B.Sc. (Computer Science)

Semester	Subject Code	Subject
Sem-I	B.Sc(CS)-101	Mathematics Paper–I: Algebra
Sem-I	B.Sc(CS)-102	Mathematics Paper–II: Calculus And Trigonometry
Sem-I	B.Sc(CS)-103	Physics Paper–A: Mechanics (Theory)
Sem-I	B.Sc(CS)-104	Physics Paper–B: Electricity And Magnetism (Theory)
Sem-I	B.Sc(CS)-105	Physics (Practical)
Sem-I	B.Sc(CS)-106	Computer Fundamental & Pc Software (Theory)
Sem-I	B.Sc(CS)-107	Computer Science (Practical)
Sem-I	B.Sc(CS)-108	General Punjabi/ Basic Punjabi
Sem-I	B.Sc(CS)-109	Communication Skills in English
Sem-III	B.Sc(CS)-301	Mathematics Paper–I: Analysis
Sem-III	B.Sc(CS)-302	Mathematics Paper–II: Analytical Geometry
Sem-III	B.Sc(CS)-303	Physics Paper-A Statistical Physics & Thermodynamics (Theory)
Sem-III	B.Sc(CS)-304	Physics Paper–B: Optics (Theory)
Sem-III	B.Sc(CS)-305	Physics (Practical)
Sem-III	B.Sc(CS)-306	Computer Science Computer Oriented Numerical And Statistical Methods (Theory)
Sem-III	B.Sc(CS)-307	Computer Oriented Numerical And Statistical Methods Lab. (Practical)
Sem-III	B.Sc(CS)-308	General Punjabi/ Basic Punjabi
Sem-III	B.Sc(CS)-309	Communication Skills in English
Sem-V	B.Sc(CS)-501	Mathematics Paper–I: Dynamics
Sem-V	B.Sc(CS)-502	Mathematics Paper–II: Number Theory
Sem-V	B.Sc(CS)-503	Physics Paper–A Condensed Matter Physics (Theory)
Sem-V	B.Sc(CS)-504	Physics Paper–B Electronics (Theory)
Sem-V	B.Sc(CS)-505	Physics (Practical)
Sem-V	B.Sc(CS)-506	Computer Science Data Base Management System & Oracle (Theory)
Sem-V	B.Sc(CS)-507	Computer Science Data Base Management System & Oracle (Practical)
Sem-V	B.Sc(CS)-508	General Punjabi/ Basic Punjabi
Sem-V	B.Sc(CS)-509	Communication Skills in English

LESSON PLAN B.SC (COMPUTER SCIENCE) SEMESTER-I
MATHEMATICS
PAPER–I: ALGEBRA

Topic-I

Topic	**Resources**	**Time**
Rank of a Matrix	K.B. Dutta: Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi (2002). H.S. Hall and S.R. Knight: Higher Algebra, H.M. Publications, 1994. Shanti Narayan: Text Book of Matrix	Two Weeks
Body of the lesson:. Linear independence of row and column vectors. Row rank, Column rank of a matrix, Equivalence of column and row ranks, Nullity of matrix		
Conclusion: Students will be able to learn the basics of rank of a matrix. Assignment on Question of Rank of a matrix.		

Topic-II

Topic	Resources	Time
Linear equations Cayley Hamilton theorem	K.B. Dutta: Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi (2002). H.S. Hall and S.R. Knight: Higher Algebra, H.M. Publications, 1994. Chandrika Parsad: Text book on Algebra and Theory of Equations, Pothishala Pvt. Ltd., Allahabad. Shanti Narayan: Text Book of Matrix	Three Weeks
Body of the lesson:. Applications of matrices to a system of linear (both homogeneous and non–homogeneous) equations. Theorems on consistency of a system of linear equations. Eigen values, Eigen vectors, minimal and the characteristic equation of a matrix. Cayley Hamilton theorem and its use in finding inverse of a matrix		
Conclusion: Students will be able to learn to solve linear (both homogeneous and non–homogeneous) equations.		

Topic-III

Topic	Resources	Time
Quadratic Forms	K.B. Dutta: Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi (2002). H.S. Hall and S.R. Knight: Higher Algebra, H.M. Publications, 1994. Chandrika Parsad: Text book on Algebra and Theory of Equations, Pothishala Pvt. Ltd., Allahabad. Shanti Narayan: Text Book of Matrix	Three Weeks
Body of the lesson:. Quadratic Forms, quadratic form as a product of matrices. The set of quadratic forms over a field. Congruence of quadratic forms and matrices. Congruent transformations of matrices. Elementary congruent transformations. Congruent reduction of a symmetric matrix. Matrix Congruence of skew–symmetric matrices. Reduction in the real field. Classification of real quadratic forms in variables. Definite, semi–definite and indefinite real quadratic forms. Characteristic properties of definite, semi–definite and indefinite forms.		
Conclusion: Students will learn classification of real quadratic forms in variables. Assignment on Quadratic Forms		

Topic-IV

Topic	Resources	Time
Solution of cubic and biquadratic equations	H.S. Hall and S.R. Knight: Higher Algebra, H.M. Publications, 1994. Chandrika Parsad: Text book on Algebra and Theory of Equations, Pothishala Pvt. Ltd., Allahabad. Shanti Narayan: Text Book of Matrix	Four Weeks
Body of the lesson:. Relations between the roots and coefficients of general polynomial equation in one variable. Transformation of equations and symmetric function of roots, Descarte's rule of signs, Newton's Method of divisors, Solution of cubic equations by Cardon method, Solution of biquadratic equations by Descarte's and Ferrari's Methods		
Conclusion: Students will be able to solve various equations		

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER-I
MATHEMATICS
PAPER–II: CALCULUS AND TRIGONOMETRY

Topic-I

Topic	Resources	Time
Real number system	ErwinKreyszig: AdvancedEngineeringMathematics, John Wiley and Sons, 1999.	Three Weeks
Body of the lesson:. Real number system and its properties, lub, glb of sets of real numbers.		
Conclusion: Students will be able to learn the basics of real number system and its properties . Assignment on lub and glb of real numbers and inequalities		

Topic-II

Topic	Resources	Time
Limit and Continuity	N. Piskunov: Differential and Integral Calculus, Peace Publishers, Moscow.. Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999.	Two Weeks
Body of the lesson:. limit of a function, Basic properties of limits, Continuous functions and classification of discontinuities, Uniform continuities		
Conclusion: Students will be able to learn the use of limit and continuity . Assignment on limit ,continuity and uniform continuity		

Topic-III

Topic	Resources	Time
Differentiation	N. Piskunov: Differential and Integral Calculus, Peace Publishers, Moscow. Gorakh Prasad: Differential Calculus, Pothishala Pvt. Ltd., Allahabad. Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999.	Two Weeks
Body of the lesson:. Differentiation of hyperbolic functions, Successive differentiation, Leibnitz theorem		
Conclusion: Students will be able to learn the use of Leibnitz theorem to find higher order derivatives Assignment on successive differentiation		

Topic-IV

Topic	Resources	Time
Taylor's and Maclaurin's theorem , Indeterminate forms	Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999.	Two Weeks
Body of the lesson:. Taylor's and Maclaurin's theorem with various forms of remainders, Indeterminate forms		
Conclusion: Students will be able to learn the use of Taylor's and Maclaurin's theorem with various forms of remainders, Indeterminate forms Assignment on Linear indeterminate forms		

Topic-V

Topic	Resources	Time
De–Moivre's Theorem Summation of series	Gorakh Prasad: Differential Calculus, Pothishala Pvt. Ltd., Allahabad. Erwin Kreyszig: AdvancedEngineering Mathematics, John Wiley and Sons, 1999.	Four Week
Body of the lesson: De–Moivre's Theorem and its applications, circular and hyperbolic functions and their inverses. Exponential and Logarithmic function of a complex numbers, Expansion of trigonometric functions, Gregory's series, Summation of series. .		
Conclusion: Students will be able to learn the use De-Moivre's theorem and its applications. Assignment on Questions related to above topics.		

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER- I

PAPER-A MECHANICS

Topic	Notes/Strategies/ Resources	Time
Coordinate Systems	• Students will learn about basics ideas of different coordinate systems • Cartesian System • Spherical System • Polar Coordinates • Area, volume, velocity, acceleration in these systems • Solid angle • Conservation Laws • Relationship of Laws • Symmetries of space and time ✓ Modern's Analytical Mechanics by Satish K. Gupta ✓ Mechanics, Berkeley Vol – I by C. Kittle	15 Days
Central forces and Kepler Laws	• Students will gain knowledge about various forces in nature • Centre of mass • Equivalent one body problem • Central forces • Equation of motion under central force • Equation of orbit • Turning Points • Kepler Laws • Concept of ether • Michelson – Morley Experiment ✓ Modern's Analytical Mechanics by Satish K. Gupta ✓ Mechanics, Berkeley Vol – I by C. Kittle	20 Days
Frames of reference & Transformations	• Students will learn about what is Inertial and non – Inertial frame of reference	10 Days

	• Galilean transformation • Invariance • Coriolis force, its applications • Variation of acceleration due to gravity with latitude • Focault pendulum ✓ Modern's Analytical Mechanics by Satish K. Gupta ✓ Mechanics, Berkeley Vol – I by C. Kittle	
Rotational motion & Elastic collisions	• Elastic collision in CM and Lab systems • Velocity • Angles • Energies • Cross section of elastic scattering • Rutherford scattering • Rigid body motion • Rotational motion • Principal moments and axes • Euler's equations • Precession • Elementary Gyroscope ✓ Modern's Analytical Mechanics by Satish K. Gupta ✓ Mechanics, Berkeley Vol – I by C. Kittle	15 Days

LESSON PLAN B.SC.(COMPUTE SC.) SEMESTER - I

PAPER-B ELECTRICITY & MAGNETISM

Topic	Notes/Strategies/ Resources	Time
Vector Calculus	• Students will learn about basics ideas of vectors • Gradient • Divergence • Curl • Physical significance of vector calculus • Laplacian in rectangular, cylindrical, spherical coordinates ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	3 Days
Electric Field & Coulomb's Law	• Students will gain knowledge about what is Coulumb's Law • Point charges • Continuous distribution of charges • Applications of Coulumb's Law • Electric field due to dipole, line charge, sheet of charge ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	5 Days
Electric Flux & Gauss's Law	• Students will learn about what is electric flux • Gauss's Law, its applications • Gauss's Divergence Theorem • Differential form of Gauss's Law • Green's Theorem	5 Days

	✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	
Work & Potential Difference	• Students will study about what is work and potential difference • Line Integral of field • Potential difference as line integral of field ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	5 Days
Electric Potential & Stoke's Theorem	• Students will gain knowledge about electric potential due to various charge distributions • Point charge • Group of point charges • Dipole moment • Quadrupole moment • Long uniformly charged wire • Charged disc • Stoke's theorem, its applications ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	7 days
Calculation of Electric field	• Electric field calculations due to various charge distributions • Gradient of scalar potential • Point charge field • Field due to dipole • Arbitrary charge distributions • Multipole moments • Curl of electric field	10 Days

	• Field from potential • Applications in electrostatic field ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	
Poisson & Laplace Equation	• Students will gain knowledge about Poisson and Laplace's equation • Solutions of equations in Cartesian, spherical coordinates • Concept of electrical images ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	5 Days
Electric Potential & Current Density	• Students will learn about how to calculate potential due to various charge distributions • Point Charge • Dipole • Quadrupole • Infinite conducting sheet • Current • Current density ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	5 Days
Continuity Equation & Ohm's Law	• Students will have understanding of Ohm's Law • Microscopic form of law • Conductivity • Equation of conductivity • Failure of Ohm's Law	5 days

	• Invariance of charge ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	
Field in different frames	• Students will understand about E in different frames of reference • Field of a point charge moving with constant velocity • Interaction between moving charges • Force between parallel currents ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	5 Days
E & B - various parameters	• Students will be acquainted with behaviour of various substances in magnetic field • M & H • Free and bound currents • Permeability • Susceptibilty • Orbital motion of electrons • Diamagnetism ✓ Modern's Electricity & Magnetism by Ashok Sharma ✓ Introduction to Classical Electrodynamics by David Griffith	10 Days

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-I

COMPUTER FUNDAMENTALS AND PC SOFTWARE

Topic	Notes/Strategies/ Resources	Time
Introduction to Computers and its Applications	• Students will Learn About What is Computer? • Characteristics of Computer • Applications of Computers • Various Functional Units of Computer along with diagram ✓ From Computer Fundamentals by PK Sinha	1 week
Hardware and Software	• What is hardware and Software? • Milestones in Hardware and Software ✓ From Computer Fundamentals by Unimax publications	2 Days
Types of Applications	• Students will gain knowledge about various types of Applications • Batch Applications • Online Applications • Real Time Applications ✓ From fundamentals of Information Technology by Anshuman Sharma	1 Day
Input Devices	• Students will be Acquainted with what are input devices and different types of input devices • Text Input Devices • Graphical Input Devices • Cursor Control Input Devices • Vision Input Systems ✓ From Windows Based Computer Courses by Gurvinder Singh and Rachpal singh ✓ From Computer Fundamentals By PK Sinha ✓ Through Powerpoint Presentation	10 Days

Output Devices	• Students will Learn about What are Output devices and various types of output devices • Monitors • Raster Scan and random Scan Systems • CRT Monitors • Colour Monitors • Printers and various types of printers (Character, Line , page) • Plotters • Voice Response Units ✓ From Windows Based Computer Courses by Gurvinder Singh and Rachpal singh ✓ From Computer Fundamentals By PK Sinha ✓ Through Powerpoint Presentation	10 Days
Data Storage Devices	• Students will be acquainted with what is Computer Memory? • Primary Storage(RAM, ROM, Cache) • SRAM and DRAM • Secondary storage(Magnetic and optical) ✓ From Windows Based Computer Courses by Gurvinder Singh and Rachpal singh ✓ From Computer Fundamentals By PK Sinha ✓ Through Powerpoint Presentation	5 Days
Introduction to Windows based Operating System	• Students will learn about Windows Operating System • Features of windows operating system • Anatomy of Window • Operations on Window • Desktop • Icons • Taskbar • Recycle Bin • Network places • My Computer Icon • Folder • Shortcut • Control panel ✓ From Windows Based Computer Courses by Gurvinder Singh and Rachpal singh	5 Days

MS- Word	• Students will be acquainted with what is word processing? • Features of a Good Word processor • Anatomy of MS- Word Window • Creating, Saving and opening File • Importing and Exporting Files • Formatting Pages, paragraphs and sections • Indents and Outdents • Creating Lists and Numbering • Changing Styles, Font and Font Size • Editing Text • Finding and replacing text • Page Break and Section Break • Book Marks • Inserting Symbols and dates • Using tabs • Creating tables and various operations on Tables • Header and Footer • Printing ✓ From fundamentals of Information Technology by Anshuman Sharma	15 Days
MS- Powerpoint	• Students will learn about Features of powerpoint • Anatomy of Ms-powerpoint window • Creating Presentation • Saving Presentation • Opening presentation • Inserting Audio and Video ✓ From fundamentals of Information Technology by Anshuman Sharma	10 Days

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER -I

BASIC PUNJABI

ਜਾਣ ਪਛਾਣ	ਇਸ ਵਿਚ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਦੀ ਮੁੱਢਲੀ ਸਿਖਿਆ ਦਿੱਤੀ ਜਾਵੇਗੀ ਤਾਂ ਜੋ ਉਹ ਪੰਜਾਬੀ ਦੀ ਵਰਣਮਾਲਾ ਅਤੇ ਸ਼ਬਦ ਬਣਤਰ ਨੂੰ ਚੰਗੀ ਤਰ੍ਹਾਂ ਸਮਝ ਸਕਣ	ਸਮਾਂ
ਵਿਆਕਰਨ	1.ਪੈਂਤੀ ਅੱਖਰੀ 2.ਪੈਰ ਵਿਚ ਬਿੰਦੀ ਵਾਲੇ ਅੱਖਰ 3.ਲਗਾਂ ਮਾਤਰਾਂ	1-6 ਦਿਨ
ਨਿਸ਼ਕਰਸ਼	ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੈਂਤੀ ਅੱਖਰੀ ਬਾਰੇ ਨੋਟ ਲਿਖਣ ਲਈ ਦਿੱਤਾ ਜਾਵੇਗਾ ਕਲਾਸ ਵਿਚ ਪੈਂਤੀ ਅੱਖਰੀ ਦਾ ਟੈਸਟ ਲਿਆ ਜਾਵੇਗਾ	1-6 ਦਿਨ
ਵਿਆਕਰਨ	ਲਗਾਖਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਅੱਖਰ	1-6 ਦਿਨ
ਨਿਸ਼ਕਰਸ਼	ਪੈਂਤੀ ਅੱਖਰੀ ਦੀ ਤਰਤੀਬ ਅਤੇ ਬਣਤਰ ਬਾਰੇ ਪ੍ਰਸ਼ਨ ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਅੱਖਰਾਂ ਬਾਰੇ ਕਲਾਸ ਟੈਸਟ ਲਿਆ ਜਾਵੇਗਾ	1-6 ਦਿਨ
ਵਿਆਕਰਨ	ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹਾਂ ਦੀ ਵਰਤੋਂ ਨਾਂਵ ਪੜਨਾਂਵ, ਵਿਸ਼ੇਸ਼ਣ	1-6 ਦਿਨ
ਨਿਸ਼ਕਰਸ਼	ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹਾਂ ਬਾਰੇ ਕਲਾਸ ਟੈਸਟ ਲਿਆ ਜਾਵੇਗਾ	1-3 ਦਿਨ
ਵਿਆਕਰਨ	ਕਿਰਿਆ ਲਿੰਗ ਅਤੇ ਵਚਨ	1-3 ਦਿਨ
ਨਿਸ਼ਕਰਸ਼	ਲਿੰਗ ਅਤੇ ਵਚਨ ਬਾਰੇ ਕਲਾਸ ਟੈਸਟ ਲਿਆ ਜਾਵੇਗਾ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਨਾਂਵ ਪੜਨਾਂਵ ਬਾਰੇ ਨੋਟ ਲਿਖਣ ਲਈ ਦਿੱਤਾ ਜਾਵੇਗਾ	1-6 ਦਿਨ
ਵਿਆਕਰਨ	ਕਵਰਗ, ਚਵਰਗ,ਤਵਰਗ,ਪਵਰਗ	1-6 ਦਿਨ
ਨਿਸ਼ਕਰਸ਼	ਕਵਰਗ, ਚਵਰਗ,ਤਵਰਗ,ਪਵਰਗ ਬਾਰੇ ਵਿਸਤਾਰ ਵਿਚ ਚਰਚਾ ਅਤੇ ਅਭਿਆਸ ਕਰਵਾਇਆ ਜਾਵੇਗਾ ਇਮਤਿਹਾਨਾਂ ਦੀ ਤਿਆਰੀ ਕਰਵਾਈ ਜਾਵੇਗੀ	1-3 ਦਿਨ

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-I

GENERAL PUNJABI

ਆਤਮਅਨਾਤਮ ਗਿਅਾਨਮਾਲਾ ਨਿਸ਼ਕਰਸ਼	ਵਿਦਿਆਰਥੀਆਂਇਸਸਮੈਸਟਰਵਿੱਚਇਸਪਾਠਪੁਸਤਕਵਿੱਚੋਂਕਵਿਤਾ ਵਾਲਾਭਾਗਕਰਵਾਇਆਜਾਵੇਗਾ। 1. ਪ੍ਰੋਮੋਹਣਸਿੰਘ ੧ ਪਹੀਆਪ੍ਰੂਸ਼ਣ 1.ਸੈਦਾਂਤੇਸਬਜਾਂ ੨.ਖਾਨਗਾਹੀਦੀਵਾਬਾਲਦੀਏ ਕਵਿਤਾਵਾਦਾਵਿਸ਼ੈਗਤਸਰੋਕਾਰਾਂਦਾਅਧਿਅੈਨਕਰੋ	ਸਮਾਂ 1-3 ਦਿਨ 1-3 ਦਿਨ
ਆਤਮਅਨਾਤਮ ਗਿਆਨਮਾਲਾ ਨਿਸ਼ਕਰਸ਼	2ਅਮ੍ਰਿਤਾਪ੍ਰੀਤਮ 2.ਭਰੂਣਹੱਤਿਆਦੇਦੇਸ਼ਵਿੱਚ ੧ਅਮ੍ਰਿਤਾਪ੍ਰੀਤਮਦੀਆਂਕਵਿਤਾਵਾਂਅੰਨਦਾਤਾਅਤੇਅੱਜਆਖਾਂਵਾਰਿਸ ਸ਼ਾਹਨੂੰਦੇਥੀਮਿਕਸਰੋਕਾਰਾਂ ਦਾ ਅਧਿਐਨ ਕਰੋ ੨ ਭਰੂਣਹੱਤਿਆਦੇਦੇਸ਼ਵਿਚਨਿਬੰਧਦਾਸਾਰਆਪਣੇਸ਼ਬਦਾਂਵਿੱਚਲਿਖੋ।	1-3 ਦਿਨ 1-3 ਦਿਨ
ਆਤਮਮਅਨਾਤਮ ਗਿਆਨਮਾਲਾ ਨਿਸ਼ਕਰਸ਼	੩ਸ਼ਿਵਕੁਮਾਰਬਟਾਲਵੀ ੩ ਨਾਰੀਸ਼ਕਤੀ 1ਲੂਣਾਅਤੇਜੀਚਾਹੇਪੰਛੀਹੋਜਾਵਾਂਕਵਿਤਾਵਾਂਦਾਵਿਸੇਵਸਤੂਤਿਆਰਕਰ ਵਾਇਆਗਿਆ। ੨ਨਾਰੀਸ਼ਕਤੀਨਿਬੰਧਦਾਵਿਸ਼ਾਵਸਤੂਤਿਆਰਕਰਵਾਇਆਜਾਵੇਗਾ।	1-3 ਦਿਨ 1-3 ਦਿਨ

ਆਤਮਅਨਾਤਮ ਗਿਆਨਮਾਲਾ ਨਿਸ਼ਕਰਸ਼	੪ ਸੁਰਜੀਤਪਾਤਰ ੪ਵਾਤਾਵਰਣੀਪ੍ਰਦੂਸ਼ਣਅਤੇਮਨੁੱਖ ੧ਸੁਰਜੀਤਪਾਤਰਦੀਆਂਕਵਿਤਾਵਾਂਹੁਣਘਰਾਂਨੂੰਪਰਤਣਆਂਅਤੇਸੁੰਨੇਸੁੰਨੇ ਰਾਹਾਂ ‘ਤੇਕੋਈਕੋਈਪੈੜਹੈਦਾਨਕਸਲੀਦ੍ਰਿਸ਼ਟੀਤੋਂਮੁਲਾਂਕਣਕੀਰਾਜਾਵੇਗਾ। ੨ ਵਾਤਾਵਰਣੀਪ੍ਰਦੂਸ਼ਣਅਤੇਮਨੁੱਖਨਿਬੰਧਦਾਸਾਰਲਿਖੋ।	1-3 ਦਿਨ 1-3 ਦਿਨ
ਆਤਮਅਨਾਤਮ ਗਿਆਨਮਾਲਾ ਨਿਸ਼ਰਕਰਸ਼	5ਪਾਸ਼ ਪਏਡਜ ੧ ਪਾਸ਼ਦੀਆਂਕਵਿਤਾਵਾਂਇਨਕਾਰਅਤੇਮੇਰੇਤੋਂਆਸਨਾਕਰਿਓਕਵਿਤਾਵਾਂ ਦਾਨਕਸਲੀਲਹਿਰਦੇਪਰਿਪੇਖਵਿੱਚਅਧਿਐਨ। ੨ਏਡਜਨਿਬੰਧਦਾਸਾਰਆਪਣੇਸ਼ਬਦਾਂਵਿੱਚਲਿਖੋ।	1-3 ਦਿਨ 1-3 ਦਿਨ
ਵਿਆਕਰਨ ਪੈਰਾਰਚਨਾ ਨਿਸ਼ਕਰਸ਼	1 ਪੰਜਾਬੀਧੁਨੀਵਿਉਂਤ ੳ.ਸਵਰਦੀਪਰਿਭਾਸ਼ਾ ਅ. ਸਵਰਦੀਆਂਕਿਸਮਾਂ ੲ. ਉਚਾਰਨਅੰਗ ਪੈਰਾਰਚਨਾਕੀਹੈ? ਚੰਗੀਪੈਰਾਰਚਨਾਦੇਗੁਣ। 1ਸਵਰਉਪਰਨੋਟਲਿਖੋ। 2ਵਿਦਿਆਰਥੀਅਤੇਅਨੁਸ਼ਾਸਨਦੇਵਿਸ਼ੇ ‘ਤੇਪੈਰਾਰਚਨਾਕਰੋ	1-4 ਦਿਨ 1-3 ਦਿਨ
ਵਿਆਕਰਨ ਅਣਡਿੱਠਾਪੈਰਾ ਨਿਸ਼ਕਰਸ਼	ਸ.ਵਿਅੰਜਨਦੀਪਰਿਭਾਸ਼ਾ ਹਵਿਅੰਜਨਦੀਆਂਕਿਸਮਾਂ ਕਸੁਰਪ੍ਣਾਲੀ ਅਣਡਿੱਠਾਪੈਰੇਦਾਅਭਿਆਸਕਰਵਾਇਆਜਾਵੇਗਾ। ਧੁਨੀਵਿਉਂਤਉਪਰਨੋਟਲਿਖੋ।	1-5 ਦਿਨ 1-3 ਦਿਨ

ਵਿਅ◌ਾਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਪੰਜਾਬੀਭਾਸ਼ਾਅਤੇਉਪਭਾਸ਼ਾ ੳ.ਭਾਸ਼ਾਅਤੇਉਪਭਾਸ਼ਾਵਿਚਅੰਤਰ ਅ.ਭਾਸ਼ਾਵੰਨਗੀਆਂ ਏਪੰਜਾਬੀਦੀਆਂਉਪਭਾਸ਼ਾਵਾਂਅਤੇਉਹਨਾਂਦੇਪਛਾਣਚਿਨ ਸਟਕਸਾਲੀਭਾਸ਼ਾ ਭਾਸ਼ਾਅਤੇਉਪਭਾਸ਼ਾਦੇਅੰਤਰਨੂੰਸਪਸ਼ੱਟਕਰਦੇਹੋਏਉਪਭਾਸ਼ਾਵਾਂਦੇਪਛਾਣਚਿੰਨਨਿਸ਼ਚਿਤਕਰੋ	1-6 ਦਿਨ
ਵਿਅ◌ਾਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਮਾਤਭਾਸ਼ਾ ੳ.ਮਾਤਭਾਸ਼ਾਕੀਹੁੰਦੀਹੈ? ਅ,ਮਾਤਭਾਸ਼ਾਪੜਨੀਕਿਓਜਰੂਰੀਹੈ? ਏ. ਮਾਤਭਾਸ਼ਾਦੇਅਧਿਐਨਦੀਆਂਕੀਸਮੱਸਿਆਵਾਂਹਨ? ਮਾਤਭਾਸ਼ਾਦੇਅਧਿਐਨ ‘ਤੇਨੋਟਲਿਖੋ|	1-5 ਦਿਨ
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਦੂਜੀਭਾਸ਼ਾ ੳ. ਦੂਜੀਭਾਸ਼ਾਕੀਹੁੰਦੀਹੈ? ਅਦੂਜੀਭਾਸ਼ਾਪੜਨੀਕਿਓਜਰੂਰੀਹੈ? ਏਦੂਜੀਭਾਸ਼ਾਦੇਅਧਿਐਨਦੀਆਂਸਮੱਸਿਆਵਾਂ ‘ਤੇਨੋਟਲਿਖੋ ਦੂਜੀਭਾਸ਼ਾ‘ਤੇਨੋਟਲਿਖੋ਼	1-4 ਦਿਨ

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-I
ENGLISH

July 2017

Contents	Books	Plan	Activity	Assignment
1.Short stories	Tales of life	Story no. 1	Reading in class	Tests from each textbook carrying 10 marks each
2.Essays	PROSE FOR YOUNG LEARNERS	Essay no. 1	Oral tests	
3.Grammar	English Grammar in use by Raymond Murphy	Unit 1 to 5	Practice of exercises given	

August 2017

Books	Plan	Activity	Assignment
Tales of life	Story no. 1 & 2	Loud reading	Class tests and oral revision
Prose for young learners	Essay no. 2	Discussion of back exercises	
English Grammar	Unit 6 to12	Practice of grammar	

September 2017

Books	Plan	Activity	Assignment
Tales of life	Story no. 5	Back exercises to be discussed	Regular class tests and composing of long questions
Prose for young learners	Essay no. 3 & no.5	Back exercise to be discussed	
English grammar	Unit 13 to 30	Practice of grammar exercises	

October 2017

Books	Plan	Activity	Assignment
Tales of life	Story no. 6	Back exercises to be discussed	Long questions based on syllabi and test of complete grammar exercises
Prose for young learners	Essay no. 6	Reading of essays thoroughly	
English grammar	Unit 31 to 48	Practice of grammar	

November 2017

Books	Plan	Activity
3 Books	Discussion on current affairs	Class tests
	University examination preparation	Revision

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-III

MATHEMATICS

PAPER–I: ANALYSIS

Topic-I

Topic	**Resources**	**Time**
Sequence	1.Malik, S.C.: Mathematical Analysis, Wiley Eastern Ltd. (1991). 2. Apostal, T.M.: Mathematical Analysis, Addison Wesley Series in Mathematics (1974). 3. Narayan, S.: Integral Calculus, Sultan Chand & Sons	Three Weeks
Introduction: In thistopic, we discuss the basic ideas involved in sequences and convergence. We start by defining sequences and follow by explaining convergence and divergence, bounded sequences, continuity, and subsequences. Relevant theorems		
Body of the lesson: Definition of a sequence. Theorems on limits of sequences. Bounded and monotonic sequences. Cauchy's convergence criterion.		
Conclusion : Students will be able to learn the use of Sequences , Convergence and divergence of sequences Assignment on convergence of seqnence and subsequences, Cauchy sequences		

Topic-II

Topic	**Resources**	**Time**
Series	1.Malik, S.C.: Mathematical Analysis, Wiley Eastern Ltd. (1991). 2. Apostal, T.M.: Mathematical Analysis, Addison Wesley Series in Mathematics (1974). 3. Narayan, S.: Integral Calculus, Sultan Chand & Sons	Three Weeks
Introduction: It is a concept of convergence of series of real numbers and of continuous functions of a real variable.		
Body of the lesson: Series of non-negative terms. Comparison tests. Cauchy's integral tests. Ratio tests. Cauchy's root test. Raabe's test, logarithmic test. Demorgan's and Bertrand's tests. Kummer's test, Cauchy Condensation test, Gauss test, Alternating series. Leibnitz's test, absolute and conditional convergence.		
Conclusion: Students will be able to calculate the sum of series with different tests .		

Topic-III

Topic	Resources	Time
Riemann integrability	1.Malik, S.C.: Mathematical Analysis, Wiley Eastern Ltd. (1991). 2. Apostal, T.M.: Mathematical Analysis, Addison Wesley Series in Mathematics (1974). 3. Narayan, S.: Integral Calculus, Sultan Chand & Sons	Three Weeks
Introduction: In this topic, students will learn what a Riemann sum is and be given a step-by-step procedure of how to formulate them. They will also learn how to calculate both upper and lower Riemann sums. A formal definition of a definite integral will be discussed and students will learn and use integral notation – integrand, limits of integration, variable of integration, and what it means for an integral to be Riemann integrable		
Body of the lesson: Partitions, Upper and lower sums. Upper and lower integrals, Riemann integrability. Conditions of existence of Riemann integrability of continuous functions and of monotone functions. Algebra of integrable functions.		
Conclusion: The purpose of this lesson is to define definite integrals using Riemann sums. By doing this, students will truly understand how integrals work rather than just learning a formula. They will also learn many properties of the definite integral which will help them to perform their integrations faster.		

Topic-IV

Topic	Resources	Time
Improper integrals	Shanti Narayan : A course of Mathematical Analysis. 2. Apostol, T.M. : Mathematical Analysis 2nd Edition 7.18(Th.7.30&7.31)	Three weeks
Introduction: An improper integral is a definite integral that has either or both limits infinite or an integrand that approaches infinityat one or more points in the range of integration.		
Body of the lesson: Improper integrals and statements of their conditions of existence. Test of the convergence of improper integral, beta and gamma functions.		
Conclusion: Students will be able to calculate improper integral using different methods Assignment related to the topic.		

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-III

PAPER–II: ANALYTICAL GEOMETRY

Topic-I

Topic	Resources	Time
Transformation of axes	1.Gorakh Prasad and H.C. Gupta: Text Book on Coordinate Geometry. 2. S.L. Loney: The Elements of Coordinate Geometry, Macmillan and Company, London. 3. Narayan, S.: Analytical Solid Geometry, Sultan Chand & Sons (2005).	Two Weeks
Body of the lesson: Transformation of axes, shifting of origin, Rotation of axes, The invariants, Joint equation of pair of straight lines, equations of bisectors		
Conclusion: Students will learn to shift the origin and rotation of axis		

Topic-II

Topic	Resources	Time
Parabola	1.Gorakh Prasad and H.C. Gupta: Text Book on Coordinate Geometry. 2. S.L. Loney: The Elements of Coordinate Geometry, Macmillan and Company, London. 3. Narayan, S.: Analytical Solid Geometry, Sultan Chand & Sons (2005).	Three Weeks
Body of the lesson: Parabola and its properties. Tangents and normal, Pole and polar, pair of tangents at a point, Chord of contact, equation of the chord in terms of midpoint and diameter of conic.		
Conclusion : Students will be able to learn about parabola. Assignment on the related topic.		

Topic-III

Topic	Resources	Time
Ellipse and hyperbola	1.Gorakh Prasad and H.C. Gupta: Text Book on Coordinate Geometry. 2. S.L. Loney: The Elements of Coordinate Geometry, Macmillan and Company, London. 3. Narayan, S.: Analytical Solid Geometry, Sultan Chand & Sons (2005).	Three Weeks
Body of the lesson: Ellipse and hyperbola with their properties. Tangents and normal, Pole and polar. pair of tangents at a point, Chord of contact,		
Conclusion: Students will be able to learn various conics.		

Topic-IV

Topic	Resources	Time
Identifications of curves Change of axes	1.Narayan, S.: Analytical Solid Geometry, Sultan Chand & Sons (2005). 2. Kreyszig, E.: Advanced Engineering Mathematics. 3.Thomos, G.B. and Finney, R.L.: Calculus and Analytic Geometry.	One week
Body of the lesson : Identifications of curves represented by second degree equation (including pair of lines). Intersection of three planes, condition for three planes to intersect in a point or along a line or to form a prism. Change of axes, Shift of origin, rotation of axes.		
Conclusion: Students will be able to learn how to identify and rough sketch of the curves.		

Topic-V

Topic	Resources	Time
Sphere	1.Narayan, S.: Analytical Solid Geometry, Sultan Chand & Sons (2005). 2. Kreyszig, E.: Advanced Engineering Mathematics. 3.Thomos, G.B. and Finney, R.L.: Calculus and Analytic Geometry.	Two weeks
Body of the lesson : Sphere, Section of a sphere by a plane, spheres of a given circle. Intersection of a line and a sphere. Tangent line, tangent plane, power of a point w.r.t. a shpere, radical planes.		
Conclusion: Students will be able to learn sphere and radical planes Assignment related to the topic		

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER - III

PAPER-A STATISTICAL PHYSICS & THERMODYNAMICS

Topic	Notes/Strategies/ Resources	Time
Statistical Physics	• Students will learn about basics ideas of statistical physics • Scope • Effects of constraints on the system ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	2 Days
Probability & Equilibrium	• Students will gain knowledge about what is thermodynamic probability • Equilibrium state of dynamic sytem • Basic ideas about probability • Macrostates • Microstates • Deviation from the state of maximum probability ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	5 Days
Distribution of particles	• Distribution of n particles in two compartments • Distribution of four distinguishable particles into compartments of equal size • Distribution of distinguishable n particles in k compartments of unequal sizes ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	5 Days
Classical & Quantum Statistics	• Students will study about three kinds of statistics • Phase space and division Into elementary cells • Maxwell Boltzmann statistics • Ideal gas in equilibrium • Experimental verification of law of distribution of molecular speeds • Need for Quantum statistics • Bose – Einstein statistics • Fermi – Dirac statistics • Planck's law of radiation • Wien's displacement law • Stefan's law • Comparison of MB, BE and FD statistics ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	15 Days

Entropy	• Students will learn about statistical definition of entropy • Change of entropy of system • Additive nature of entropy • Law of increase of entropy • Increase in entropy in natural processes ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	10 Days
Processes and disorder	• Reversible Processes • Irreversible Processes • Work done in reversible process • Entropy and disorder ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	4 Days
Carnot Cycle & Thermodynamics	• Students will gain knowledge about laws of thermodynamics • Carnot cycle • Entropy changes in carnot cycle • Applications of thermodynamics to thermoelectric effect • Change of entropy along reversible path in P-V diagram • Heat death of universe ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	8 Days
Maxwell Thermodynamics	• Derivation of Maxwell thermodynamic relations • Cooling produces by adiabatic stretching • Adiabatic compression • Change of internal energy with volume • Specific heat • Specific heat at constant pressure and volume • Expression for specific heats • Change of state • Claypron equation ✓ PV's Statistical Physics and Thermodynamics by V.K Sharma ✓ A Treatise on Heat by M.N Saha & B.N Srivastava	10 Days

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER - III

PAPER-B OPTICS

Topic	Notes/Strategies/ Resources	Time
Interference of light	• Students will learn about basics ideas of superposition of light waves • Interference • Young's double slit experiment • Distribution of intensity • Conditions for sustained interference pattern • Coherent sources of light • Temporal Coherence • Spatial Coherence • Mathematical analysis of temporal coherence • Interference pattern by division of wave front • Fresnel biprism • Fresnel double mirror • Lloyd's single mirror • Displacement of fringes ✓ PV's Optics and lasers by V.K Sharma ✓ Optics by Ajoy Ghatak	15 Days
Interference by division of amplitude	• Students will gain knowledge about change of phase on reflection • Interference in thin films due to reflected and transmitted light • Need for extended source for interference by division of amplitude • Fringes of equal inclination and equal thickness • Non reflecting films • Newton's rings • Michelson Interferometer • Fabry Perot interferometer and etalon • Distribution of intensity in fabry perot fringes ✓ PV's Optics and lasers by V.K Sharma ✓ Optics by Ajoy Ghatak	10 Days

Diffraction	• Students will study in detail about following topics – • Huygen's fresnel theory • Half period zones • Zone plate • Fresnel diffraction • Fraunhoffer diffraction • Frannhoffer diffraction at rectangular and circular apertures • Optical imaging • Resolving power of telescope in diffraction grating • Resolving power of microscope • Resolving power of fabry – perot interferometer • Spectroscopy ✓ PV's Optics and lasers by V.K Sharma ✓ Optics by Ajoy Ghatak	20 Days
Polarization	• Students will study about polarized light • Plane polarized • Elliptically polarized • Wire grid polarizer • Sheet polarizer • Malus Law • Brewester Law • Polarization by reflection • Scattering • Double Reflection • Nicol prism • Retardation plates • Production analysis of polarized light • Quarter plates • Half wave plates ✓ PV's Optics and lasers by V.K Sharma ✓ Optics by Ajoy Ghatak	15 Days

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER-III

COMPUTER ORIENTED NUMERICAL AND STATISTICAL METHODS

Topic	Notes/Strategies/ Resources	Time
Introduction	• Students will learn about what is Numerical methos? • Numerical methods versus Numerical Analysis • Errors and types of Errors • Measures of Errors • Significant Digits • Machine Epsilon • Error Propagation ✓ Numerical methods and Statistical techniques By Anshuman Sharma ✓ Numerical Methods by BS Grewal	5 Days
Non Linear Equations	• Students will gain knowledge about what are non linear Equations • Methods of finding solution of non-linear equations • Various Iterative Methos • Order of convergence of iterative methods • Terminating Criteria for iterative methods • Bisection Method • False position Method • Newton Raphson method ✓ Numerical Methods by BS Grewal ✓ Numerical methods and Statistical techniques By Anshuman Sharma	10 Days
Linear Equations	• Students will learn about what are linear equations • Methods of solving simultaneous equations • Guass Elimination Method • Guass Jordan method • Guass seidel Method • Matrix Inversion Method ✓ Numerical Methods by BS Grewal ✓ Numerical methods and Statistical techniques By Anshuman Sharma	10 Days

Interpolation	• Students will study about what is interpolation and its need? • Types of finite differences • Interpolation with equal intervals • Newton's forward difference Method • Newton's backward difference method • Interpolation with unequal intervals • Newton's divided difference method ✓ Numerical Methods by BS Grewal ✓ Numerical methods and Statistical techniques By Anshuman Sharma	10 Days
Numerical Integration	• Students will gain knowledge about various numerical integration formulas • Trapezoidal Rule • Simpson's 1/3 Rule • Simpson's 3/8 Rule • Comparison between different methods of integration ✓ Numerical Methods by BS Grewal ✓ Numerical methods and Statistical techniques By Anshuman Sharma	8 days
Measures of Central Tendency	• Students will be acquainted with different kinds of measures of central tendency • Preparing Frequency distribution table • Arithmetic Mean • Geometric Mean • Harmonic Mean • Median • Mode • Difference between mean, median , mode ✓ Numerical methods and Statistical techniques By Anshuman Sharma	15 Days
Measures of Dispersion	• Students will gain knowledge on various measures of dispersion • Range • Mean Deviation • Standard Deviation • Co-efficient of variation ✓ Numerical methods and Statistical techniques By Anshuman Sharma	10 Days

Skewness, moments and Kurtosis	• Students will learn about what is skewness, Moments and Kurtosis and their types • Measures of Skewness • Measures of moments • Measures of Kurtosis ✓ Numerical methods and Statistical techniques By Anshuman Sharma	10 Days
Correlation Analysis	• Students will have understanding of What is Correlation and Regression and their types • Correlation in bivariate distribution • Correlation in multivariate distribution ✓ Numerical methods and Statistical techniques By Anshuman Sharma	5 days
Regression Analysis	• Students will understand about regression and types of regression analysis • LinearRegression • Multiple Regression • Uses of Regression Analysis • Limitations of Regression Analysis ✓ Numerical methods and Statistical techniques By Anshuman Sharma	5 Days
Trend Analysis	• Students will be acquainted with various methods of calculating curve Fitting • Least Square Method • Linear Trend • Non- Linear Trend • Polynomial Fit ✓ Numerical methods and Statistical techniques By Anshuman Sharma ✓	5 Days

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-III

BASIC PUNJABI

ਜਾਣ – ਪਛਾਣ ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਇਸਵਿਚਵਿਦਿਆਰਥੀਆਂਨੂੰਪੰਜਾਬੀਦੀਮੁਢਲੀਸਿਖਿਆਦਿੱਤੀਜਾਵੇਗੀਤਾਂ ਜੋ ਉਹਪੰਜਾਬੀਦੀਵਰਣਮਾਲਾਤੇਸ਼ਬਦ–ਬਣਤਰਨੂੰਚੰਗੀਤਰਾਂਸਮਝਸਕਣ। 1.ਵਿਆਕਰਨਕਇਕਾਈਆਂਦੀਪਛਾਣਤੇਵਰਤੋਂ2.ਵਾਕਅੰਸ਼ ਤੇਵਰਗੀਕਰਨ 3.ਉਪਵਾਕ ਤੇਵਰਗੀਕਰਨ ਵਿਦਿਆਰਥੀਆਂਨੂੰਵਾਕਅੰਸ਼ਤੇ ਨੋਟ ਲਿਖਣਲਈਦਿੱਤਾਜਾਵੇਗਾ। ਕਲਾਸਵਿੱਚਉਪਵਾਕਦਾਟੈਸਟਲਿਆਜਾਵੇਗਾ।	ਸਮਾਂ 1-3(ਦਿਨ) 1-3ਦਿਨ) 1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	1. ਵਾਕਤੇਵਰਗੀਕਰਨ 2.ਨਿੱਜੀਚਿੱਠੀਪੱਤਰ.ਦਫਤਰੀਚਿੱਠੀਪੱਤਰ 1.ਵਾਕਉੱਤੇ ਨੋਟ ਲਿਖਣਲਈਦਿੱਤਾਜਾਵੇਗਾ। 2.ਨਿੱਜੀ ਚਿੱਠੀਪੱਤਰਦਾਟੈਸਟਲਿਆਜਾਵੇਗਾ।	1-6(ਦਿਨ) 1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	1.ਅਖਾਣ ਮੁਹਾਵਰੇ 2.ਪੈਰਾ ਅਧਾਰਿਤਪ੍ਰਸ਼ਨਾਂਦੇਉੱਤਰ(ਅਣਡਿੱਠਾਪੈਰਾ) 3.ਪੈਰ੍ਹਾ ਰਚਨਾ 1.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰਪੈਰ੍ਹਾਰਚਨਾਲਿਖਣਲਈਦਿੱਤਾਜਾਵੇਗਾ। ਕਲਾਸਵਿੱਚਅਖਾਣਮੁਹਾਵਰਿਆਂਦਾਟੈਸਟਲਿਆਜਾਵੇਗਾ।	1-3(ਦਿਨ) 1-3(ਦਿਨ) 1-3(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	1.ਸੰਖੇਪਰਚਨਾ 2.ਨਿੱਜੀਚਿੱਠੀਪੱਤਰ.ਦਫਤਰੀਚਿੱਠੀਪੱਤਰ 1.ਸੰਖੇਪਰਚਨਾਉੱਤੇ ਨੋਟ ਲਿਖਣਲਈਦਿੱਤਾਜਾਵੇਗਾ। ਦਫਤਰੀਚਿੱਠੀਪੱਤਰਦਾਕਲਾਸਵਿੱਚਟੈਸਟਲਿਆਜਾਵੇਗਾ।	1-3(ਦਿਨ) 1-6(ਦਿਨ)
ਵਿਆਕਰਣ ਨਿਸ਼ਕਰਸ਼	1.ਵਾਕ,ਉਪਵਾਕ,ਵਾਕਅੰਸ਼ 2. ਸੰਖੇਪਰਚਨਾ, ਪੈਰ੍ਹਾਰਚਨਾ 3.ਅਣਡਿੱਠਾਪੈਰਾ ਪੇਪਰਾਂਦੀਤਿਆਰੀਕਰਵਾਈਜਾਵੇਗੀ।	1-3(ਦਿਨ) 1-3(ਦਿਨ) 1-3(ਦਿਨ)

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-III

GENERAL PUNJABI

ਜਾਣ – ਪਛਾਣ ਕਵਿ–ਕੀਰਤੀ ਨਿਸ਼ਕਰਸ਼	ਇਸਸਮੈਸਟਰਵਿਚਵਿਦਿਆਰਥੀਆਂਨੂੰਕਵਿਤਾ,ਇਕਾਂਗੀਅਤੇਵਿਆਕਰਨਪੜਾਈਜਾਵੇਗੀ। 1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ 4.ਸੰਦੇਸ਼ 1.ਭਾਈ ਵੀਰਸਿੰਘਦੀਆਂਸੱਤਕਵਿਤਾਵਾਂਪੜਾਈਆਂਜਾਣਗੀਆਂ। ਕਵਿਤਾਵਾਂਦੇਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂ ਕਰਵਾਏਜਾਣਗੇ।	ਸਮਾਂ 1-6(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਆਧੁਨਿਕਇਕਾਂਗੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪਾਤਰ–ਚਿਤਰਨ 1.ਸੁਹਾਗ 1.ਸੁਹਾਗ ਇਕਾਂਗੀਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਲਿਖੋ। 2.ਮੇਲੋਦਾਪਾਤਰ–ਚਿਤਰਨਕਰੋ।	 1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਭਾਸ਼ਾਵੰਨਗੀਆਂ ਭਾਵਅੰਸ਼ਦੀਪਰਿਭਾਸ਼ਾ ਭਾਵਅੰਸ਼ਦਾਵਰਗੀਕਰਨ ਕਲਾਸਵਿੱਚਵਿਆਕਰਨਦਾਟੈਸਟਵੀਲਿਆਜਾਵੇਗਾ। ਵਿਦਿਆਰਥੀਆਂਨੂੰਸ਼ਬਦਜੋੜਾਂਦਾਅਭਿਆਸਵੀਕਰਵਾਇਆਜਾਵੇਗਾ। 1.ਭਾਵਅੰਸ਼ ਉੱਤੇ ਨੋਟ ਲਿਖੋ	1-6(ਦਿਨ) 1-2(ਦਿਨ) 1-2(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਕਵਿ–ਕੀਰਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ 4.ਸੰਦੇਸ਼ 1.ਧਨੀ ਰਾਮਚਾਤ੍ਰਿਕਅਤੇਪੂਰਨਸਿੰਘਦੀਆਂ ਛੇ ਕਵਿਤਾਵਾਂਪੜਾਈਆਂਜਾਣਗੀਆਂ। ਕਵਿਤਾਵਾਂਦੀਪ੍ਰਸੰਗਸਹਿਤਵਿਆਖਿਆਕਰਨੀਹੈ।	 1-6(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਆਧੁਨਿਕਇਕਾਂਗੀ 	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪਾਤਰ–ਚਿਤਰਨ 1.ਜਫਰਨਾਮਾ	

ਨਿਸ਼ਕਰਸ਼	ਜਫਰਨਾਮਾਇਕਾਂਗੀਦਾ ਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਲਿਖੋ ਤੇਔਰੰਗਜੇਬਪਾਤਰ–ਚਿਤਰਨਕਰੋ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਭਾਸ਼ਾਵੰਨਗੀਆਂ ਸ਼ਬਦਦੀਪਰਿਭਾਸ਼ਾ ਸ਼ਬਦਦਾਵਰਗੀਕਰਨ ਕਲਾਸਵਿੱਚਵਿਆਕਰਨਦਾਟੈਸਟਵੀਲਿਆਜਾਵੇਗਾ। ਵਿਦਿਆਰਥੀਆਂਨੂੰਸ਼ਬਦਜੋੜਾਂਦਾਅਭਿਆਸਵੀਕਰਵਾਇਆਜਾਵੇਗਾ। 1.ਸ਼ਬਦਉੱਤੇ ਨੋਟ ਲਿਖੋ।	1-6(ਦਿਨ) 1-2(ਦਿਨ) 1-2(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਕਵਿ–ਕੀਰਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ 4.ਸੰਦੇਸ਼ 1.ਦੀਵਾਨ ਸਿੰਘਕਾਲੇਪਾਣੀਅਤੇਮੋਹਨਸਿੰਘਦੀਆਂ ਅੱਠ ਕਵਿਤਾਵਾਂਪੜਾਈਆਂਜਾਣਗੀਆਂ। ਕਵਿਤਾਵਾਂਦੀਪ੍ਰਸੰਗਸਹਿਤਵਿਆਖਿਆਕਰਨੀਹੈ।	1-8(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਆਧੁਨਿਕਇਕਾਂਗੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪਾਤਰ–ਚਿਤਰਨ 1.ਬੰਬ ਕੇਸ 1.ਬੰਬ ਕੇਸ ਇਕਾਂਗੀਦਾ ਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਲਿਖੋ। 2.ਵੀਰਾਂ ਵਾਲੀਦਾਪਾਤਰ–ਚਿਤਰਨਕਰੋ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਭਾਸ਼ਾਵੰਨਗੀਆਂ ਵਾਕਅੰਸ਼ਦੀਪਰਿਭਾਸ਼ਾ ਵਾਕਅੰਸ਼ਦਾਵਰਗੀਕਰਨ ਕਲਾਸਵਿੱਚਵਿਆਕਰਨਦਾਟੈਸਟਵੀਲਿਆਜਾਵੇਗਾ। ਵਿਦਿਆਰਥੀਆਂਨੂੰਸ਼ਬਦਜੋੜਾਂਦਾਅਭਿਆਸਵੀਕਰਵਾਇਆਜਾਵੇਗਾ। 1.ਵਾਕਅੰਸ਼ ਉੱਤੇ ਨੋਟ ਲਿਖੋ	1-6(ਦਿਨ) 1-2(ਦਿਨ) 1-2(ਦਿਨ)

ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਕਵਿ-ਕੀਰਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ-ਵਸਤੂ 3.ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ 4.ਸੰਦੇਸ਼ 1,ਅਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮਅਤੇਪ੍ਰੀਤਮਸਿੰਘਸਫੀਰਦੀਆਂਸੱਤਕਵਿਤਾਵਾਂਪੜਾਈਆਂਜਾਣਗੀਆਂ। ਕਵਿਤਾਵਾਂਦੀਪ੍ਰਸੰਗਸਹਿਤਵਿਆਖਿਆਕਰਨੀਹੈ।	1-8(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਆਧੁਨਿਕਇਕਾਂਗੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ-ਵਸਤੂ 3.ਪਾਤਰ-ਚਿਤਰਨ 1.ਕਵਿਤਾਵਾਂ 2.ਜਫਰਨਾਮਾਂ 3.ਬੰਬਕੇਸ ਇਹਨਾਂਦੇਕਲਾਸਟੈਸਟ ਲਏ ਜਾਣਗੇ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਭਾਸ਼ਾਵੰਨਗੀਆਂ ਉਪਵਾਕਦੀਪਰਿਭਾਸ਼ਾ ਉਪਵਾਕਦਾਵਰਗੀਕਰਨ ਵਾਕਅਤੇਉਪਵਾਕਅੰਤਰਅਤੇਸੰਬੰਧ। ਉਪਵਾਕਉੱਤੇ ਨੋਟ ਲਿਖੋ। ਅਕਤੂਬਰਮਹੀਨੇਵਿੱਚਪੇਪਰ ਲਏ ਜਾਣਗੇ।	1-6(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਕਵਿ-ਕੀਰਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ-ਵਸਤੂ 3.ਪ੍ਰਸੰਗ ਸਹਿਤਵਿਆਖਿਆ 4.ਸੰਦੇਸ਼ 1.ਬਾਵਾ ਬਲਵੰਤਦੀਆਂਪੰਜਕਵਿਤਾਵਾਂਪੜਾਈਆਂਜਾਣਗੀਆਂ। ਕਵਿਤਾਵਾਂਦੇਸਾਰ/ਵਿਸ਼ਾ-ਵਸਤੂ ਕਰਵਾਏਜਾਣਗੇ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਭਾਸ਼ਾਵੰਨਗੀਆਂ ਵਾਕਦੀਪਰਿਭਾਸ਼ਾ ਵਾਕਦਾਵਰਗੀਕਰਨ ਵਾਕਅਤੇਉਪਵਾਕਅੰਤਰਅਤੇਸੰਬੰਧ। ਵਾਕਉੱਤੇ ਨੋਟ ਲਿਖੋ। ਨਵੰਬਰਮਹੀਨੇਵਿੱਚਪੇਪਰ ਲਏ ਜਾਣਗੇ।	1-6(ਦਿਨ)

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-III

ENGLISH

July 2017

Contents	Books	Plan	Activity	Assignment
1. Vocabulary & textual Ex.	**Making connections**	First half of Unit 1	Group discussions	Surprise tests on regular basis
2. Poetry	**Moments in time**	Poem no. 1 & 2		
3. Grammar	**English Grammar in use by Murphy**	Unit 98 to101		

August 2017

Books	Plan	Activity	Assignment
Making Connections	Completion of Unit 1	Critical appreciation of poems to be discussed	Long questions based on poems
Moments in time	Poem no. 3		
English Grammar in use by Murphy	Unit 102 to120		

September 2017

Books	Plan	Activity	Assignment
Making connections	First half of Unit 2	Class tests	Discussion of grammar in class
Moments in time	Poems no. 4 and 5		
English Grammar in use by Murphy	Unit102 to120		

October 2017

Books	Plan	Activity	Assignment
Making connections	Completion of Unit 2	Discussion of themes of all the poems	Class tests of full syllabi
Moments in time	Poem 6		
English Grammar in use by Murphy	Unit 132 to145		

November 2017

Books	Plan	Activity
3 Books	Discussion on Composition	Class tests
	University examination preparation	Revision

LESSON PLAN B.SC.(COMPUTER SC.)SEMESTER-V
MATHEMATICS
PAPER–I: DYNAMICS

Topic-I

Topic	Resources	Time
Rectilinear motion with uniform acceleration	S.R.Gupta: A text book of Dynamics 2. F. Chorlton: Dynamics.	One Week
Body of the lesson:. Rectilinear motion in a starlight line with uniform acceleration		
Conclusion: Students will be able to learn to solve the problems of Rectilinear motion in a starlight line with uniform acceleration		

Topic-II

Topic	Resources	Time
Newton's laws of motion	S.R.Gupta: A text book of Dynamics F. Chorlton: Dynamics.	Four Weeks
Body of the lesson:. Newton's laws of motion. Motion of two particles connected by a string. Motion along a smooth inclined plane		
Conclusion: Students will be able to understand Newton's laws of motion Assignment on questions related to motion of two particles connected by a string, motion along a smooth inclined plane		

Topic-III

Topic	Resources	Time
Variable acceleration. Simple Harmonic Motion	S.R.Gupta: A text book of Dynamics F. Chorlton: Dynamics. S.L. Loney: An Elementary Treatise on the Dynamics of a Practice and of Rigid Bodies, Cambridge University Press, 1956.	Two Weeks
Body of the lesson: Rectilinear motion in a starlight line with Variable acceleration. Simple Harmonic Motion		
Conclusion: Students will be able to learn the topics of variable acceleration Assignment on questions of Simple Harmonic Motion		

Topic-IV

Topic	Resources	Time
Projectiles	S.R.Gupta: A text book of Dynamics F. Chorlton: Dynamics.	Three Weeks
Body of the lesson:. Curvilinear motion of particle in a plane, Definition of velocity and acceleration, projectiles		
Conclusion: Students will be able to understand Curvilinear motion of particle in a plane		

Topic-V

Topic	Resources	Time
Oscillations Work, Power and Energy	S.R.Gupta: A text book of Dynamics 2. F. Chorlton: Dynamics. 3. S.L. Loney: An Elementary Treatise on the Dynamics of a Practice and of Rigid Bodies, Cambridge University Press, 1956.	Three Week
Body of the lesson: Oscillations: Free Vibrations, Simple Pendulum, Conical Pendulum. Work, Power and Energy: Kinetic and Potential energy, Conservative forces. Theorem of conservation of energy. Work done against gravity.		
Conclusion: Students will be able to learn the concept of Oscillations and Work, Power and Energy		

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER-V
MATHEMATICS
PAPER–II: NUMBER THEORY

TOPIC-I

Topic	**Resources**	**Time**
The division algorithm The Euclidean alogrithm	D. Burton: Elementary Number Theory, Sixth Edition, McGraw-Hill. Niven and Zuckerman: An Introduction to Number Theory, Wiley 1972	Three Weeks
Body of the lesson:. Divisibility &its properties ,use of principle of mathematical induction, The division algorithm, The greatest common divisor: Definition &various properties, Euclid's lemma least common multiple, The Euclidean algorithm ,the method of calculating gcd		
Conclusion: Students will be able to learn the basics of the basic concepts of divisibility &greatest common divisor Assignment on greatest common divisor, least common multiple		

Topic-II

Topic	**Resources**	**Time**
Prime numbers ,Linear congruences	D. Burton: Elementary Number Theory, Sixth Edition, McGraw-Hill. Niven and Zuckerman: An Introduction to Number Theory, Wiley 1972	Three Weeks
Body of the lesson:. The Diophantine equation ax + by = c &the method of solving Diophantine equation ,Prime numbers and their distribution, Euclid's theorem , Betrand's conjecture,Goldbach's conjecture, The fundamental theorem of arithmetic, Basic properties of congruences , Linear congruences, Special divisibility tests, Residue modulo n, complete residue system, reduced residue modulo n,congruent &incongruent solutions ,method of solving linear congruences		
Conclusion: Students will be able to learn prime numbers & various properties and method of solving linear congruences		

Topic-III

Topic	**Resources**	**Time**
Linear congruences	D. Burton: Elementary Number Theory, Sixth Edition, McGraw-Hill. Niven and Zuckerman: An Introduction to Number Theory, Wiley 1972	Two Weeks
Body of the lesson:. Chinese remainder theorem, The Fermat's theorem, Wilson's theorem ,solving various congruences with the help of above theorems		
Conclusion: Students will be able to solve various congruences Assignment on Linear congruences		

Topic-IV

Topic	**Resources**	**Time**
Arithmethic functions	D. Burton: Elementary Number Theory, Sixth Edition, McGraw-Hill.Niven and Zuckerman: An Introduction to Number Theory, Wiley 1972	Two Weeks
Body of the lesson:. σ and τ functions, , Mobius function,Mobius Inversion formula, Greatest integer function,Multiplicative function,E.Merter's Lemma		
Conclusion: Students will be able to learn various arithmethic functions Assignment on arithmethic functions		

Topic-V

Topic	**Resources**	**Time**
Euler's Phi function	D. Burton: Elementary Number Theory, Sixth Edition, McGraw-Hill. Niven and Zuckerman: An Introduction to Number Theory, Wiley 1972	Two Week
Body of the lesson: Euler's function, Euler's Phi function, Euler's theorem, some properties of the Phi Function, solving linear congruences using Euler's theorem , Gauss theorem		
Conclusion: Students will learn solve some congruences using Euler's theorem Assignment onEuler' function .		

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER -V

PAPER-A CONDENSE MATTER PHYSICS

Topic	Notes/Strategies/ Resources	Time
Crystal Structure	• Students will learn about basics ideas of crystal structure • Symmetry operations • Two dimensional crystal • Three dimensional crystal • Two dimensional bravais lattices • Three dimensional bravais lattices • Basic primitive cells • Crystal planes • Miller Indices • Diamond structure • NaCl structure ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Introduction to Solid State Physics by C. Kittel	10 Days
Crystal Diffraction	• Students will gain knowledge about what is crystal diffraction • Bragg's Law • Experimental methods for crystal structure studies • Laue equations • Reciprocal lattices of SC, BCC, FCC • Bragg's law in reciprocal lattice • Brillouin zones and its construction in two and three dimensions • Structure factor • Atomic form factor ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Introduction to Solid State Physics by C. Kittel	15 Days

Lattice Vibrations	• Students will learn about what are lattice vibrations • Concepts of phonons • Scattering of photons by phonons • Vibrations • Monoatomic linear chains • Density of modes • Specific heat • Einstein model of specific heat • Debye model of specific heat ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Introduction to Solid State Physics by C. Kittel	15 Days
Electron models of metals	• Students will study about what is free electron model of metals • Free electrons • Fermi gas • Fermi energy • Band theory • Kronig – penney model • Metals • Insulators • Conductivity • Variation in conductivity with temperature in semiconductors • Fermi levels • Intrinsic semiconductors • Extrinsic semiconductors • Band gap ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Introduction to Solid State Physics by C. Kittel	20 Days

LESSON PLAN B.SC. (COMPUTER SC.) SEMESTER - V

PAPER-B ELECTRONICS

Topic	Notes/Strategies/ Resources	Time
P – n Junction and related parameters	• Students will learn about concepts of current and voltage sources • P- n junction • Biasing of diode • V-I characteristics • Zener diode • Rectification • Half wave rectifiers • Full wave rectifiers • Bridge rectifiers • Filter Circuits (LC and Pi) • Efficiency • Ripple factor • Voltage regulation ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Principles of electronics by V.K Mehta	15 Days
Junction Transistors	• Students will gain knowledge about what is a junction transistor • Structure of transistors • Working relation between different currents • Sign conventions • Amplifying action • Different configurations of a transistor • Comparison of various configurations • CB characteristics • CE characteristics • Structure and characteristics of JFET • Transistor biasing • Stabalization of operating point • Voltage divider biasing circuit ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers	20 Days

Amplifiers	• Students will learn about working of CE amplifier • Amplifier analysis using h-parameters • Equivalent circuits • Current gain • Power gain • Input impedance • FET amplifier • Voltage gain • Feedback in amplifiers • Advantages of negative feedback • Emitter follower as negative feedback circuit ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Principles of electronics by V.K Mehta	15 Days
Oscillators	• Students will study about oscillations • Barkausen criterion of sustained oscillations • LC Oscillators • Tuned collector oscillator • Tuned base Hartley • RC Oscillators • Phase shift oscillator • Wein bridge ✓ Electronics and Solid State Devices by S.Vikas & Co. ✓ Electronics and Solid State Devices by Modern Publishers ✓ Principles of electronics by V.K Mehta	10 Days

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER- V

DBMS

Topic	Notes/Strategies/ Resources	Time
Database	Students will learn about • what is data, information • Database, DBMS • Components of database • Manual File system • Traditional File System • Advantage and disadvantage of database system • Database languages, • Three level architecture of database • DBA, Responsibilities of DBA. Database Concepts by Korth	10 Days
Data model	Students will gain knowledge about different models • Hierarchical Model • Network Model • Relational Model • Concept of keys • Integrity Constraints Database Concepts by CJ Date	7 Days
Relational Algebra and Calculus	Students will learn about what • Traditional operators • Special Operators • Domain Calculus • Tuple Calculus Database Concepts by Korth	10 Days
Normalization	Students will study about • what is Normalisation • Need for normalization • First Normal Form • Second Normal Form • Third Normal Form • BCNF • Fourth Normal Form • Fifth Normal Form Database Concepts by CJ Date	10 Days

Database Security	Students will gain knowledge about • Security • Integrity • Protection • Recovery(Log based and shadow Paging) Database Concepts by CJ Date	8 days
Concurrency Control	Students will be acquainted with • Need for concurrent access • Locking • Graph based • Time stamp based technique Database Concepts by Korth	10 Days
SQL	• Introduction to Oracle 10 g • Features of Oracle 10 g • SQL – DDL, DML, DCL. • Join methods & Sub query, • Union, Intersection • Built in Functions, • View • Security amongst users • Sequences, • indexing object Database Concepts by Korth	15 Days
PL/SQL	• Introduction to PL/SQL. • Cursors – Implicit & Explicit. • Procedures, • Functions • Packages. • Database Triggers. Database Concepts by Korth	15 Days

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-V

GENERAL PUNJABI

ਜਾਣ – ਪਛਾਣ ਜੱਗ–ਬੀਤੀਹੱਡ–ਬੀਤੀ ਨਿਸ਼ਕਰਸ਼	ਇਸਕਿਤਾਬਵਿਚੋਂਵਿਦਿਆਰਥੀਆਂਨੂੰਕਹਾਣੀਆਂਪੜਾਈਆਂਜਾਣੀਆਂਹਨ। 1.ਨਿਕੀ ਕਹਾਣੀਦੀਜਾਣ–ਪਛਾਣ। 2.ਹਲਵਾਹ ਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 3. ਕੁਲਫੀਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 1.ਹਲਵਾਹ 2. ਕੁਲਫੀਕਹਾਣੀਦਾਸਾਰ।	ਸਮਾਂ 1-6(ਦਿਨ)
ਗੱਦ–ਪ੍ਰਵਾਹ ਨਿਸ਼ਕਰਸ਼	1.ਗੰਡਾ ਸਿੰਘ 2.ਨਾਟਕ ਦੀਨਕੜਦਾਦੀ ਇਨ੍ਹਾਂਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਪਾਤਰ–ਚਿਤਰਨਵਿਦਿਆਰਥੀਆਂਨੂੰਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 1.ਗੰਡਾ ਸਿੰਘਦਾਪਾਤਰਚਿਤਰਨ। 2.ਨਾਟਕ ਦੀਨਕੜਦਾਦੀਵਿਸ਼ਾ–ਵਸਤੂਲਿਖੋ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਨਾਂਵਵਾਕੰਸ਼ 1.ਨਾਂਵ ਵਾਕੰਸ਼ਦੀਪਰਿਭਾਸ਼ਾ 2.ਨਾਂਵ ਵਾਕੰਸ਼ਦੇਤੱਤ 3.ਨਾਂਵ ਵਾਕੰਸ਼ਦਾਵਰਗੀਕਰਨ 1.ਨਾਂਵ ਵਾਕੰਸ਼ਉੱਤੇ ਨੋਟ ਲਿਖੋ 2.ਕਲਾਸ ਵਿੱਚਵਿਦਿਆਰਥੀਆਂਨੂੰ ਦੋ ਹਿੱਸਿਆਂਵਿੱਚਵੰਡਕੇਵਿਆਕਰਨਸੰਬੰਧੀਪ੍ਰਤੀਯੋਗਤਾਕਰਵਾਈਜਾਵੇਗੀ।	1-6(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਜੱਗ–ਬੀਤੀਹੱਡ–ਬੀਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3. ਛੋਟੇ ਪ੍ਰਸ਼ਨਉੱਤਰ 1.ਸਫੈਦਪੋਸ਼ ਕਹਾਣੀਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 2.ਇਕ ਸਧਾਰਨਆਦਮੀਕਹਾਣੀਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 1. ਸਫੈਦਪੋਸ਼ਕਹਾਣੀਦਾਸਾਰ 2. ਇਕਸਧਾਰਨਆਦਮੀਕਹਾਣੀਦਾਵਿਸ਼ਾ–ਵਸਤੂਲਿਖੋ।	1-6(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ	1.ਸਾਰ	

	2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪਾਤਰ–ਚਿਤਰਨ 4. ਛੋਟੇ ਪ੍ਰਸ਼ਨਉੱਤਰ	
ਗੱਦ–ਪ੍ਰਵਾਹ ਨਿਸ਼ਕਰਸ਼	1.ਪੂਰਨ ਸਿੰਘ 2.ਨਿੱਕੀ ਕਹਾਣੀਦਾਬਾਦਸ਼ਾਹ ਇਨ੍ਹਾਂਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਪਾਤਰ–ਚਿਤਰਨਵਿਦਿਆਰਥੀਆਂਨੂੰਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 1.ਪੂਰਨ ਸਿੰਘਦਾਪਾਤਰਚਿਤਰਨ। 2.ਨਿੱਕੀ ਕਹਾਣੀਦਾਬਾਦਸ਼ਾਹਵਿਸ਼ਾ–ਵਸਤੂਲਿਖੋ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ ਨਿਸ਼ਕਰਸ਼	ਮੇਲਤੇਅਧਿਕਾਰ 1.ਮੇਲ ਤੇਅਧਿਕਾਰਦੀਪਰਿਭਾਸ਼ਾ 2.ਮੇਲਤੇਅਧਿਕਾਰਦੇਤੱਤ 3. ਮੇਲਤੇਅਧਿਕਾਰਵਰਗੀਕਰਨ 1.ਮੇਲ ਤੇਅਧਿਕਾਰਉੱਤੇ ਨੋਟ ਲਿਖੋ। 2.ਕਲਾਸ ਵਿੱਚਵਿਦਿਆਰਥੀਆਂਨੂੰ ਦੋ ਹਿੱਸਿਆਂਵਿੱਚਵੰਡਕੇਵਿਆਕਰਨਸੰਬੰਧੀਪ੍ਰਤੀਯੋਗਤਾਕਰਵਾਈਜਾਵੇਗੀ।	1-6(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਜੱਗ–ਬੀਤੀਹੱਡ–ਬੀਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3. ਛੋਟੇ ਪ੍ਰਸ਼ਨਉੱਤਰ 1.ਕਸ਼ਟ ਨਿਵਾਰਨਕਹਾਣੀਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ। 2.ਪੈਰ੍ਹਾ ਰਚਨਾਕਰਵਾਈਜਾਵੇਗੀ। 1.ਤਿੰਨ ਪੈਰ੍ਹਾਰਚਨਾਕਰਨਲਈਦਿੱਤੇਜਾਣਗੇ।	1-3(ਦਿਨ) 1-3(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਗੱਦ–ਪ੍ਰਵਾਹ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ–ਵਸਤੂ 3.ਪਾਤਰ–ਚਿਤਰਨ 4. ਛੋਟੇ ਪ੍ਰਸ਼ਨਉੱਤਰ 1.ਬਾਤਾਂ ਮੋਹਨਸਿੰਘਕੀਆਂ 1.ਬਾਤਾਂਮੋਹਨਸਿੰਘਕੀਆਂਦਾਸਾਰ/ਵਿਸ਼ਾ–ਵਸਤੂਤੇਪਾਤਰ–ਚਿਤਰਨਵਿਦਿਆਰਥੀਆਂਨੂੰਇਸਸੰਬੰਧੀ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਜਾਣਗੇ।	1-6(ਦਿਨ)
ਵਿਆਕਰਨ	1.ਧੁਨੀ ਵਿਉਂਤ	1-5(ਦਿਨ)

	(ੳ) ਧੁਨੀਵਿਉਂਤਦੀਪਰਿਭਾਸ਼ਾ (ਅ) ਧੁਨੀਵਿਉਂਤਦਾਵਰਗੀਕਰਨ 2.ਅਨੁਵਾਦ	
ਨਿਸ਼ਕਰਸ਼	1.ਧੁਨੀ ਵਿਉਂਤਉਤੇ ਨੋਟ ਲਿਖੋ। 2.ਕਲਾਸ ਵਿੱਚਵਿਦਿਆਰਥੀਆਂਨੂੰ ਦੋ ਹਿੱਸਿਆਂਵਿੱਚਵੰਡਕੇਵਿਆਕਰਨਸੰਬੰਧੀਪ੍ਰਤੀਯੋਗਤਾਕਰਵਾਈਜਾਵੇਗੀ। 3. ਅੰਗਰੇਜੀਦੇਪੈਰੇਦੇਕੇਪੰਜਾਬੀਵਿੱਚਅਨੁਵਾਦਕਰਵਾਇਆਜਾਵੇਗਾ। 4. ਅਕਤੂਬਰਮਹੀਨੇਵਿੱਚਹੋਣਵਾਲੇਪੇਪਰਾਂਦੀਤਿਆਰੀਵੀਕਰਵਾਈਜਾਵੇਗੀ। 5.ਕਲਾਸ ਵਿਚਵਿਦਿਆਰਥੀਆਂਤੋਂਟੈਸਟਵੀ ਲਏ ਜਾਣਗੇ।	1-2(ਦਿਨ) 1-2(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਜੱਗ-ਬੀਤੀਹਡ-ਬੀਤੀ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ-ਵਸਤੂ 3. ਛੋਟੇ ਪ੍ਰਸ਼ਨਉੱਤਰ 1.ਭਾਗਾਂ ਦੀ ਡੋਰ 2.ਅੰਗਰੇਜੀਤੋਂਪੰਜਾਬੀਵਿੱਚਅਨੁਵਾਦ 1.ਭਾਗਾਂ ਦੀ ਡੋਰ ਕਹਾਣੀਦਾਵਿਸ਼ਾਵਸਤੂਲਿਖੋ। 2. ਅੰਗਰੇਜੀਤੋਂਪੰਜਾਬੀਵਿੱਚਅਨੁਵਾਦਕਰਨਲਈਦਿੱਤਾਜਾਵੇਗਾ।	 1-3(ਦਿਨ) 1-3(ਦਿਨ)
ਪਾਠਕ੍ਰਮਸੰਬੰਧੀਪ੍ਰਸ਼ਨ ਗੱਦ-ਪ੍ਰਵਾਹ ਨਿਸ਼ਕਰਸ਼	1.ਸਾਰ 2.ਵਿਸ਼ਾ-ਵਸਤੂ 3.ਪਾਤਰ-ਚਿਤਰਨ 4. ਛੋਟੇ ਪ੍ਰਸ਼ਨਉੱਤਰ 1.ਨੰਗੀ ਮੁਸਕਾਨ 2. ਪੈਰਾਰਚਨਾ 1.ਸ਼ਿਵ ਕੁਮਾਰਦਾਪਾਤਰਦਾਪਾਤਰਚਿਤਰਨ। 2.ਇਸ ਦੇ ਛੋਟੇ ਪ੍ਰਸ਼ਨਵੀਕਰਵਾਏਹੋਣਗੇ।	1-6(ਦਿਨ)
ਨਿਸ਼ਕਰਸ਼	1.ਨਾਂਵ ਵਾਕੰਸ਼ 2.ਮੇਲ਼ ਤੇਅਧਿਕਾਰਦੇਕਲਾਸਟੈਸਟ ਲਏ ਜਾਣਗੇ। ਨਵੰਬਰਮਹੀਨੇਵਿੱਚਰਵੀਜਨਕਰਵਾਈਜਾਵੇਗੀ।	1-6(ਦਿਨ)

LESSON PLAN B.SC.(COMPUTER SC.) SEMESTER-V

ENGLISH

July 2017

Contents	Books	Plan	Activity	Assignment
1.Play	All my sons	Reading Act 1	Film based on the play to be shown	Critical appreciation ,theme of the poems
2.Poetry	Poems of nature and culture	Text reading and explanation		
3.Grammar &Writing Skills	Letters, Resume, Report Writing etc	Formats and practice		

August 2017

Books	Plan	Activity	Assignment
All my sons	Reading Act 2	Practice of Letter Writing	Questions based on Act 2
Poems of nature and culture	5 Poems	Discussion on themes of all the poems	
Letters etc	Resume Writing Informal Letter	Formats and practice	

September 2017

Books	Plan	Activity	Assignment
All my sons	Reading Act 3	Discussion of full play	Role playing by the students
Poems of nature and culture	7 poems	Class tests	
Letters etc	Report writing, business writing	Formats and practice	

October 2017

Books	Plan	Activity	Assignment
All my sons	Revision of play	Clearing of doubts	Class tests and revision
Poems of nature and culture	Revision of poems		
Letters Etc	Revision		

November 2017

Books	Plan	Activity
2 Books	Discussion on current affairs	Class tests
	University examination preparation	Revision