BISHOP SCOTT BOYS' SCHOOL

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COMMON ACADEMIC PLAN-2020-21

SYLLABUS SPLIT-UP

(REVISED AS PER CBSE CIRCULAR AND NCERT ACADEMIC CALENDAR)

BISHOP SCOTT BOYS' SCHOOL, PATNA

REVISED SPLIT UP SYLLABUS (SESSION: 2020-21) [RATIONALISED CURRICULUM]

CLASS: XII	SUB: ENGLISH				
MONTH	**NAME OF BOOKS**	**CHAPTERS**	**PERIODS**	**ACTIVITIES/WORKSHOPS RELATED TO THE TOPIC**	**EXAMINATION**
APRIL	Falmingo	The Last Lesson	3	Elocution on *Save Wild Animals	
		My Mother at Sixty Six	3	Patriotism	
	Vistas	The Third Level	3		
	Reading Section	Different kind of passages	2		
	Writing Section	Notice	2		
		Smart Class	2		
MAY	Falmingo	Lost spring	4	Speech on Child Labour	
		An Elementary School Classroom in a Slum	3		
			10		
	Writing Section	Invitation	2		
		Advertisement	1		
		Smart Class	3		
JUNE					
JULY			4		
	Falmingo	Deep Water,	5		
	Vistas	The Enemy	10		
		Letter Writing (Formal Letter)	3		
	Writing Section	Smart Class	4		
AUGUST		Keeping Quiet	2	Sk: 1 on	
	Flamingo	The Rattrap	4	Freedom	
		Indigo	4	Movement	
		Should Wizard Hit Mommy	4	Independence Day	
	Vistas		8		
SEPTEMBER	Flamingo		5	Debate: Pessimism Vs Optimism	
	Vistas		3		
	Writing Section		1		
		On the Face of It	1		
		Article	1		
		Report Writing	1		
		Smart Class	3		
OCTOBER	Flamingo		3	Debate: Fancy and Imagination	
	Vistas		4		
		A Thing of Beauty	8		
		Evans Tries An O-level			
		Smart Class	4		
NOVEMBER			3	Debate: Global Discrimination	
	Flamingo	Aunt Jeniffer's Tiger	4		
	Vistas	Practice on Writing Section	10		
	Writing Section	Smart Class	6		
DECEMBER	Revision	Revision of All Sections	2		
		Smart Class	10		

BISHOP SCOTT BOYS' SCHOOL

COMMON ACADEMIC PLAN-SYLLABUS SPLIT UP (2020-21) 12TH (MATHS)

April	1. Relations and functions	09	Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions	To verify that the relation R in the set L of all lines in a plane,defined by $R = \{(l, m): l \perp m\}$ is symmetric but neither reflexive nor transitive	
	2. Inverse trigonometric functions	08	• Definition, range, domain, principal value branch.	To draw the graph of $\sin^{-1} x$ and demonstrate the concept of mirror reflection (about the line $y = x$)	
May & June	3. Matrices	17	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. Non-commutativity of multiplication of matrices, Invertible matrices; (Here all matrices will have real		

			entries).		
July	4. Determinants	18	• Determinant of a square Matrix. (maximum up to 3x3 matrix) . • Minors, Co-factors, and application of determinants in finding area of triangle. • Adjoint and Inverse of a square matrix. . • Solving system of linear equations in two or three variables (having unique solution) using inverse of matrix.		
	5. Continuity and differentiability	16	Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions • expressed in parametric forms. Second order	To find analytically the limit of a function $f(x)$ at $x = c$ and also to check the continuity of the function at he point.	

			derivatives.		
August	6. Application of derivatives	07	Applications of derivatives: increasing/decreasing functions, tangents and normals , 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).	To understand the concepts of decreasing and increasing functions. To understand the concepts of absolute maximum and minimum values of a function in a given closed interval through its graph. To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner . To verify that amongst all the rectangles of the same perimeter, the square has the maximum area.	
	7. Integrals	15	• Integration as an inverse process of differentiation. • Integration of a variety of functions by transformation substitution, by partial fractions and by parts.	To evaluate the definite integral $\int_b^a \sqrt{1-x^2}\ dx$ as the limit of a sum and verify it by actual integration	
September	8. Application of the integrals	09	Applications in finding the area under simple curves, especially lines, parabolas; area of circles /ellipses		

			(in standard form only) (the region should be clearly identifiable).	
	9. Differential equation	10	Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree of the type: $\frac{dy}{dx}$ = f(y/x). Solutions of linear differential equation of the type: $\frac{dy}{dx} + py = q$ where p and q are functions of x or constant	
October	10. Vectors	13	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	To verify that angle in a semi-circle is a right angle, using vector method.

			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.	
	11. Three-dimensional geometry	13	Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Distance of a point from a plane.	To locate the points to given coordinates in space, measure the distance between two points in space and then to verify the distance using distance formula. To demonstrate the equation of a plane in normal form. To verify that the angle between two planes is the same as the angle between their normals. To measure the shortest distance between two skew lines

				and verify it analytically
November	12. Linear programming	13	Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems. graphical method of solution for problems in two variables, feasible and infeasible regions (bounded), feasible and infeasible solutions, optimal feasible solutions (up to • three non-trivial constraints).	
	13. Probability	20	Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution.	To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice.

BISHOP SCOTT BOYS SCHOOL, PATNA

SPLIT UP SYLLABUS (SESSION: 2020-21)

Subject : Physics

Subject Teacher :- Md Khalil Ahmad

Class XII

Month	Name of the Chapter with serial no	Sub Topic	No. of Periods	Activities/ Practicals as per the Chapter	Mortion For PT/MT/ AE
April	Chapet -1 : Electric Charges and Fields	Electric Charges , Coulomb's Law and it's application , Electric Field and Field Lines , Electric dipole , Electric Field due to an electric dipole , Torque on an electric dipole, Electric Flux , Gauss Theorem and it's applications (except field inside &	1	Section :- A : Experiment No -1 , 2 ,3 , 4 , 5	
	Chapter -2 : Electrostatic Potential and Capacitance	Electric Potential and it's expression due to an electric dipole and system of charges , Equipotential surface and its properties , Electric potential energy in various cases and for an electric dipole , Dielectric and polarisation , Capacitor and Capacitance , Parallel and series combination of capacitors , Expression for capacitance without dielectric and with Dielectric medium , energy stored in capacitors	9		
May	Chapter -3 : Current Electricity	Electric current , drift velocity , mobilty , Ohm's law , V- I characteristics , electrical energy , power , resistivity , conductivity , and combination of cells , Kirchhoff's law and it's application , Wheatstone bridge and it's application , meter bridge.	10		
June	Chapter -4 : Moving Charges and Magnetism	Magnetic fields and properties , Oersted experiment , Biot Savart law and it's application , Ampere circuital law and it's application , force between two parallel straight current carrying wires , Torque experienced by current loop , galvanometer	14	Section :- A :Experiment No - 6 , 10	Periodic Test :- I
July	Chapter -5: Magnetism and Matter	Current loop as a magnetic dipole , magnetic dipole moment of a revolving electron , Magnetic field intensity , Earth's magnetic field and magnetic elements.	14	Section :- A : Experiment No - 9	
	Chapter - 6 : Electromagnetic Induction	Magnetic induction , Faraday's laws , induced emf and current , Lenz's law , Eddy currents, self and mutual induction	12		PT-II
August	Chapter -7: Alternating Current	Alternating current , Circuits R - circuit , L- circuit , C- circuit and Series LCR - circuits , Peak and RMS values of current and voltage , Reactance and impedance , Resonance , AC generator and transformer	12		
	Chapter -8: Electromagnetic Waves	Electromagnetic Waves and it's characteristics and their transverse nature , Electromagnetic spectrum and their uses	6		Term -1 : Practical Exam :- Last week of August
September	Chapter -9: Ray Optics and Optical Instruments	Reflection of light , mirror and it's formula , Refraction of light , Total internal refraction and it's application , Refraction through spherical surfaces , lens & Lens makers formula , magnification , power of lens , combination of lens , Refraction and	6	Section :- B : Experiment No - 1 and 2	
	Chapter -10 : Wave Optics	Huygen's principle and verification of reflection and refraction using Huygen's principle , Interference and Young's double slit experiment ,	6		Term-1 Exam :- Chapter :- 1 to 8
October	Chapter -10 : Wave Optics	Diffraction and single slit experiment	2	Section :- B : Experiment No - 4 and 5	
	Chapter -11 : Dual Nature of Radiation and Matter	Dual nature of radiation , Photoelectric effect , Einstein's photoelectric equation , Matter wave , de Broglie relation ,	6	Section :- B : Experiment No - 3, 6 and 7	
	Chapter-12: Atoms	Alpha particle scattering effect , Rutherford's model of atom , Bohr's model , Energy levels and Hydrogen spectrum	6		
November	Chapter -13 : Nuclei	Composition and size of nucleus , Mass - energy decay relation , mass defect , Nuclear fission and fission	6		

	Chapter -14 : Semiconductor Electronics : Materials , Devices and Simple Circuits	Energy band theory in conductors , insulators and semi conductors , Formation of p- n junction diode , Depletion layer , drift and diffusion current , forward and reverse biasing and it's V-I characteristics , Diode as a rectifier special purpose diode : LED , Zener diode , photodiode , solar cell and their characteristics ,	16	Section :- A : Experiment No - 7 and 8	
December		Revision			Pre- Board
January					Sent-Up
February					
March					

BISHOP SCOTT BOYS' SCHOOL

COMMON ACADEMIC PLAN-SPLIT UP SYLLABUS SESSION :2020-21

CLASS-XII, SUBJECT :CHEMISTRY

Unit No.	Title	No. of Periods	MONTH
Unit I	Solid state	10	APRIL
Unit II	Solutions	12	MAY
Unit III	Chemical Kinetics	10	JUNE
Unit IV	Coordinate Compounds	08	JULY
Unit V	Electrochemistry	08	
Unit VI	Surface Chemistry	14	AUGUST
Unit VI	Haloalkane and haloarenes	12	SEPTEMBER
Unit VII	Alcohol,phenol,ether	12	
Unit VIII	Aldehyde,ketones,carboxylic acid	12	OCTOBER
Unit IX	Amines	12	
Unit X	Aldehydes, Ketones and Carboxylic Acids	6	NOVEMBER
Unit XI	p-block	6	
Unit XII	d and f block elements	4	
	REVISION		DECEMBER
	total	160	

References

-Ncert publication, Balaji publication, pradeep publication

I: Solutions (10 Periods)

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties – relative lowering of vapour pressure, Raoult's law, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor.

Unit II: Electrochemistry (12 Periods)

Redox reactions, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, fuel cells, corrosion.

Unit III: Chemical Kinetics (10 Periods)

Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment). Activation energy, Arrhenius equation.

Unit IV: Surface Chemistry (08 Periods)

Adsorption – physisorption and chemisorption, factors affecting adsorption of gases on solids, catalysis, homogenous and heterogenous activity and selectivity; enzyme catalysis colloidal state distinction between true solutions, colloids and suspension; lyophilic, lyophobic multi-molecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation, emulsion – types of emulsions.

Unit VI: p -Block Elements (14 Periods)

Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: Preparation, Properties and uses, classification of Oxides, Ozone, Sulphur – allotropic forms; compounds of Sulphur: Preparation Properties and uses of Sulphur-dioxide, Sulphuric Acid: industrial process of manufacture, properties and uses; Oxoacids of Sulphur (Structures only).

Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens, Preparation, properties and uses of Chlorine and Hydrochloric acid, interhalogen compounds, Oxoacids of halogens (structures only).
Group 18 Elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.

Unit VII: 'd' and 'f' Block Elements (12 Periods)

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$. Lanthanoids – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences.
Actinoids – Electronic configuration, oxidation states and comparison with lanthanoids.

Unit VIII: Coordination Compounds (12Periods)

Coordination compounds – Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative inclusion, extraction of metals and biological system).

Unit IX: Haloalkanes and Haloarenes (12 Periods)

Haloalkanes: Nomenclature, nature of C-X bond, physical and chemical properties, mechanism of substitution reactions, optical rotation.
Haloarenes: Nature of C-X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).
Uses and environmental effects of – dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Unit X: Alcohols, Phenols and Ethers (12 Periods)

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol.
Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.
Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

Unit XI: Aldehydes, Ketones and Carboxylic Acids (14 Periods)

Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.
Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

Unit XII: Organic compounds containing Nitrogen (12 Periods)

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.
Cyanides and Isocyanides – will be mentioned at relevant places in text.
Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry

Unit XIII: Biomolecules (12 Periods)

Carbohydrates – Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins -Elementary idea of – amino acids, peptide bond, polypeptides, proteins, structure of proteins – primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones – Elementary idea excluding structure. Vitamins – Classification and functions. Nucleic Acids: DNA and RNA.

Practicals

Evaluation Scheme for Examination	**Marks**
Volumetric Analysis	08
Salt Analysis	08
Content-Based Experiment	06
Project Work	04
Class record and viva	04
Total	30

COMMON ACADEMIC PLAN-SPLIT UP SYLLABUS SESSION : 2020-2021

Subject : BIOLOGY
Class XII

Month	Name of the Chapter with serial no	Sub Topic	Activities/ Practicals as per the Chapter	Mortion For PT/MT/ AE
April	Chapter-2: Sexual Reproduction in Flowering Plants	Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy,	A.1.Prepare a temporary mount to observe pollen germination ; Flowers adapted to pollination by different agencies (wind, insects, birds)Flowers adapted to pollination by different agencies (wind, insects, birds)	
	Chapter-3: Human Reproduction	Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).	Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice) ; T.S. of blastula through permanent slides (Mammalian).	
May	Chapter-4: Reproductive Health	Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).		
June	Chapter-5: Principles of Inheritance and Variation	Heredity and variation: Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in human being, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.	Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.	
July	Chapter-6: Molecular Basis of Inheritance	Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting	Prepare a temporary mount of onion root tip to study mitosis; Meiosis in onion bud cell or grasshopper testis through permanent slides	PT-2 ; Ch - 2,3,4,5
August	Chapter-8: Human Health and Diseases	Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse	Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images. Comment on symptoms of diseases that they cause	
	Chapter-10: Microbes in Human Welfare	Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.	Study the effect of different temperatures or three different pH on the activity of salivary amylase on starch	
September		MID TERM		Ch - 2,3,4,5,6,8,10
October	Chapter-11: Biotechnology - Principles and Processes	Genetic Engineering (Recombinant DNA Technolo	Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.	
	Chapter-12: Biotechnology and its Application	Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.		

November	Chapter-13: Organisms and Populations	Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution	Collect and study soil from at least two different sites and study them for texture, moisture content, pH and water holding capacity. Correlate with the kinds of plants found in them. 3. Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organism.	
	Chapter-15: Biodiversity and its Conservation	Biodiversity - Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.	Two plants and two animals (models/virtual images) found in xeric conditions. Comment upon their morphological adaptations; Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.	
December		PRE - BOARD		
January		SENT-UP		
February				
March				

BISHOP SCOTT BOYS' SCHOOL

CLASS-12TH SYLLABUS FOR SESSION 2020-21 SUBJECT-INFORMATICS PRACTICES (065)

MONTH	NAME OF THE CHAPTER WITH SERIAL NO	SUB-TOPICS	NO. OF PERIODS	ACTIVITES AS PER THE CHAPTER	PORTION FOR PT/MT/AE	ASSIGNMENTS IF REQUIRED
April	1.PYTHON PANDAS-1	INTRODUCTION OF PANDAS, DATA STRUCTURES , SERIES DATA STRUCTURE ,CREATING AND DISPLAYING A DATAFRAME, ADDDING,MODIFYING ROWS/COLUMNS VALUES IN DATAFRAMES,DELETING/RENAMING COLUMN AND BOOLEAN INDEXING				
MAY	2. PYTHON PANDAS-2	INTRODUCTION,ITERATION OVER A DATAFRAME, DESCRIPTIVE STATISTICS WITH PANDAS, BINARY OPERATIONS,HANDLING MISSING DATA ,FUNCTION GROUPBY(), COMBINING,ADVANCE OPERATION ON DATAFRAME AND FUNCITONS AND THEIR FUNCTIONALITY				
JUNE	3.PLOTTYING WITH PYPLOT	DATA VISUALIZATION PURPOSE OF PLOTTING; DRAWING AND SAVING FOLLOWING TYPES OF PLOTS USING MATPLOTLIB – LINE PLOT, BAR GRAPH, HISTOGRAM. CUSTOMIZING PLOTS: COLOR, STYLE (DASHED, DOTTED), WIDTH; ADDING LABEL, TITLE, AND LEGEND IN PLOTS.				
JULY	5. MYSQL SQL REVISION TOUR 6.MYSQL FUNCTIONS 7. QUERYING USING SQL	Database Query using SQL Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (),		**PT-1 CH-1,2,3,4**		

		RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME (). Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by.				
AUGUST	CHPATER-10 INTRODUCTION TO COMPUTER NETWORK	Introduction to Computer Networks Introduction to networks, Types of network: LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh. Introduction to Internet, URL, WWW and its applications- Web, email, Chat, VoIP. Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.				
SEPTEMBER	CH-10 INTRODUCTION TO INTERNET AND WEB CH-11 SOCIETAL IMPACTS AND	Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR),				

	DATA PROTECTION	plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management. Awareness about health concerns related to the usage of technology.				
NOV-DEC		REVISION AND PRE-BOARD				

1. Suggested Practical List

1.1 Data Handling

1. Create a pandas series from a dictionary of values and an ndarray
2. Given a Series, print all the elements that are above the 75th percentile.
3. Create a Data Frame quarterly sales where each row contains the item category, item name, and expenditure. Group the rows by the category, and print the total expenditure per category.
4. Create a data frame based on ecommerce data and generate descriptive statistics (mean, median, mode, quartile, and variance)
5. Create a data frame for examination result and display row labels, column labels data types of each column and the dimensions
6. Filter out rows based on different criteria such as duplicate rows..
7. Find the sum of each column, or find the column with the lowest mean.
8. Locate the 3 largest values in a data frame.
9. Subtract the mean of a row from each element of the row in a Data Frame.
10. Replace all negative values in a data frame with a 0.
11. Replace all missing values in a data frame with a 999.
12. Importing and exporting data between pandas and CSV file

13. Importing and exporting data between pandas and MySQL database

1.2 Visualization

14. Given the school result data, analyse the performance of the students on different parameters, e.g subject wise or class wise.
15. For the Data frames created above, analyze and plot appropriate charts with title and legend.
16. Take data of your interest from an open source (e.g. data.gov.in), aggregate and summarize it. Then plot it using different plotting functions of the Matplotlib library.

1.3 Data Management

17. Create a student table with the student id, name, and marks as attributes where the student id is the primary key.
18. Insert the details of a new student in the above table.
19. Delete the details of a particular student in the above table.
20. Use the select command to get the details of the students with marks more than 80.
21. Create a new table (order ID, customer Name, and order Date) by joining two tables (order ID, customer ID, and order Date) and (customer ID, customer Name, contact Name, country).
22. Create a foreign key in one of the two tables mentioned above
23. Find the min, max, sum, and average of the marks in a student marks table.
24. Find the total number of customers from each country in the table (customer ID, customer Name, country) using group by.
25. Create a new table (name, date of birth) by joining two tables (student id, name) and (student id, date of birth).
26. Write a SQL query to order the (student ID, marks) table in descending order of the marks.

1.4 Introduction to Computer Networks

27. Download, install and configure browser.

BISHOP SCOTT BOYS' SCHOOL

COMMON ACADEMIC PLAN- SPLIT UP SYLLABUS (SESSION: 2020-21)

CLASS: XII SUB: PHYSICAL EDUCATION

Month	Name of the Chapter with Serial No	Sub-Topics	Activities as per the Chapter	Portion for PT/MT/AE	Assignments if required
APRIL	Unit I Planning in Sports	Meaning & Objectives Of Planning Various Committees & its Responsibilities (pre; during & post) Tournament – Knock-Out, League Or Round Robin & Combination Procedure To Draw Fixtures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic)	**Sports House division of School**	**PT : Ch-1**	Write about various committees and explain it.
MAY	Unit II Sports & Nutrition	Balanced Diet & Nutrition: Macro & Micro Nutrients Nutritive & Non-Nutritive Components Of Diet	Diet control and balance diet .		Make a chart of

		Eating For Weight Control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance & Food Myths			vitamins and their roles .
JUNE	Unit III Yoga & Lifestyle	Asanas as preventive measures Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, Ardh Matsyendrasana Diabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana Asthema: Procedure, Benefits & contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Sharasana	**Yoga asanas**		Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.

JULY	Unit IV : Physical Education & Sports for CWSN (Children With Special Needs - Divyang	Concept of Disability & Disorder Types of Disability, its causes & nature (cognitive disability, intellectual disability, physical disability) Types of Disorder, its cause & nature (ADHD, SPD, ASD, ODD, OCD) Disability Etiquettes Strategies to make Physical Activities assessable for children with special need.	**Visit any local blind School .**	**PT : Ch - 2,3**	**Describe type of Disability**
AUGUST	Unit V : Children & Women in Sports	Motor development & factors affecting it. Exercise Guidelines at different stages of growth & Development. Common Postural Deformities - Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow Legs and Scoliosis and their corrective measures. Sports participation of women in India	**Motor skill exercise**	**Mid Term Ch- 1 2,3,4,5**	**Write about common postural deformities with diegram**
SEPTEMBER	Unit VI : Test & Measurement in Sports	Motor Fitness Test – 50 M Standing Start, 600 M Run/Walk, Sit & Reach, Partial Curl Up, Push Ups (Boys), Modified Push Ups (Girls), Standing Broad Jump, Agility – 4x10 M Shuttle	**Fitness test through Harvad step test .**		Procedure for administering Senior Citizen Fitness Test for 5 elderly family members

		Run o Measurement of Cardio Vascular Fitness – Harvard Step Test/Rockport Test - Computation of Fitness Index:– Rikli & Jones - Senior Citizen Fitness Test 1. Chair Stand Test for lower body strength 2. Arm Curl Test for upper body strength 3. Chair Sit & Reach Test for lower body flexibility 4. Back Scratch Test for upper body flexibility 5. Eight Foot Up & Go Test for agility 6. Six Minute Walk Test for Aerobic Endurance			
OCTOBER	Unit VII : Physiology & Injuries in Sports	Physiological factor determining component of Physical Fitness. Effect of exercise on Cardio Respiratory System. Effect of exercise on Muscular System. Sports injuries: Classification (Soft Tissue Injuries:(Abrasion, Contusion, Laceration, Incision, Sprain & Strain) Bone & Joint Injuries: (Dislocation,	**Cardio exercise**	**PT : Ch – 6 , 7**	**Draw a picture of** Respiratory System

		Fractures: Stress Fracture, Green Stick, Commutated · Physiological factor determining component of Physical Fitness Effect of exercise on Cardio Respiratory System Effect of exercise on Muscular System Sports injuries: Classification (Soft Tissue Injuries:(Abrasion, Contusion, Laceration, Incision, Sprain & Strain) Bone & Joint Injuries: (Dislocation, Fractures: Stress Fracture, Green Stick, Communated, Transverse Oblique & Impacted) Causes, Prevention& treatment			
NOVEMBER	Unit VIII Biomechanics & Sports	Meaning and Importance of Biomechanics in Sports Types of movements (Flexion, Extension, Abduction & Adduction) Newton's Law of Motion & its application in sports	**Types of Body movements in sports**		Fitness tests administration for all items.
DECEMBER	Unit IX Psychology & Sports	Personality; its definition & types – Trait & Types (Sheldon & Jung	**Group discussion**	**PT : Ch – 8,9**	**Write about exercise benefits and**

		Classification) & Big Five Theory Motivation, its type & techniques Meaning, Concept & Types of Aggressions in Sports			**explain the types of aggression in sports.**
JANUARY	Unit X Training in Sports	Strength – Definition, types & methods of improving Strength – Isometric, Isotonic & Isokinetic Endurance - Definition, types & methods to develop Endurance – Continuous Training, Interval Training & Fartlek Training Speed – Definition, types & methods to develop Speed – Acceleration Run & Pace Run Flexibility – Definition, types & methods to improve flexibility Coordinative Abilities – Definition & types			
FEBRUARY	**Revision**			**Annual Exam Ch - 6,7,8,9,10**	

Practical Max. Marks **30**

01. Physical Fitness Test - **6 Marks**

02. Proficiency in Games and Sports (Skill of any one Game of choice from the given list*)- 7 Marks

03. Yogic Practices - **7 Marks**

04. Record File ** - **5 Marks**

05. Viva Voce (Health/ Games & Sports/ Yoga) - **5 Marks**

*** Basketball, Football, Kabaddi, Kho-Kho, Volleyball, Handball, Hockey, Cricket, Bocce & Unified Basketball [CWSN (Children With Special Needs - Divyang)] **Record File shall include:**