ACCOUNTACY

ACCOUNTANCY CLASS XII

S. No	Month	Expected No. of working Days	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No.of Periods
1	April/ May	10 Days 07 Days 07 Days	Accounting for Partnership Firms- Fund. Goodwill Change in Profit sharing Ratio Admission Of a Partner	14 09 09	01 01 01	15 10 10	
2	June/July	14 Days 18 Days 07 Days	Admission Of a Partner---Continued Retirement/Death of a partner Dissolution of partnership firm	19 24 09	01 01 01	20 25 10	
3	August	22 Days	Accounting for share capital-Issue of Shares Forfeiture and reissue of shares Accounting for Share Capital	30	05	35	
4	September	07 Days 12 Days	Issue of debentures and redemption of debentures Accounting for Debentures	09 14	01 01	10 15	
5	Oct	08 Days 14 Days	Financial statements of a company Financial statement analysis Ratio analysis Financial statements of a company	09 18	01 02	10 20	
6	NOv	14 Days	Ratio analysis ---Cont. Cash Flow Statement Solvency Ratios	18	02	20	
7	Dec/Jan/Feb		Project work and revision				

BIOLOGY

S. No	Month	Expected No.of working Days	Branch of Subject	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No. of Periods
1	April And May	22+8	UNIT-6 (Reproduction	Chap-1 to 4	**Chapter-1: Reproduction in Organisms** **Chapter-2: Sexual Reproduction in Flowering Plants** **Chapter-3: Human Reproduction** **Chapter-4: Reproductive Health** Practical-Study of pollen germination on a slide Isolation of DNA from available plant material Study and identify stages of gametic development i.e T.S. of Testis and T.S. of ovary from permanent slides. Study of flowers adapted to pollination by different agencies	27	03	30
2	June & July	8+25	Genetics and Evolution (Unit-VII)	Chap-5,6,7	**Chapter-5: Principles of Inheritance and Variation** **Heredity and variation:** **Chapter-6: Molecular Basis of Inheritance** **Chapter-7: Evolution** Practical- Study of T.S. of Blastula through permanent slide Study of meiosis from prepared slides Study of pedigree from prepared charts	30	3	33
3	August	22	Biology and Human welfare (Unit-VIII)	Chap-7 contd,8, 9	**Chapter-8: Human Health and Diseases** **Chapter-9: Strategies for Enhancement in Food Production** Practical-Exercise on controlled pollination- emasculation, tagging etc. To identify common diseases Study the effect of different temperatures and three different pH on the activity of salivary amylase on starch	20	02	22

4	**September**	**16**	**Unit-VIII and Unit-IX (Biotechnology)**	**Chap-10-12**	**Chapter-10: Microbes in Human Welfare** **Chapter-11: Biotechnology - Principles and processes** **Chapter-12: Biotechnology and its Application** Practical-Study and comment on Xerophytic and aquatic plants and animals Study of pH , clarity and presence of any living organism in water sample Prepare a temporary mount of onion root tip to study mitosis.	**20**	**03**	**23**
5	**October And November**	**22**	**Ecology (Unit-X)**	**Chap 13-16**	**Chapter-13: Organisms and Populations** **Chapter-14: Ecosystem** **Chapter-15: Biodiversity and its Conservation** **Chapter-16: Environmental Issues** Practical-Collect and study soil, texture, moisture etc Study pH and water holding capacity of different soil samples Study presence of suspended particulate matter in air Population density and population frequency by quadrate method.	**14**	**02**	**16**

BUSINESS STUDIES

S. No	Month	Expected No.of working Days	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No.of Periods
1	April	11 Days 11 Days	Nature and significance of management Principles of management		13 13	01 01	14 14
2	May	08 Days	Business environment		11	01	12
3	June	08 Days	Planning		13	01	14
4	July	03 Days 14 Days 08 Days	Planning ----Continued Organizing Staffing		17 15	01 01	18 16
5	August	04 Days 14 Days 04 Days	Staffing---Cont. Directing Controlling		17 13	01 01	18 14
6	Sept	07 Days 16 Days	Controlling---Cont. Financial management		20	02	22
7	Oct	12 Days 04 Days	Financial market Marketing management		18 30	02 02	20 32

8 9	Nov	13 Days 05 Days	**Marketing management---Cont.** **Consumer Protection** **Project work** Product- Concept, branding, labelling and Packaging Price- Concept, Factors determining price Physical Distribution - concept and components, channels of distribution: types, choice of channels. Promotion – Concept and elements; advertising concept, role, objections against advertising, personal selling-concept and qualities of a good salesman, sales promotion- concept and techniques, public relations- concept and role Concept and importance of consumer protection Consumer protection Act 1986: Meaning of consumer and consumer protection. Rights and responsibilities of consumers Who can file a complaint against whom? Redressal machinery Remedies available Consumer awareness- Role of consumer organizations and Non-Governmental Organizations (NGOs).	15	01	16 30

CHEMISTRY

S. No	Month	Expected No.of working Days	Branch of Subject	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No.of Periods
1	April	22	Physical Chemistry	**Unit I: Solid State**		9	1	10
				Unit II: Solutions		9	1	10
				Unit III : Electrochemistry		11	1	12
2	May &June	16	PHYSICAL CHEMISTRY	**Unit IV: Chemical Kinetic**		9	1	10
3	July	25	PHYSICAL CHEMISTRY	**Unit V: Surface Chemistry**		7	1	8
			INORGANIC CHEMISTRY	**Unit VI: General Principles and Processes of Isolation of Elements**		7	1	8
4	August	22	INORGANIC CHEMISTRY	**Unit VII: "p"-Block Elements**		11	1	12
				Unit VIII: "d" and "f" Block Elements		11	1	12
				Unit IX: Coordination Compounds		11	1	12
5	Septemb er	23	ORGANIC CHEMISTRY	**Unit X: Haloalkanes and Haloarenes.**		9	1	10
				Unit XI: Alcohols, Phenols and Ethers		9	1	10
				Unit XII: Aldehydes, Ketones and Carboxylic Acids		9	1	10

6	OCTOBER	17	ORGANIC CHEMISTRY	**Unit XIII: Organic compounds containing Nitrogen** **Unit XIV: Biomolecules** **Unit XV: Polymers** **Unit XVI: Chemistry in Everyday life**		9 11 7 5	1 1 1 1	10 12 8 6
7	November	18		Revision	Remedial Step to be taken by teacher according to student's requirements			
8	December	20		Revision and First Pre-board	Remedial Step to be taken by teacher according to student's requirements			
9	January	15		Revision and Second Pre-board	Remedial Step to be taken by teacher according to student's requirements			
10	February	22		Revision	Remedial Step to be taken by teacher according to student's requirements			
11	March	ANNUAL BOARD EXAMINATION						

COMPUTER SCIENCE (THEORY)

S. No.	Month	Expected No. of Working Days	Chapter	Detailed Split Up Syllabus	Periods for class room Teaching	CAD Teaching Period	Total No. of Periods
1.	**April**	**22**	**Revision of C++ (Class XI) Structures** **OOPs**	REVIEW: C++ covered In Class – XI, **Object Oriented Programming: OOPs** Concepts, Advantages of Object Oriented Programming over earlier programming methodologies, **Implementation of Object Oriented Programming concepts in C++:** Definition of a class, Member of a class – Data Members and Member Functions (methods), Using Private and Public visibility modes, default visibility mode (private); Member function definition: inside class definition and outside class definition using scope resolution operator (::); Declaration of objects as instances of a class; accessing members from object (s), Objects as function arguments–pass by value and pass by reference;	**18+09**	**04**	**31**
2.	**May, June & July**	**08 + 08 + 25 = 41**	**Constructor & Destructor** **Inheritance**	**Constructor and Destructor** **Inheritance:** Concept, Base Class, Derived classes, protected visibility mode; Single level inheritance, Multilevel inheritance and Multiple inheritance, Privately derived, publicly derived and Protectedly derived class, accessibility of members from objects and within derived class (es); **Data File Handling:** Need for a data file, Types of data files – Text file and Binary file; **Text File:** Basic file operations on text file, **Binary File:** Creation of file, Writing data/Searching required data/Appending data/Insertion of data/ Deletion of data/Modification of data in a file; Components of C++ to be used with file handling: Header file: fstream.h; ifstream, ofstream, classes; Open(), get (), read () put (), write(), getline() and close() functions;	**36+16**	**05**	**57**

			Data File Handling **Pointers**	Detecting end-of-file (with or without using eof() function), tellg(), tellp(), seekg().seekp(); **Introduction to Pointer,** Declaration and Initialization of Pointer; Dynamic memory allocation/de-allocation operators: **new, delete;** Pointers and Arrays: Array of Pointers, Pointer to an array (1 dimensional array), Function returning a pointer, Reference variables and use of alias; Function call by reference. Pointer to structure: De-reference/Deference operator: *, ->; self referential structure;			
3.	**Aug.**	**22**	**Data Structure**	**Array:** Searching, Sorting, Merging **Stack (Array and Linked implementation of Stack):**Stack, PUSH and POP Operations and its Implementation, Converting expressions from INFIX to POSTFIX notation and evaluation of Postfix expression; **Queue: (Array and Linked Implementation):**Introduction to Queue, Operations on Queue, circular queue using array.	**18 + 10**	**04**	**32**
4.	**Sep.**	**23**	**RDBMS** **Boolean Algebra**	Data base Concepts, Relational data model, Relational algebra, Structured Query Language, Advantages of using SQL, DDL & DML, Data Types, SQL Commands**,** SQL functions, SELECT query, equi-join, Cartesian product and Union **Role of Logical Operations in Computing.** Binary-valued Quantities, Boolean Variable, Boolean Constant and Boolean Operators, Truth Tables; DeMorgan‟s Law and their applications; Obtaining SOP and POS form the Truth Table, Reducing Boolean Expression (SOP and POS) to its minimal form, Use of Karnaugh Map for minimization of Boolean expressions (up to 4 variables);circuit design using basic Logic Gates	**20+ 14**	**03**	**37**

5.	**Oct.**	**16**	**Communication Technologies**	Evolution of Networking, Data Communication terminologies, Transmission media, Network Topologies and types, Network Protocol, Mobile Telecommunication Technologies, Network Security Concepts, Introduction To Web services **(Syllabus Completion upto 31st October)** **Revision Work& Pre-Boards**	**14 + 03**	**02**	**19**

Economics

S. No	Month	Expected No. of working Days	Branch of Subject	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No. of Periods
1	April	22	Economics	Economics Introduction: Meaning of micro and macroeconomics what is an economy . central problem of an economy. What, how and for whom to produce : concept of PPC and opportunity cost Consumers equilibrium meaning of utility, marginal utility law of diminishing marginal utility conditions of consumers equilibrium using marginal utility analysis. Indifference curve analysis of consumer's equilibrium the consumers budget (budget set and budget line), preferences of the consumers (indifference curve, indifference map)and conditions of consumers equilibrium. Demand market demand determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve: price elasticity of demand – a- %age change method and b- geometric method (linear demand curve ; relationship between price elasticity of demand and total expenditure.		36	2	38
2	May/June	16		Producer Behaviour and Supply Production function – Short-Run and Long-Run Total Product, Average Product and Marginal Product. Returns to a Factor		18	2	20

3	July	25		Producer Behaviour and Supply Forms of Market and Price Determination under Perfect Competition with simple applications Cost: Short run costs - total cost, total fixed cost, total variable cost; Average cost; Average fixed cost, average variable cost and marginal cost-meaning and their relationships. Revenue - total, average and marginal revenue - meaning and their relationships. Producer's equilibrium-meaning and its conditions in terms of marginal revenue-marginal cost. Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply - (a) percentage-change method and (b) geometric method. Forms of Market and Price Determination under Perfect Competition with simple applications. Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply. Other Market Forms - monopoly, monopolistic competition, oligopoly - their meaning and features. Simple Applications of Demand and Supply: Price ceiling, price floor. Forms of Market and Price Determination under Perfect Competition with simple applications.	34	4	38
4	August	22		National Income and Related Aggregates ,Some basic concepts: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation. Circular flow of income; Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method. Aggregates related to National Income: Gross National	36	2	38

				Product (GNP), Net National Product (NNP), Gross and Net Domestic Product (GDP and NDP) - at market price, at factor cost; National Disposable Income (gross and net), Private Income, Personal Income and Personal Disposable Income; Real and Nominal GDP. GDP and Welfare.			
5	September	23		Money and Banking, Money - its meaning and functions Supply of money - Currency held by the public and net demand deposits held by commercial banks. Money creation by the commercial banking system. Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Controller of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement Aggregate demand & its components. Propensity to consume and propensity to save (average and marginal). Short run equilibrium output; investment multiplier and its mechanism. Meaning of full employment and involuntary unemployment. Problems of excess demand and deficient; measures to correct them. Changes government spending taxes and money supply.	36	2	38
6	October	16		Government Budget and the economy, Balance of Payments Government budget - meaning, objectives and components. Classification of receipts - revenue receipts and capital receipts; classification of expenditure –revenue expenditure and capital expenditure. Measures of government deficit - revenue deficit, fiscal deficit, primary deficit their meaning. Balance of payments account - meaning and components; balance of payments deficit-meaning. Foreign exchange rate - meaning of fixed and flexible rates and managed floating. Determination of exchange rate in a free market.	20	2	22

7	November	18		Revision				
8	December	20		Revision and First Pre-board				
9	January	15		Revision and Second Pre-board				
10	February	22		Revision				

English Core (301)

S.No.	Month	Flamingo (Text BOOK) Prose/Poem	Vistas – (Supplementary Book) The Invisible Man – HG Wells (Novel) (Discussion & Questions on Theme , Plot , Characters and Incidents)	Reading and Writing Skills	ICT	Periods of Classroom Teaching	No. of Working Days / Period
1	April	L-1.The Last Lesson (Prose) (pds-4) P-1.My Mother at Sixty- Six (Poem)(pds2) P-2. An Elementary School Classroom In A Slum (Poem)(pds3)	L-1. The Tiger King (vistas) (pds -4) Introduction to the novel & novelist (The Invisible Man –HG Wells)(pds-2)	Poster Designing (Social issues , general awareness ,commercial issues) (pds 2) Letter to Editor(pds-2) Article writing (pds- 3)	06	16	22
2.	May	L-2. Lost Spring(Prose)(pds4)	Thorough Discussion (The Invisible Man –HG Wells ,chapters 1-4)(pds-2)	Recapitulation of Note- Making and summarizing (pds- 2)	02	06	08
3.	June	L-3. Deep Water(Prose)(pds3)	Thorough Discussion (The invisible Man –HG Wells, chapters 5,6)(pds-2)	Advertisements (classified and display- To-Let ,for sale, Matrimonial, Obituary, Situation Vacant, etc)(pds - 3)	02	06	08

4.	July	P-3. Keeping Quiet – (Poem) (pds-3) P-4. A Thing of Beauty (Poem) (pds3) ***I Unit Test**	L-2. The Enemy.(pds6) L-3. Should Wizard Hit Mommy? (pds3) Discussion of chapters 7to 12 of the novel(pds3)	Speech Writing (pds2) Debate Writing (pds3) Notice Writing (pds2)	06	19	25
5.	August	L-4. The Rattrap (Prose) (pds 5)	L-4. On The Face Of It.(pds5) Discussion Of Chapters 13 to 18 (Novel) (pds4)	Invitation Writing - Formal & Informal & Replies (acceptance & Decline) (pds 5) Reading comprehension (pds 3)	05	17	22
6.	September	L-5. Indigo(Prose)(pds4) P-5. Aunt Jennifer's Tigers (Poem (pds 4) *Selection/ Achievement Test	Discussion Of Chapters 19 to 24 (Novel)(pds3)	Letter Of Complaint (pds 2) Letter of Placing Orders & Cancellation (pds3)	04	12	16 + 7 days for Selection Test = 23
7.	October	L-6.Going Places. (Prose) (pds 3)	L-5.Evans Tries An 0-Level.(pds4) L-6.Memories of Childhood(pds 2) Discussion of Chapters 25 to 28 (Novel)(pds 2)	Letter of Enquiry (pds2) Job Application (pds 3)	05	11	16
8.	November	***Half Yearly**	Revision(Chapters 1 to 6) Question Bank Theme, Plot, Characters and incidents from Novel	Revision from Question Bank (Short and long Compositions)	05	13	18

S. No.	Month	Flamingo (Text BOOK) Prose/Poem	Vistas – (Supplementary Book) The Invisible Man – HG Wells (Novel) (Discussion & Questions on Theme , Plot , Characters and Incidents)	Reading and Writing Skills	ICT	Periods of Classroom Teaching	No. of Working Days / Period
9.	December	REVISION Value based Questions, HOTS & MLL * I Pre-Board	Revision , Value based Questions, HOTS & MLL	Revision Reading Section and Letters	05	15	20
10.	January	REVISION from Study Material and Sample Papers Discussion and solving I PB QP * II Pre-Board	Revision Study Material and Sample Papers Discussion and solving I PB QP	Revision Study Material and Sample Papers Discussion and solving I PB QP	05	10	15
11.	February	Revision Study Material and Sample Papers	Revision Study Material and Sample Papers	Revision Study Material and Sample Papers	05	10	15

SPLIT-UP SYLLABUS XII CLASS GEOGRAPHY 2016-17

MONTHS	BOOK-1: FUNDAMENTALS OF HUMAN GEOGRAPHY	PDS	BOOK-1: FUNDAMENTALS OF HUMAN GEOGRAPHY	PDS	PRACTICALS	PDS
APRIL/ MAY	**1.** Human Geography: Nature and Scope **2.** The World Population: Distribution, Density and Growth **3.** Population Composition	**17**	**1.** Population: Distribution, Density, Growth and Composition **2**. Migration: Types, Causes and Consequences	**15**	1.Data: Its Sources and Compilation 2. Data Processing	**7**
JUNE/ JULY	**4.** Human Development **5.** Primary Activities **6.** Secondary Activities **7.** Tertiary and Quaternary Activities	**22**	**3**. Human Development **4.** Human Settlements	**14**	Part-1: Graphical Representation of Data Part II: Graphical Representation of Data	**14**
AUGUST	**8.** Transport and Communication **9.** International Trade	**16**	**5.** Land Resources and Agriculture **6.** Water Resources	**16**	Use of Computer in Data Processing and Mapping	**12**
SEPT.	**9.** International Trade **10.** Human Settlements	**15**	**7.** Mineral and Energy Resources **8.** Manufacturing Industries	**15**		
OCT.	**REVISION**		**9.** Planning and Sustainable Development in Indian Context **10.** Transport and Communication	**22**	Field Survey	**6**
NOV.	**REVISION**		**11.** International Trade **12.** Geographical Perspective on Selected Issues and Problems	**20**	Spatial Information Technology	**8**
DEC,	**REVISION & PB-1**		**REVISION**			
JAN.	**REVISION & PB**		**REVISION**			
FEB.	**REVISION &PRACTICALS**		**REVISION**			

हिंदी

क्रम संख्या	माह	अनुमानित कार्य दिवस	विषय	अध्याय संख्या	विस्तृत-पाठ्यक्रम	कालांश	कंप्यूटर शिक्षण कालांश	कुल कालांश
1	अप्रैल	22	हिंदी के	5	1.आत्म परिचय, एक गीत- हरिवंश राय बच्चन 2.भक्तिन - महादेवी वर्मा 3.विभिन्न संचार माध्यमों का परिचय 4.सिल्वर वैडिंग- मनोहर श्याम जोशी 5.निबंध-लेखन (सामजिक विषयों पर)	२२	एक	4 5 4 4 4
2	मई-जून	16	हिंदी के	5	1.पतंग - आलोक धन्वा 2.कविता के बहाus, बात सीधी थी पर - कुंवर नारायण 3.बाजार दर्शन - जैनेन्द्र कुमार 4.संचार माध्यम परिचय - प्रिंट मीडिया 5.निबंध लेखन - साहित्यिक निबंध(हिंदी साहित्य का इतिहास,राष्ट्रभाषा हिंदी)	१६	एक	3 4 4 3 1
3	जुलाई	25	हिंदी के	6	1.कैमरे में बंद अपाहिज - रघुवीर सहाय 2.काले मेघा पानी दे - धर्मवीर भारती 3.जूझ - आनंद यादव 4.समाचार, पत्र लेखन - (औपचारिकपत्र) 5.निबंध - समसामायिक विषयों पर- नारी-सशक्तिकरण,२१वीं सदी का भारत) 6.सम्पादकीय परिचय	२५	एक	4 5 5 4 4 2

4	अगस्त	22	हिंदी के	6	1.सहर्ष स्वीकारा है - मुक्तिcks/k xtkuu ek/ko 2.पहलवान की ढोलक - रेणु Q.kh'ojukFk js.kq 3.अतीत में दबे पाँव - ओम थानवी 4.कार्यालयी पत्र (प्राचार्य,सम्पादक,स्वास्थ्य अधिकारी के नाम पत्र) 5.निबंध - विविध विषयों पर(विज्ञान: वरदान या अभिशाप, इन्टरनेट) 6.सम्पादकीय - प्रारूप	२२	एक	5 5 6 2 2 2
5	सितम्बर	23	हिंदी के	8	1.उषा -jkमेश्वर बहादुर सिंह 2.बादल राग-निर!ला 3-चार्लीचैप्लिन यानी हम सब-विष्णु खरे 4-नमक-रजिया सज्जाद जहीर 5-डायरी के पन्ने-ऐन फ्रैंक 6.रिपोर्ट एवं आलेख 7.रोजगार सम्बन्धी पत्र 8.स्ववृंत लेखन	२३	एक	2 3 3 3 8 1 1 1
6	अक्टूबर	17	हिंदी के	7	1.कवितावली,लक्ष्मण-मूर्च्छा और राम का विलाप - तुलसीदास 3.रुबाइयां Xजल-फ़िराक गोरखपुरी 4.शीरी"k के फूल- हजारी प्रसाद f}वेदी 5.फीचर-लेखन 6. अपठित- गद्यांश,पद्यांश 7.निबन्ध-सांस्कृतिक विषयों पर(विभिन्नता में एकता) 8.छोटा मेरा खेत-उमाशंकर जोशी बगुलों के पख-उमाशंकर जोशी 9. श्रम- विभाजन और जाति-प्रथा-डॉ. आंबेडकर मेरी कल्पना का आदर्श समाज- डॉ. आंबेडकर	१७	एक	4 3 3 1 1 1 2 2
7	नवम्बर	18	हिंदी के	4	3. विभिन्न समस्याओं पर विभागीय अधिकाfjयों को लिखे जाने वाले पत्र 4. पुनर!vfRr प्रश्न-पत्र-अभ्यास कार्य	१८	एक	4 3 4 2
								6

HISTORY								
S. No	Month	Expected No. of working Days	Branch of Subject	Chapter No & Chapter	Detailed Split-up THEORY-80 MARKS PROJECT-20 MARKS(start in April)	Periods for class room Teaching	Computer Aided Teaching Periods	Total No. of Periods
01	April/May	30 Days	_____	Ch. 1. Bricks, Beads and Bones Ch. 2. Kings, Farmers and Towns Ch. 3. Kingship, Caste and class		36	06+01	43
02	June	08	_____	Ch. 4.Thinkers, Beliefs and Buildings		10	02	12
03	July	25	_____	Ch. 8. Peasants, Zamindars and the state Ch.9. Kings and chronicles Sr. No. of lesson in second part changed by C.B.S.E		23	03	26
04	August	22	_____	Ch. 7. An Imperial capital- Vijaya Nagar Ch.6. The Bhakti-Sufi traditions Ch.5. Through the eyes of the travellers		34	05	39
05	Sept	23	_____	Ch.10. Colonialism and the countryside Ch.11. Rebels and the Raj Ch. 12. Colonial cities		33	06	39
06	Oct	16	--------	Ch. 13. Mahatma Gandhi Ch.14 Understanding Partition		25	02	27
07	Nov	18	_____	Ch. 15. Framing the constitution		12	02	14
08	Dec to Feb				Map work and revision 1st Preboard-2015-16(Nov-Dec 2016) 2nd Preboard-2015-16(Jan 2017)			

Informatics Practices (065)

S. No.	Month	Expected No. of Working Days	Chapter	Detailed Split Up Syllabus	Periods for class room Teaching	Computer Aided Teaching Period	Total No. of Periods
1.	**April**	**22**	**Computer Networking** **Open Source Concepts**	**Networking**: Overview, *Communication Media,* Wireless Technologies, *Network Devices, Types of network*: LAN, MAN, WAN, PAN,*Network Topologies, Network Protocols*; Domain name, MAC&IP Address, DNS, *Network security, Internet Applications, Wireless/Mobile Communication, Network Security Concepts* **Open Source Concepts:**OSS, FOSS/FLOSS examples, Open standards (WWW, HTML, XML, ODF, TCP,IP) *Indian Language Computing*: character encoding, UNICODE, different types of fonts (open type vs true type, static vs dynamic), entering Indian Language Text – phonetic and key map based, Inscript.	**18 +04**	**02**	**24**
2.	**May, June & July**	**08 + 08 + 25 = 41**	**Revision Tour of Class XI; Class & Object; Inheritance; Standard Functions**	All the programming concepts studied in class XI for Review**.** Basic concept of Access-specifier for class members (data members and methods) Basic concept of Inheritance Commonly used libraries: String class and methods: toString(), concat(), length(), toLowerCase(), toUpperCase(),trim(), substring() Math class methods: pow(), round()	**30+28**	**04**	**62**
3.	**Aug.**	**22**	**Database**	Accessing My SQL database using ODBC/JDBC to connect with	**10 +16**	**02**	**28**

			Connectivity **Web Application Development.** **HTML-I,II** **XML**	database. **Web application development**: URL, Web server, Communicating with the web server, concept of Client and Server Side **HTML based web pages covering basic tags** Creating and accessing static pages using HTML and introduction to XML			
4.	**Sep.**	**23**	**Database Concepts** **MYSQL Functions**	**Review of RDBMS from Class XI** **Database Fundamentals** Concept of Database transaction, Committing and revoking a transaction using COMMIT and ROLLBACK. *Grouping Records*: GROUP BY, Group functions - MAX(), MIN(), AVG(), SUM(), COUNT(); using COUNT(*), DISTINCT clause with COUNT; Group Functions and Null Values.	**21 + 20**	**02**	**43**
5.	**Oct.**	**16**	**Constraints and Data Manipulation Commands** **IT-Applications**	*Displaying Data From Multiple Tables*: Cartesian product, Union, Intersection concept of Foreign Key, Equi-Join Creating a Table with PRIMARY KEY and NOT NULL constraints, Viewing Constraints, Viewing the Columns Associated with Constraints using DESC command. ALTER TABLE for deleting column(s), modifying data type(s) of column(s),adding a constraint, enabling constraints, dropping constraints. DROP Table for deleting a table **Front-end Interface:** Introduction; content and features; identifying and using appropriate component (Text Box, Radio Button, Check Box, List etc. as learnt in Unit 2 (Programming)) for data entry, validation and display. **Back-end Database**: Introduction and its purpose, exploring the requirement of tables and its essential attributes. **Front-End and Database Connectivity:** Introduction,	**16+10**	**04**	**30**

				requirement and benefits Demonstration and development of appropriate Front-end interface and Back-end Database for e-Governance, e-Business and e-Learning applications **Impact of ICT on society**: Social, environmental and Economic benefits. In each of the above domains, identify at least two real-life problems, list the expected outputs and the input(s) required for the output, and describe the problem solving approach and develop relevant front-end interface and back-end database.**(Syllabus Completion Up to 31st October)** **Revision Work& Pre-Boards)**			

MATHS

S.NO.	Month	Expected No. of working Days	Subject	Chapter No& Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No. of Periods
1	APRIL	22	MATHEMATICS	1. Relations and Functions 2. Inverse Trigonometric Functions 3 Matrices	**1**.Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function. Binary operations. 2.Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions. 3.Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Noncommutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2).Concept of elementary row and column operations. Invertible matrices and proof of the	13 Pds 13 Pds 23 Pds	2 Pds 2 Pds 2 Pds	15 15 25

					uniqueness of inverse, if it exists; (Here all matrices will have real entries).			
2	MAY & JUNE	16	MATHEMATICS	4. Determinants 5. Continuity and Differentiability	4. Determinant of a square matrix (up to 3 x 3 matrices), properties of determinants, minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples ,solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix. 5.. Continuity and differentiability, derivative of composite functions, chain rule, derivatives of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions.	23 Pds 18 Pds	2 Pds 2 Pds	25 20

					Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation			
3	JULY	25	MATHEMATICS	6. Applications of Derivatives 7. Integrals	rate of change of bodies, increasing/decreasing functions, tangents and normals, use of derivatives in approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool)Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations). 7. Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.	8 Pds 20	2 Pds ---	10 20

	August				Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof).Basic Properties of definite integrals and evaluation of definite integral			
4		22	MATHEMATICS	8. Applications of the Integrals 9. Differential Equations.	8. Applications in finding the area under simple curves, especially lines, circles/parabolas/ellipses (in standard form only), Area between any of the two above said curves (the region should be clearly identifiable). 9. Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables solutions of homogeneous differential equations of first order and first degree Solutions of linear differential equation of the type:	13 Pds 15 Pds	2 Pds --	15 15

5	SEPTEMBER	23	MATHEM ATICS	10. Vectors 11. Three - dimensional Geometr1y *SELECTION TEST	10. Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors, scalar triple product of vectors 11. Direction cosines and direction ratios of a line joining two points. Cartesian	13 Pds 13 Pds	2Pds 2Pds	15 15

					equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane.			
6	OCTOBER	16	MATHEMATICS	12. Linear Programming 13. Probability	12. Introduction, related terminology such as constraints objective function, optimization different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions(bounded and unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints). 13.-Conditional probability, multiplication theorem on probability, independent events, total probability Bayes' theorem, Random variable and its probability distribution mean and variance of random variable. Repeated independent (Bernoulli) trials and Binomial distribution	8 Pds 20 Pds	2 Pds 2 Pds	10 22

PHYSICS

S No	Month	Expected No.of working Days	Branch of Concerned Subject	Chapter No & Chapter	Detailed Split-up	Periods for class room Teaching	Computer Aided Teaching Periods	Total No.of Periods	UNIT TEST	PERFORMANCE TEST
		First Term								
1	April	22	Electrostatics	Chapter–1: Electric Charges and Fields	Electric Charges; Conservation of charge, Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).	8	2	10	25	15
				Chapter–2: Electrostatic Potential and Capacitance	Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor	9	1	10		

					with and without dielectric medium between the plates, energy stored in a capacitor					
			Current Electricity	**Chapter–3: Current Electricity**	Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law,	2	0	2		
2	**May & June**	**8+8**	**Current Electricity**	**Chapter–3: Current Electricity**	electrical resistance, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance. Internal resistance of a cell, potential difference and **emf** of a cell, combination of cells in series and in parallel, Kirchhoff's laws and simple applications, Wheatstone bridge, meter bridge. Potentiometer - principle and its applications to measure potential difference and for comparing EMF of two cells; measurement of internal resistance of a cell.	7	1	8		
			Magnetic Effects of Current and Magnetism	**Chapter–4: Moving Charges and Magnetism**	Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight and toroidal solenoids (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields, Cyclotron.	7	1	8		

3	**July**	**25**	**Magnetic Effects of Current and Magnetism**	**Chapter–4: Moving Charges and Magnetism**	Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.	4	1	5	15	25
				Chapter–5: Magnetism and Matter	Current loop as a magnetic dipole and its magnetic dipole moment, magnetic dipole moment of a revolving electron, magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis, torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; earth's magnetic field and magnetic elements. Para-, dia- and ferro - magnetic substances, with examples. Electromagnets and factors affecting their strengths, permanent magnets. **UNIT TEST - Ist**	6	1	7		
			Electromagnetic Induction and Alternating Currents	**Chapter–6: Electromagnetic Induction**	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Eddy currents. Self and mutual induction.	8	2	10		
				Chapter–7: Alternating Current	Alternating currents, peak and RMS value of alternating current/voltage;	3	0	3		

4	**August**	**22**	**Electromagnetic Induction and Alternating Currents**	**Chapter–7: Alternating Current**	reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, power factor wattless current. AC generator and transformer.	6	1	7		
4			**Electromagnetic waves**	**Chapter–8: Electromagnetic Waves**	Basic idea of displacement current, Electromagnetic waves, their characteristics, their Transverse nature (qualitative ideas only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.	3	1	4		30
			Optics	**Chapter–9: Ray Optics and Optical Instruments** **Chapter–9: Ray Optics and Optical Instruments**	**Ray Optics:** Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction and dispersion of light through a prism. Scattering of light - blue colour of sky and reddish appearance of the sun at sunrise and sunset. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.	9	2	11		
5	**Septem ber**	**23**	**Optics**	**Chapter–10: Wave Optics**	**Performance test** **Wave optics:** Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained	8	2	10		

					interference of light, diffraction due to a single slit, width of central maximum, resolving power of microscope and astronomical telescope, polarization, plane polarized light, Brewster's law, uses of plane polarized light and Polaroids.					
			Dual Nature of Radiation and Matter	**Chapter–11: Dual Nature of Radiation and Matter**	Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Matter waves-wave nature of particles, de-Broglie relation, Davisson-Germer experiment (experimental details should be omitted; only conclusion should be explained).	5	1	6		
			Atoms and Nuclei	**Chapter–12: Atoms**	Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum.	3	0	3		
				Chapter–13: Nuclei	Composition and size of nucleus, Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion.	3	1	4		
6	**October**	**16**	**Electronic Devices**	**Chapter–14: Semiconductor Electronics: Materials, Devices and Simple Circuits**	Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Semiconductor diode - I-V characteristics in forward and reverse bias, diode as a rectifier; Special purpose p-n junction diodes: LED, photodiode, solar cell and Zener diode and their characteristics, zener diode as a voltage regulator. Junction transistor, transistor action, characteristics of a transistor and transistor as an amplifier (common emitter configuration), basic idea of analog and	9	2	11		

					digital signals, Logic gates (OR, AND, NOT, NAND and NOR).					
			Communication Systems	**Chapter–15: Communication Systems**	Elements of a communication system (block diagram only); bandwidth of signals (speech, TV and digital data); bandwidth of transmission medium. Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation, satellite communication. Need for modulation, amplitude modulation	4	1	5		