventional and non-conventional sources of energy	2	1	3
		Chemistry	2. Acids, bases and salts (Contd.)	preparation and uses of sodium hydroxide, Bleaching powder, Baking soda Washing soda and Plaster of Paris	4	1	5
		Chemistry	3.Metals and non metals	Properties of metals and non-metals, reactivity series,	2	1	3
		Biology	7. Control and co-ordination in animals and plants	Chemical co-ordination: animal hormones.	2	1	3
5	September	Physics	14.Sources of energy (Contd.)	Fossil fuels, Solar Energy, Bio Gas, Wind, Water and Tidal energy, Nuclear energy, Renewable versus Nonrenewable sources.	4	1	5
		Chemistry	3. Metals and non metals (Contd.)	Formation and properties of ionic compounds, basic metallurgical processes, corrosion and its prevention.	3	1	4
		Biology /Chem/Phy		Revision for SA1	4	2	6

SPLIT UP SYLLABUS (2014-15) SCIENCE CLASS X (TERM II)

6	October	Physics	10.Light:Reflection & Refraction	Reflection of light by curved surfaces, Images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification	4	1	5
		Chemistry	4. Carbon & itsCompounds	Carbon compounds : Covalent bonding in carbon compounds. Versatile nature of carbon. Homologous series. Nomenclatureof carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes and alkynes),	4	1	5
		Biology	8. Reproduction	Reproduction in animals and plants (asexual and sexual),	5	1	6
7	November	Physics	10.Light:Reflection & Refraction (contd.)	Refraction ,Laws of refraction, Refractive index,Refraction of light by spherical lenses,Image formedf by spherical lenses Lens Formula,(Derivation not required),Magnification ,Power of a lens.	6	1	7
		Chemistry	4. Carbon & its Compounds (Contd.)	difference between saturated hydrocarbons and unsaturated hydrocarbons. Chemical properties of carboncompounds (combustion,oxidation, addition and substitution reaction). Ethanol and Ethanoic acid (only properties and uses), soaps and detergents.	5	1	6
		Biology	8. Reproduction (contd.)	reproductive health-need and methods of family planning, Safe sex vs HIV/AIDS.Child bearing and women,s health.	3	1	4
		Biology	9. Heredity and Evolution	Heredity; Accumulation of variations,Mendel's contribution- Laws for inheritance of traits: Sex determination.	4	1	5
8	December	Physics	11. Human eye & Colourful World	Functioning of a lens in human eye, Defects of vision and their correction, Applications of spherical mirrors & lenses.	4	1	5
		Chemistry	5. Periodic classification of elements	Need for classification, Modern periodic table,	5	1	6
		Biology	9. Heredity and Evolution (Contd.)	Brief introduction Basic concepts of evolution	5	1	6
9	January	Physics	11. Human eye & Colourful World (contd.)	*Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life.*	5	1	6
		Chemistry	5. Periodic classification of elements (contd.)	gradation in properties, valency, atomicnumber, metallic and non-metallic properties	6	2	8
		Biology	9. Heredity and Evolution (Contd.)	Basic concepts of evolution (Contd.)	7	2	9

		Biology	15. Our environment	Eco-system, Environmental problems, Ozone depletion, waste production and their solutions. Biodegradable and non-biodegradable substances	2	0	2
10	February	Physics	**Revision**	Physics & Biology	5	1	6
		Chemistry	**Revision**	Chemistry & Biology	6	0	6
		Biology	15. Our environment (Contd.)	Biodegradable and non-biodegradable substances	2	0	2
		Biology	16. Management of natural resources	Conservation of natural resources, Management of natural resources, Conservation and judicious use of natural resources. Forest and wild life, coal and petroleum conservation. Examples of people's participation for conservation of natural resources. Regional environment: Big dams: advantages and limitations; alternatives, if any. Water harvesting. Sustainability of natural resources.	6	2	8

SCIENCE CLASS X Practical							
			First Term				
1	April	Physics	5. Ohm's Law verification	To study the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plot a graph between V and I			1
		Chemistry	1. To find the pH	To find the pH of the following samples by using pH paper/universal indicator:			1
		Biology	8. To observe the structure of stomata	To prepare a temporary mount of a leaf peel to show stomata. (Demonstration and Hands on Experiment)			2
2	July	Physics	6. To verify Law of Series combination of resistances	To determine equivalent resistance of 2 resistors when connected in series.			1
		Chemistry	2. To study the properties of acids and bases	To study the properties of acids and bases (HCl & NaOH)			2
		Biology	9. Light is essential for photosynthesis	To show experimentally that light is necessary for photosynthesis.			1
3	August	Physics	7. To verify Law of Parallel combination of resistances	To determine equivalent resistance of 2 resistors when connected in parallel.			1
		Chemistry	3. Classification of chemical reactions	To perform,classify and observe the chemical reactions			2

			4. Reactivity	To observe the action of Zn, Fe, Cu and Al			
			series	metals			
		Biology	10. Release of CO_2 during Respiration	To show experimentally that carbon dioxide is given out during respiration.			1
			Second Term				
4	October	Physics	4. focal length of concave mirror & convex lens	To determine the f of concave mirror & convex lens by obtaining image of distant object			1
		Chemistry	1. properties of acetic acid	To study the following properties of acetic acid			2
		Biology	6. Reproduction in organisms	To study (a) binary fission in Amoeba, and (b) budding in yeast with the help of prepared slides			1
5	November	Physics	5. Refraction through a glass slab	Refraction through a glass slab for different angles of incidence			2
		Chemistry	2. saponification	To study saponification reaction for preparation of soap			1
		Biology	10. Reproduction in organisms	To identify the different parts of an embryo of a dicot seed (Pea, gram or red kidney bean).			1
6	December	Physics	7. Refraction through a glass prism	To trace the path of light through a glass prism			1
		Chemistry	3. To compare cleaning capacity of a sample of soap	To study the comparative cleaning capacity of a sample of soap in soft and hard water.			1
		Biology	9. Evidences of Evolution	To study homology and analogy with the help of models/charts of animals and models/charts/specimens of plants.			2
7	January	Physics	8. Nature of image of a convex lens.	To find the image distance for varying object distances in case of convex lens and to draw ray digrams to show the nature of image formed.			1
		Chemistry	revision	revision			1
		Biology	revision	revision			1
8	February	Physics	Practicals revision with test	Practical's revision with test			1
		Chemistry	Practicals revision with test	Practical revision with test			1
		Biology	Practicals revision with test	Practical revision with test			1

CLASS-X TERM-I (APRIL TO SEPTEMBER 2014-15) SOCIAL SCIENCE

S.NO	MONTH	NAME OF THE LESSONS	No. of Periods	REMARKS
1	APRIL/MAY	HISTORY : INDUSTRIALISATION 1850'S-1950'S OR URBANISATION AND URBAN LIVES OR TRADE AND GLOBALISATION GEOGRAPHY: 1. RESOURCES AND DEVELOPMENT POL. SC: 1. POWER SHARING MECHANISM IN DEMOCRACY 2. FEDERALISM	12 5 4 4	ANY ONE
2	JUNE/JULY	HISTORY: PRINT CULTURE AND NATIONALISM OR HISTORY OF NOVEL ECONOMICS: DEVELOPMENT STORY GEOGRAPHY: 1. FOREST AND WILD LIFE RESOURCES POL. SC: 1. WORKING OF DEMOCRACY DEMOCRACY AND DIVERSITY	**10** **8** **6** **5** **4**	ANY ONE
3	AUGUST	GEOGRAPHY: 1. WATER RESOURCES 2. AGRICULTURE ECONOMICS: SECTORS OF INDIAN ECONOMY	**5** **6** **12**	
4	SEPTEMBER	POL SCI: 1. GENDER, CASTE AND RELIGION DISASTER MANAGEMENT : SAFE CONSTRUCTION PRACTICE and SHARING RESPONSIBILITY (Only Through Project work & Assignment) REVISION FOR SA-1	**5** **10**	

CLASS-X, TERM-II (OCTOBER TO MARCH 2014-15)

S.NO	MONTH	NAME OF THE LESSONS	No. of Periods	REMARKS
5	OCTOBER	HISTORY : 1.NATIONALISM IN EUROPE (OR) NATIONALIST MOVEMENT IN INDO-CHINA POL. SC: 1. POPULAR STRUGGLES AND MOVEMENTS.	12 6	ANY ONE
6	NOVEMBER	GEOGRAPHY: 1.MINERALS AND ENERGY RESOURCES GEOGRAPHY: 1. MANUFACTURING INDUSTRIES. ECONOMICS: MONEY AND CREDIT	8 7 8	
7	DECEMBER	HISTORY: NATIONALISM IN INDIA POL. SC: POLITICAL PARTIES POL. SC: OUTCOMES OF DEMOCRACY	11 5 6	
8	JANUARY	ECONOMICS: GLOBALISATION IN INDIAN ECONOMY GEOGRAPHY:LIFELINES OF NATIONAL ECONOMY POL. SC: CHALLENGES TO DEMOCRACY FA -III	9 8 6	
9	FEBRUARY	ECONOMICS: CONSUMER RIGHTS DISASTER MANAGEMENT : SURVIVAL SKILLS (Only Through Project work & Assignment) REVISION FOR SA-II	8 10	
10	MARCH	SA-II EXAMS		

कक्षा दसवीं हिंदी 'अ' पाठ्यक्रमविनिर्देशन

प्रथम सत्र X 2014-2015

क्रम0 स0	माह	पाठ्य पुस्तक		कृतिका	व्याकरण	कालांश
		गद्य	पद्य			
1	**अप्रैल** –	नेताजी का चश्मा (6) बाल गोबिन भगत (6)	सूरदास (6) देव.....(5)	माता का अँचल (5)		28
2	**मई एवं जून**	----------	----------	---------	रचना के आधार पर वाक्य भेद, अपठित गद्यांश, पद्यांश, निबंध, पत्र लेखन(11)	11
2	**जुलाई**	लखनवी अंदाज़ (6)	आत्मकथ्य, (6) उत्साह (4)	जार्ज पंचम की नाक (4)	रस(9)	29
3	**अगस्त**	मानवीय करुणा की दिव्य चमक (6)	अट नहींरही (3) यह दन्तुरित मुस्कान (3) फसल (3)		पद परिचय, (9)	24
4	**सितम्बर**	**पुनरावृति**			सार – लेखन(4)	21

<u>कक्षा दसवीं हिंदी 'अ' द्वितीय सत्र X</u>

क्रम0 स0	माह	गद्यांश	पद्यांश	कृतिका	व्याकरण	कालांश
5	**अक्तूबर**	एक कहानी यह भी (7)	राम – लक्ष्मण – परशुराम संवाद (8)		अपठित गद्यांश, पद्यांश, निबंध, पत्र लेखन (3)	18
6	**नवम्बर**	स्त्री शिक्षा के विरोधी कुतर्कों का खंडन (7)	छाया मत छूना (4) कन्यादान (3)	साना – साना हाथ जोडी(4)	रचना के आधार पर वाक्य भेद, वाच्य (6)	24
7	**दिसम्बर**	नौबतखाने में इबादत (6)	संगतकार (4)		पद – परिचय, रस(10)	20
8	**जनवरी**			एन्हीं ठैयां झुलनी हैरानी हो रामा (8) मैं क्यों लिखता हूँ (8)	सार – लेखन (4)	24
9	**फरवरी**	**पुनरावृति**				26
10	**मार्च**	**पुनरावृति एवं सत्रांत परीक्षा**				28

सततं व्यापकं मूल्याङ्कनम् – २०१४ -१

कक्षा – दशमी संस्कृत पाठ्यक्रम विभाजनम् (संप्रेष्णात्मकम्) १२२

कक्षा – दशमी		विषयः संस्कृतम्		प्रथम सत्रम् (अप्रैलतः – सितम्बरमासपर्यन्तम्)		
मासस्य नाम	**कालांशाः**	**पठित अवबोधनम्**	**रचनात्मकं कार्यम्**	**अनुप्रयुक्त व्याकरणम्**	**अपठित अवबोधनम्**	**पाठ्यक्रमस्य पूर्णता एवं विवरणं च**
अप्रैल	२४	१. वाङ्मयं तपः २.आज्ञा गुरूणां हि अविचारणीया	पत्र लेखनम् चित्राधारितं कार्यम्	दीर्घसन्धिः गुणसन्धिः वृद्धिः व्यञ्जनसन्धिः – परसवर्ण , छत्व , तुकागमसन्धिः विसर्गसंधिः – विसर्गस्य उत्वं , रत्वं	अपठितगद्यांशः	रचनात्मकं मूल्याङ्कनम् -१ (४० अङ्काः) FA – 1 अप्रैलतः जून् पर्यन्तम्) पाठ्यक्रमः रचनात्मकं मूल्याङ्कनम् -२ FA – 2 संकलात्मकं मूल्याङ्कनम् – १ SA -1 (अप्रैलतः अगस्त पर्यन्तम्)
मई – जून्	१०	३. किं किं उपादेयम्	पत्रलेखनम् चित्राधारितं कार्यम्	तत्पुरुषः – (विभक्तिः , नञ् , उपपदतत्पुरुषः) कर्मधारयः द्विगु समासः	अपठितगद्यांशः	
जलाई	२५	४.नास्ति त्यागसमं सुखम्	पत्रलेखनम् चित्राधारितं कार्यम्	कृदन्त प्रत्ययाः – तव्यत् , अनीयर् तद्धितप्रत्ययाः - मतुप् , इन् , ठक्	अपठितगद्यांशः	
अगस्त	२२	५.अभ्यासवशगं मनः	पत्रलेखनम् चित्राधारितं कार्यम्	अव्ययपदानां प्रयोगः अपि, इव , उच्चैः , एव , नूनं , पुरा, इतस्ततः , अत्र – तत्र , इदानीम् , यथा – तथा , विना सहसा , अधुना, वृथा शनैः	अपठितगद्यांशः	
सितम्बर	२३	पुनरावृत्तिः	पुनरावृत्तिः	अङ्कानां स्थाने शब्देषु समय लेखनम् पुनरावृत्तिः	पुनरावृत्तिः	

कक्षा – दशमी सततं व्यापकं मूल्याङ्कनम् – २०१४ -१५

कक्षा – दशमी		विषयः संस्कृतम्		द्वितीय सत्रम् (अक्तूबरतः – मार्चमासपर्यन्तम्)		
मासस्य नाम	**कालांशाः**	**पठित अवबोधनम्**	**रचनात्मकं कार्यम्**	**अनुप्रयुक्त व्याकरणम्**	**अपठित अवबोधनम्**	**पाठ्यक्रमस्य पूर्णता एवं विवरणं च**
अक्तूबर	१६	साधुवृत्तिं समाचरेत् रमणीया हि सृष्टिरेषा	पत्र लेखनम् चित्राधारितं कार्यम्	यण् , अयादि सन्धिः , पूर्वरूप सन्धिः अनुस्वार – वर्गीयप्रथमाक्षराणां तृतीयवर्णे परिवर्तनं , प्रथमवर्णस्य पञ्चमवर्णे परिवर्तनम्	अपठितगद्यांशः	रचनात्मकं मूल्याङ्कनम् - ३ (४० अङ्काः) FA – 3 अक्तूबरतः दिसम्बर पर्यन्तम्) पाठ्यक्रमः रचनात्मकं मूल्याङ्कनम् – ४ FA – 4 संकलात्मकं मूल्याङ्कनम् – १ SA -2 (अक्तूबरतः मार्च पर्यन्तम्)
नवम्बर	२२	तिरुक्कुरल् सूक्ति सौरभम्	पत्रलेखनम् चित्राधारितं कार्यम्	विसर्गसन्धिः – लोप , विसर्गस्य स्थाने स्, श् , ष् समासः - द्वन्द्व समासः , बहुव्रीहि समासः , अव्ययीभाव समासः	अपठितगद्यांशः	
दिसम्बर	१९	राष्ट्रं संरक्ष्यमेव	पत्रलेखनम् चित्राधारितं	प्रत्ययाः कृदन्ताः – शतृ – शानच्	अपठितगद्यांशः	

		हि सुस्वागतं भो अरुणाचलेऽ स्मिन्	कार्यम्	तद्धिताः – त्व , तल् स्त्री प्रत्ययौ – टाप् , ङीप् वचन –लिङ्ग – पुरुष – लकार दृष्ट्या संशोधनम्		
जनवरी	२४	कालोऽहं	पत्रलेखनम् चित्राधारितं कार्यम्	अव्ययानि –इति, कदा , कुतः , मा , यत् ,यत्र तत्र , यदा कदा , यावत् , श्वः , ह्यः , बहिः ,कदापि ,किमर्थं	अपठितगद्यांशः	
फरवरी	२२	पुनरावृत्तिः	पुनरावृत्तिः	संख्या एकतः पञ्च पर्यन्तम् वाक्येषु प्रयोगः | एकतः शतं पर्यन्तं संख्या ज्ञानम्	पुनरावृत्तिः	
मार्च	१२	पुनरावृत्तिः	पुनरावृत्तिः	पुनरावृत्तिः / परीक्षा – SA -2	पुनरावृत्तिः	

CLASS-X Mathematics (041) TERM 1

S.NO	Month	Units / Chapters	Detailed Split-up Syllabus	Total No. of Periods
1	**APRIL & MAY**	**1.Real Numbers** **2. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES**	**Real Numbers** . Euclid's division lemma, Fundamental Theorem of Arithmetic - statements after reviewing work done earlier and after illustrating and motivating through examples, Proofs of results - irrationality of √2, √3, √5, decimal expansions of rational numbers in terms of terminating/non-terminating recurring decimals **PAIR OF LINEAR EQUATIONS IN TWO VARIABLES** Pair of linear equations in two variables and their graphical solution. Geometric representation of different possibilities of solutions/inconsistency. Algebraic conditions for number of solutions. Solution of a pair of linear equations in two variables algebraically – by substitution, by elimination and by cross multiplication method. Simple situational problems must be included. Simple problems on equations reducible to linear equations may be included **Two skill based Math's Lab activities / Project**	15 15
2	**JUNE & JULY** Units / Chapters	**1. Polynomials** **2. TRIANGLES**	. **Polynomials** Zeroes of a polynomial. Relationship between zeroes and coefficients of quadratic polynomials. Statement and simple Problems on division algorithm for polynomials with real coefficients. **TRIANGLES** Definitions, examples, counter examples of similar triangles. 1. (**Prove**) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio. 2. (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side. 3. (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar. 4. (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.	7 15

	JUNE **&** **JULY**	**3.TRIGONOMETRY**	5. (Motivate) If one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar. 6. (Motivate) If a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to each other. 7. (**Prove**) The ratio of the areas of two similar triangles is equal to the ratio of the squares on their corresponding sides. 8. (**Prove**) In a right triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides. 9. (**Prove**) In a triangle, if the square on one side is equal to sum of the squares on the other two sides, the angles Opposite to the first side is a right triangle. **INTRODUCTION TO TRIGONOMETRY** Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined); motivate the ratios, whichever are defined at 0^o and 90^o. Values (with proofs) of the trigonometric ratios of 30^o, 45^o and 60^o. Relationships between the ratios **Two skill based Math's lab activities /Project.** **Formative assessment-1**	10
3	AUGUST	**1. TRIGONOMETRY (Contd.)** **2. STATISTICS**	. 1. **TRIGONOMETRIC IDENTITIES** Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$. Only simple identities to be given. Trigonometric ratios of Complementary angles. **2. STATISTICS** Mean, median and mode of grouped data (bimodal situation to be avoided) cumulative frequency graph. **Two skill based Math's Lab Activities/Projects**	15 13
4	SEPTEMBER	**1.STATISTICS** **2.Revision FOR SA1**	**1. STATISTICS ----** Cumulative frequency graph. **2. Revision for SA– I**	5

MATHEMATICS (041) (2014-15) CLASS-X TERM II

S.NO	Month	Units / Chapters	Detailed Split-up Syllabus	Total No. of Periods
1	**October**	**1.ARITHMETIC PROGRESSIONS** **2.QUADRATIC EQUATIONS**	1)Motivation for studying AP. Derivation of standard results of finding the nth term and sum of first n terms and their application in solving daily life problems 2) Standard form of a quadratic equation $ax^2 + bx + c = 0$, $(a \neq 0)$. Solution of the quadratic equations (only real roots) by factorization, by completing the square and by using quadratic formula. Relationship between discriminated and nature of roots. Problems related to day to day activities to be incorporated. **Two skill based Math's Lab activities/Projects**	8 15
2	**November**	**1. CIRCLES** **2. CONSTRUCTIONS** **3.AREAS RELATED TO CIRCLES**	Tangents to a circle motivated by chords drawn from points coming closer and closer to the point.1. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact.2. (Prove) The lengths of tangents drawn from an external point to circle are equal. 1. Division of a line segment in a given ratio (internally) 2. Tangent to a circle from a point outside it. 3. Construction of a triangle similar to a given triangle 1.) The area of a circle; area of sectors and segments of a circle. Problems based on areas and perimeter / circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of 60^o, 90^o& 120^o only. Plane figures involving triangles, simple quadrilaterals and circle should be taken **Two skill based Math's Lab Activities/Project**	8 8 12
	December	**1. SURFACE AREAS AND VOLUMES** **2. HEIGHTS AND DISTANCES**	1. (i) Problems on finding surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones. Frustum of a cone. (ii) Problems involving converting one type of metallic solid into another and other mixed problems. (Problems with combination of not more than two different solids be taken.) 1. Simple and believable problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation / depression should be only 30^o, 45^o, 60^o **Two skill based Math's Lab Activities/Projects**	12 8
3	**January**	**1 PROBABILITY** **2.COORDINATE**	1. Classical definition of probability. Connection with probability as given in Class IX. Simple problems on single events, not using set notation. 2. LINES (In two-dimensions) Review the concepts of coordinate geometry done earlier including graphs of linear equations. Awareness of geometrical representation of quadratic polynomials. Distance between two points and section formula (internal). Area of a triangle. **Two skill based Math's Lab Activities/Projects**	10

		GEOMETRY		14
	February	**REVISION FOR SA 2**	Revision for SA2	
	March		SA2	