SVSU Sr. Sec. School PGT Exam Scheme & syllabus

SVSU Sr. Sec. PGT Exam Pattern	Total Marks	Written Test Marks	Interview Marks
PGT Math	100	87.5	12.5
PGT English	100	87.5	12.5
PGT Computer	100	87.5	12.5

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Syllabus for Written Examination for PGT Mathematics

Total Marks -100 **Written Test – 87.5 Marks**

Syllabus for written examination for PGT (Mathematics)

Sets:
Sets and their representations. Empty set. Finite & Infinite sets. Equal sets. Subsets. Subsets of the set of real numbers. Power set. Universal set. Venn diagrams. Union and Intersection ofsets. Difference of sets. Complement of a set.

Relations & Functions:
Ordered pairs, Cartesian product of sets. Number of elements in the cartesian product of two finite sets. Cartesian product of the reals with itself (upto R x R x R). Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. Function as a special kind of relation from one set to another. Pictorial representation a function, domain, co-domain & range of a function. Real valued function of the real variable, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum and greatest integer functions with their graphs. Sum, difference, product and quotients of functions. Sets and their Representations. Union, intersection and complements of sets, and their algebraic properties, Relations, equivalence relations, mappings, one-one, into and onto mappings, composition of mappings.

Principle of Mathematical Induction:
Processes of the proof by induction. The principle of mathematical induction.

Permutations & Combinations:
Fundamental principle of counting. Factorial *n*. Permutations and combinations, derivation of formulae and their connections, simple applications.

Complex Numbers:
Complex numbers, Algebraic properties of complex numbers, Argand plane and polar representation of complex numbers, Statement of Fundamental Theorem of Algebra, solution of quadratic equations in the complex number system. Modulus and Argument of a complex number, square root of a complex number. Cube roots of unity, triangle inequality.

Linear Inequalities:
Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Solution of system of linear inequalities in two variables-graphically. Absolute value, Inequality of means, Cauchy-Schwarz Inequality, Tchebychef's Inequality.

Binomial Theorem:
Statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, general and middle term in binomial expansion, simple applications. Binomial Theorem for any index. Properties of Binomial Co-efficients. Simple applications for approximations.

Sequence and Series:
Sequence and Series. Arithmetic, Geometric and Harmonic progressions (G.P.), General terms and sum to *n* terms of A.P., G.P. and H.P. Arithmetic Mean (A.M.), Geometric Mean (G.M.), and Harmonic Mean (H.M.), Relation between A.M., G.M. and H.M. Insertion of Arithmetic, Geometric and Harmonic means between two given numbers. Special series, Sum to *n* terms of the special series. Arithmetic, Geometric Series, Exponential and Logarithmic series.

Elementary Number Theory:
Peano's Axioms, Principle of Induction; First Principle, Second Principle, Third Principle, Basis Representation Theo Greatest Integer Function Test of Divisibility, Euclid's algorithm, The Unique Factorisation Theorem, Congruence, Su divisors of a number. Euler's totient function, Theorems of Fermat and Wilson.

Quadratic Equations:
Quadratic equations in real and complex number system and their solutions. Relation between roots and co-efficients, natu roots, formation of quadratic equations with given roots; Symmetric functions of roots, equations reducible to quad equations – application to practical problems.

Polynomial functions, Remainder & Factor Theorems and their converse, Relation between roots and coefficients, Symm functions of the roots of an equation. Common roots.

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Matrices and Determinants:
Determinants and matrices of order two and three, properties of determinants, Evaluation ofdeterminants. Area of trian using determinants, Addition and multiplication of matrices, adjoint and inverse of matrix. Test of consistency and solutic simultaneous linear equations using determinants and matrices.

Two dimensional Geometry:
Cartesian system of rectangular co-ordinates in a plane, distance formula, section formula, area of a triangle, condition fo collinearity of three points, centroid and in-centre of a triangle, locus and its equation, translation of axes, slope of a parallel and perpendicularlines, intercepts of a line on the coordinate axes.

Various forms of equations of a line, intersection of lines, angles between two lines, conditionsfor concurrence of three li distance of a point from a line, Equations of internal and external bisectors of angles between two lines, coordinate centroid, orthocentre and circumcentre of a triangle, equation of family of lines passing through the point of intersection of lines, homogeneous equation of second degree in x and y, angle between pair of linesthrough the origin, combined equatic the bisectors of the angles between a pair of lines,condition for the general second degree equation to represent a pair of li point of intersection and angle between two lines.

Standard form of equation of a circle, general form of the equation of a circle, its radius and centre, equation of a circle ir parametric form, equation of a circle when the end points ofa diameter are given, points of intersection of a line and a c with the centre at the origin and condition for a line to be tangent to the circle, length of the tangent, equation of the tang equation of a family of circles through the intersection of two circles, condition for two intersecting circles to be orthogonal

Sections of cones, equations of conic sections (parabola, ellipse and hyperbola) in standardforms, condition for $y = mx +$ be a tangent and point(s) of tangency.

Trigonometric Functions:
Positive and negative angles. Measuring angles in radians & in degrees and conversion fromone measure to another. Defini of trigonometric functions with the help of unit circle.
Graphs of trigonometric functions. Expressing sin $(x+y)$ and cos $(x+y)$ in terms of sin$x$, sin$y$,cos$x$ & cos$y$. Identities relate sin2x, cos2x, tan 2x, sin3x, cos3x and tan3x. Solution of trigonometric equations, Proofs and simple applications of sine cosine formulae. Solutionof triangles. Heights and Distances.

Inverse Trigonometric Functions:
Definition, range, domain, principal value branches. Graphs of inverse trigonometric functions. Elementary propertie inverse trigonometric functions.

Differential Calculus:
Polynomials, rational, trigonometric, logarithmic and exponential functions, Inverse functions. Graphs of simple functi Limits, Continuity and differentiability; Derivative, Geometrical interpretation of the derivative, Derivative of sum, differe product and quotient of functions. Derivatives of polynomial and trigonometric functions, Derivative of composite functi chain rule, derivatives of invers trigonometric functions, derivative of implicit function. Exponential and logarithmic funct and their derivatives. Logarithmic differentiation. Derivative of functions expressed in parametric forms. Second c derivatives. Rolle's and Lagrange's Mean Value Theorems and their geometric interpretations.

Applications of Derivatives:
Applications of derivatives: rate of change, increasing / decreasing functions, tangents & normals, approximati maxima and minima.

Integral Calculus:
Integral as an anti-derivative. Fundamental integrals involving algebraic, trigonometric, exponential and logarithmic functi Integration by substitution, by parts and by partial fractions. Integration using trigonometric identities. Definite integrals limit of a sum, Fundamental Theorem of Calculus. Basic Properties of definite integrals and evaluation of definite integ Applications of definite integrals in finding the area under simple curves,especially lines, areas of circles / Parabolas / ellip area between the two curves.

Differential Equations:
Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equati

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whose general solution is given. Solution of differential equations by method of separation of variables, homogenec differential equations of firstorder and first degree. Solutions of linear differential equation.

Vectors:
Vectors and scalars, magnitude and direction of a vector. Direction cosines / ratios of vectors.Types of vectors (equal, u zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition vectors, multiplication of a vector bya scalar, position vector of a point dividing a line segment in a given ratio. Scalar (d product of vectors, projection of a vector on a line. Vector (cross) product of vectors.

Three dimensional Geometry:
Coordinates of a point in space, distance between two points; Section formula, Direction cosines / ratios of a line joining t points. Cartesian and vector equationof a line, coplanar and skew lines, shortest distance between two lines. Cartesian a vector equation of a plane.Angle between (i) two lines, (ii) two planes. (iii) a line and a plane. Distance of a point fron plane. Scalar and vector triple product. Application of vectors to plane geometry. Equation of asphere, its centre and radi Diameter form of the equation of a sphere.

Statistics:
Calculation of Mean, median and mode of grouped and ungrouped data. Measures of dispersion; mean deviation, variar and standard deviation of ungrouped / grouped data. Analysis of frequency distributions with equal means but differ variances.

Probability:
Random experiments: outcomes, sample spaces. Events: occurrence of events, exhaustive events, mutually exclusive ev Probability of an event, probability of 'not', 'and' & 'or' events., Multiplication theorem on probability. Conditi probability, independent events,,

Baye's theorem, Random variable and its probability distribution, Binomial and Poisson distributions and their properties.

Linear Algebra
Examples of vector spaces, vector spaces and subspace, independence in vector spaces, existence of a Basis, the row a column spaces of a matrix, sum and intersection of subspaces. Linear
Transformations and Matrices, Kernel, Image, and Isomorphism, change of bases, Similarity, Rank and Nullity. In Product spaces, orthonormal sets and the Gram- Schmidt Process, the Method of Least Squares. Basic theory of Eigenvect and Eigenvalues, algebraic and geometric multiplicity of eigen value, diagonalization of matrices, application to system linear differential equations. Generalized Inverses of matrices, Moore-Penrose generalized inverse. Real quadratic forn reduction and classification of quadratic forms, index and signature, triangular reduction of a pair of forms, singular val decomposition, extrema of quadratic forms. Jordan canonical form, vector and matrix decomposition.

Analysis
Monotone functions and functions of bounded variation. Real valued functions, continuous functions, Absolute continuity functions, standard properties. Uniform continuity, sequence of functions, uniform convergence, power series and radius convergence. Riemann-Stieltjes integration, standard properties, multiple integrals and their evaluation by repeat integration, change of variable in multiple integration. Uniform convergence in improper integrals, differentiation under t sign of integral - Leibnitz rule.

Dirichlet integral, Liouville's extension. Introduction to n-dimensional Euclidean space, open and closed intervals (rectang compact sets, Bolzano-Weierstrass theorem, Heine-Borel theorem. Maxima-minima of functions of several varial constrained maxima-minima of functions. Analytic function, Cauchy-Riemann equations, singularities, Statement of Cat theorem and of Cauchy integral formula with applications, Residue and contour integration. Fourier and Laplace transfo Mellin's inversion theorem.

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Syllabus for Written Examination for PGT English

Total Marks -100 **Written Test – 87.5 Marks**

REVISED SYLLABUS FOR WRITTEN EXAMINATION FOR PGT (ENGLISH)

Topics	Syllabus
Reading Comprehension	Ability to comprehend, analyze and interpret unseen texts. Three/four unseen reading passages may be set.
Writing Ability	One out of two tasks such as a factual description of any event or incident, a report or a process. Writing one formal letter. Letter types include writing personal opinion /views/stand in an article/ debate/speech etc on a given socio-cultural issue–in a style /register suitable to the task set. Issues could relate to (a) environment (b) education (c) gender discrimination (d) economic disparity etc.
Grammar and Usage	Ability to apply the knowledge of syntax and grammatical items & use them accurately in the context provided. 1. Determiners 2. Tenses 3. Clauses 4. Modals 5. Voice 6. Determiners 7. Tenses 8. Transformations: (i) Direct – Indirect (ii) Active – Passive (iii) Negatives, Interrogatives (iv) Simple to compound and complex 9. Auxiliaries 10. Prepositions 11. Phrasal verbs and Idioms 12. Reading comprehension 13. Precis writing 14. Letter writing 15. Report Writing
Literature	Shakespeare's works. . Romantic period (e.g. Shelley, Wordsworth, Keats, Coleridge etc) . 19th and 20th Century American and English Literature (e.g. Robert Frost, Hemmingway, Whitman, Hawthorne, Emily Dickinson, Bernard Shaw, Arthur Miller etc.) . Modern Indian Writing in English (e.g. Anita Desai, Vikram Seth, Nissin Ezekiel, K N . Daruwala, Ruskin Bond, R K Narayan, Mulk Raj Anand, Khushwant Singh etc)

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i. Educational Psychology

- Concept, scope and functions of educational psychology.
- Physical, cognitive, social, emotional and moral developmental characteristics of adolescent learner and its implication for teaching-learning.
- Behavioural, cognitive and constructivist principles of learning and its implication for senior secondary students.
- Concept of mental health & adjustment and adjustment mechanism.
- Emotional intelligence and its implication in teaching learning.

ii. Padagogy and Teaching Learning Material (Instructional Strategies for Adolescent Learner)

- Communication skills and its use.
- Teaching models- advance organizer, concept attainment, information processing, inquiry training.
- Preparation and use of teaching-learning material during teaching.
- Cooperative learning.

iii. General

- General Awareness including Questions related to Haryana.
- General Mental Ability including Basic numeracy & data interpretation
- Logical Reasoning & Analytical Ability
- Decision making & problem solving

Interview – 12.5 Marks

***** Interview Test of 12.5 Marks will be based on the Above Syllabus and Qualifications Knowledge. *****

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Syllabus for Written Examination for PGT CS

Total Marks -100 **Written Test – 87.5 Marks**

Syllabus for written examination for PGT(CS)

Computer Systems and Organisation

- **Basic Computer Organisation:** Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit, Byte, KB, MB, GB, TB, PB).
- **Types of software:** system software (operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software.
- **Operating system (OS):** functions of operating system, OS user interface.
- **Boolean logic:** NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's laws and logic circuits
- **Number system:** Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems.
- **Encoding schemes:** ASCII, ISCII and UNICODE (UTF8, UTF32)

Computational Thinking and Programming

- **Introduction to problem solving**: Steps for problem solving (analysing the problem, developing an algorithm, coding, testing and debugging), representation of algorithms using flow chart and pseudo code, decomposition
- **Familiarization with the basics of Python programming:** Introduction to Python, features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens (keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments
- **Knowledge of data types:** number (integer, floating point, complex), boolean, sequence (string, list, tuple), none, mapping (dictionary), mutable and immutable data types
- **Operators:** arithmetic operators, relational operators, logical operators, assignment operator, augmented assignment operators, identity operators (is, is not), membership operators (in, not in).
- **Expressions, statement, type conversion & input/output:** precedence of operators, expression, evaluation of expression, python statement, type conversion (explicit & implicit conversion), accepting data as input from the console and displaying output
- **Errors:** syntax errors, logical errors, runtime errors
- **Flow of control:** introduction, use of indentation, sequential flow, conditional and iterative flow control
- **Conditional statements:** if, if-else, if-elif-else, flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number
- **Iterative statements:** for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc
- **Strings:** introduction, indexing, string operations (concatenation, repetition, membership & slicing), traversing a string using loops, built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split()
- **Lists:** introduction, indexing, list operations (concatenation, repetition, membership & slicing),
- traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list
- **Tuples:** introduction, indexing, tuple operations (concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple

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- **Dictionary:** introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions: len(), dict(), keys(), values(), items(), get(), update(), del, clear(), fromkeys(), copy(), pop(), popitem(), setdefault (), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them
- **Introduction to Python modules:** Importing module using 'import <module>' and using from statement, Importing math module (pi, e, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, randrange), statistics module (mean, median, mode) Society, Law and Ethics
- Digital Footprints
- **Digital society and Netizen:** net etiquettes, communication etiquettes, social media etiquettes
- **Data protection:** Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache)
- **Cyber-crime:** definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime
- **Cyber safety:** safely browsing the web, identity protection, confidentiality, cyber trolls and bullying.
- **Safely accessing web sites:** malware, viruses, trojans, adware
- **E-waste management:** proper disposal of used electronic gadgets
- Indian Information Technology Act (IT Act)
- **Technology & Society:** Gender and disability issues while teaching and using computers

Computational Thinking and Programming

- **Functions:** types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)
- Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths
- **Text file:** opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file
- **Binary file:** basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file
- **CSV file:** import csv module, open / close csv file, write into a csv file using csv.writer() and read from a csv file using csv.reader()
- **Data Structure:** Stack, operations on stack (push & pop), implementation of stack using list.

Computer Networks

- **Evolution of networking:** introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)
- **Data communication terminologies:** concept of communication, components of data communication (sender, receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)
- **Transmission media:** Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves)
- **Network devices** (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)
- **Network topologies and Network types:** types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)

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- **Network protocol:** HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP
- **Introduction to web services:** WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting

Database Management

- **Database concepts:** introduction to database concepts and its need
- **Relational data model:** relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key)
- **Structured Query Language:** introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join
- **Interface of python with an SQL database:** connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(); fetchall(), rowcount, creating database connectivity applications

Introduction to Computer System

Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, Input/output devices.
Computer Memory: Units of memory, types of memory – primary and secondary, data deletion, its recovery and related security concerns.
Software: purpose and types – system and application software, generic and specific purpose software.

Data Structure & Algorithms:-

- Types of data structure: Array, stack, queues, linked lists heaps, trees, binary search tree.
- Searching algorithms: Linear and Binary search.
- Sorting algorithms: Bubble, Selection, Iustration, quick sort, merge sort and heap sort.
- Analysis of Algorithm: Asymptotic notation – Big – Oh (O), Omega and Theta notations.
- Graphs: Definitions, connected graphs, regular and bipartite graphs, cycles and circuits, spanning trees, breadth first search, Depth first search.

Operating Systems (O.S.):-

- Functions of operating systems, Types of O.S,- multiprocessing, Multitasking, Multiprogramming, time sharing & distributed operating systems.
- Virtual memory, paging, segmentation & fragmentations.
- Mutual Exclusion, Lock-unlock, semaphores.
- C.P.U Scheduling, I/O scheduling, Resource scheduling, Scheduling algorithms.
- Deadlock & its handling.

Software Engineering:-

- Software, development life cycle (SDLC) introduction and various steps.
- SDLC Models:- waterfall, prototype, spiral, Agile.
- Data warehouse & Data mining: introduction and methodology.

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Digital Logic & Circuits:-

- Number System and Codes.
- Combinational Logic circuits: Digital Logic gates, Simplifications, Half and full address, encoders, Decoders and Multiplexers.
- Sequential Logic circuits: Flip Flops, RAM and ROM.

Theory of Computation:-

- Automata Fundamentals: Finite Automata (F.A.), Deterministic F.A. & Non Deterministic F.A.
- Regular Expressions and Language.
- Context Free Grammar and Languages.
- Recursive Enumerable and non-Recursive Enumerable Language.

Compiler Design:-

- Introduction of a compiler: Lexical Analyses Recognition of tokens, Minimizing DFA.
- Parsing and Parse trees: Rightmost and leftmost derivation, Bottom-up and Top-down parser.
- Intermediate code generation.
- Code Generation and Code optimization.

Introduction to the Emerging Trends

Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.

Database Query using SQL

Math functions: POWER (), ROUND (), MOD ().

Text functions: UCASE (), UPPER (), LCASE (), LOWER (), MID (), SUBSTRING (), SUBSTR (), LENGTH (), LEFT (), 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.

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.

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iii. General

- General Awareness including Questions related to Haryana.
- General Mental Ability including Basic numeracy & data interpretation
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Interview – 12.5 Marks

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SVSU Sr. Sec. School TGT Exam Scheme & syllabus

SVSU Sr. Sec. TGT Exam Subject	Total Marks	Written Test Marks	Interview Marks
TGT English	100	70	30
TGT Mathematics	100	70	30
TGT Music	100	70	30
TGT Social Science	100	70	30

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Syllabus for the written examination for TGT English

Total Marks -100 **Written Test – 70 Marks**

1. Environmental Awareness **(Weightage 10%)**

Introduction: Basics of ecology, ecosystem- concept, and sustainable development, Sources, advantages, disadvantages of renewable and non-renewable energy, Rain water harvesting, Deforestation – its effects & control measures.

Air and Noise Pollution: Air Pollution: Source of air pollution. Effect of air pollution on human health, economy, Air pollution control methods, Noise Pollution: Source of noise pollution, Unit of noise, Effect of noise pollution, Acceptable noise level, Different method of minimizing noise pollution.

Water and Soil Pollution: Water Pollution: Impurities in water, Cause of water pollution, Source of water pollution. Effect of water pollution on human health, Concept of DO, BOD, COD. Prevention of water pollution- Water treatment processes, Sewage treatment. Water quality standard, Soil Pollution: Sources of soil pollution, Effects and Control of soil pollution, Types of Solid waste- House hold, Industrial, Agricultural, Biomedical, Disposal of solid waste, Solid waste management E-waste, E – waste management.

Impact of Energy Usage on Environment: Global Warming, Green House Effect, Depletion of Ozone Layer, Acid Rain. Eco-friendly Material, Recycling of Material, Concept of Green Buildings, Concept of Carbon Credit & Carbon footprint.

2. Haryana General Knowledge and Welfare schemes of Haryana Government.
(Weightage 20%)

Haryana history, current affairs, literature, Geography, Civics, Environment, Culture etc. and Welfare schemes run by state Government of Haryana and provisions there-in.

3. Road Safety Awareness **(Weightage 5%)**

Traffic Rules, importance of traffic rules, authority to implement traffic rules, punishment for violating traffic rules, authority to issue driving license, procedure to get driving license, classification of vehicles, traffic signs, knowledge of safety measures in vehicles.

4. Perspectives on Education and Leadership **(Weightage 15%)**

(a) Understanding the Learner

Concept of growth, maturation and development, principles and debates of development, development tasks and challenges, Domains of Development: Physical, Cognitive, Socio-emotional, Moral etc., deviations in development and its implications, Understanding Adolescence: Needs, challenges and implications for designing institutional support, Role of Primary and Secondary Socialization agencies. Ensuring Home school continuity.

(b) Understanding Teaching Learning

Theoretical perspectives on Learning -Behaviorism, Cognitivism and Constructivism with special reference to their implications for: (i) The role of teacher (ii) The role of learner (iii) Nature of teacher-student relationship (iv) Choice of teaching methods (v) Classroom environment (vi) Understanding of discipline, power etc.

Factors affecting learning and their implications for: (i) Designing classroom instructions, (ii) Planning student activities and, (iii) Creating learning spaces in school.

Planning and Organization of Teaching-Learning;e-Perspectives in Education, NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency based learning and Education. Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure

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school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education;

School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment, (i) Concept of Syllabus and Curriculum, Overt and Hidden Curriculum (ii) Foundational Literacy and Numeracy, Early Childhood Care and Education (iii) Competency based Education, Experiential learning, etc. (iv) Instructional Plans: -Year Plan, Unit Plan, Lesson Plan (v) Instructional material and resources (vi) Information and Communication Technology (ICT) for teaching-learning (vii) Assessment of learning, for learning and as learning: Meaning, purpose and considerations in planning each. Enhancing Teaching Learning processes: Classroom Observation and Feedback, Reflections and Dialogues as a means of constructivist teaching.

c) Creating Conducive Learning Environment

The concepts of Diversity, disability and Inclusion, implications of disability as social construct, types of disabilities-their identification and interventions, Concept of School Mental Health, addressing the curative, preventive and promotive dimensions of mental health for all students and staff. Provisioning for guidance and counselling, Developing School, and community as a learning resource.

(d) School Organization and Leaders-hip

Leader as reflective practitioner, team builder, initiator, coach, and mentor, Perspectives on School Leadership: instructional, distributed, and transformative, Vision building, goal setting and creating a School development Plan, Using School Processes and forums for strengthening teaching learning-Annual Calendar, time-tabling, parent teacher forums, school assembly, teacher development forums, using achievement data for improving teaching —learning, School Self-Assessment, and Improvement, Creating partnerships with community, industry and other neighboring schools and Higher Education Institutes — forming learning communities.

(e) Perspectives in Education

NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency based learning and Education, Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education; School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment

English **(Weightage50%)**

Literature	Short Story, Novel, Poetry
Language	Phonetic Transcription, stress or Accent, Information
Vocabulary sentence	Synonyms, Antonyms, one word substitution, Homophones, making, Phrasal verbs
Parts of Speech	Noun, Pronoun, Adverb, Adjective, Preposition, Interjection
Punctuation	voice, Narration, verb-Subject Agreement, Verb Patterns
Composition	Paragraph, Article, Letter, writing (Formal, Informal), Email; Resume

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Writing and Reading Skills

Advertisement, Report Notice, Poster Making, Invitation, Applications and letters

Articles, Conversations, Interview, Paragraph, Diary entry, Comprehension Passages

English Grammar

Determiners, Tenses, Clauses, Synthesis of Sentences, Modals, Voice, Error Correction, Editing

Reordering of sentences, Punctuation, Articles, Reported speech, Non-Finites, Idioms,

Figures of speech, Editing & omission, Subject verb concord

Types of Paragraphs, Poetic devices, Infinitives, Gerund, Clauses

Important Note: The Weightage as mentioned against the syllabus is tentative & may vary.

Skill Test – 30 Marks

***** Skill Test of 30 Marks will be based on the Above Syllabus and Qualifications. *****

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Syllabus for written examination for TGT Mathematics

Total Marks -100 **Written Test – 70 Marks**

1. ENVIRONMENTAL AWARENESS (Weightage 10%)

Introduction: Basics of ecology, ecosystem- concept, and sustainable development, Sources, advantages, disadvantages of renewable and non-renewable energy, Rain water harvesting, Deforestation – its effects & control measures.

Air and Noise Pollution: Air Pollution: Source of air pollution. Effect of air pollution on human health, economy, Air pollution control methods, Noise Pollution: Source of noise pollution, Unit of noise, Effect of noise pollution, Acceptable noise level, Different method of minimizing noise pollution.

Water and Soil Pollution: Water Pollution: Impurities in water, Cause of water pollution, Source of water pollution. Effect of water pollution on human health, Concept of DO, BOD, COD. Prevention of water pollution- Water treatment processes, Sewage treatment. Water quality standard, Soil Pollution: Sources of soil pollution, Effects and Control of soil pollution, Types of Solid waste- Household, Industrial, Agricultural, Biomedical, Disposal of solid waste, Solid waste management, E-waste, E–waste management.

Impact of Energy Usage on Environment: Global Warming, Greenhouse Effect, Depletion of Ozone Layer, Acid Rain. Eco-friendly Material, Recycling of Material, Concept of Green Buildings, Concept of Carbon Credit & Carbon footprint.

2. Haryana General Knowledge and Welfare schemes of Haryana Government. (Weightage 20%)

Haryana history, current affairs, literature, Geography, Civics, Environment, Culture etc. and Welfare schemes run by state Government of Haryana and provisions therein.

3. Road Safety Awareness (Weightage 5%)

Traffic Rules, importance of traffic rules, authority to implement traffic rules, punishment for violating traffic rules, authority to issue driving license, procedure to get driving license, classification of vehicles, traffic signs, knowledge of safety measures in vehicles.

4. Perspectives on Education and Leadership (Weightage 15%)

(a) Understanding the Learner

Concept of growth, maturation and development, principles and debates of development, development tasks and challenges, Domains of Development: Physical, Cognitive, Socio-emotional, Moral etc., deviations in development and its implications, Understanding Adolescence: Needs, challenges and implications for designing institutional support, Role of Primary and Secondary Socialization agencies. Ensuring home-school continuity.

(b) Understanding Teaching Learning

Theoretical perspectives on Learning -Behaviorism, Cognitivism and Constructivism with special reference to their implications for: (i) The role of teacher (ii) The role of learner (iii) Nature of the teacher-student relationship (iv) Choice of teaching methods (v) Classroom environment (vi) Understanding of discipline, power etc.

Factors affecting learning and their implications for: (i) Designing classroom instructions, (ii) Planning student activities and, (iii) Creating learning spaces in school.

Planning and Organization of Teaching-Learning; e-Perspectives in Education, NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency-based learning and Education. Guiding Principles for Child Rights, Protecting and provisioning for rights of children to a safe and

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secure school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education;

School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment, (i) Concept of Syllabus and Curriculum, Overt and Hidden Curriculum (ii) Foundational Literacy and Numeracy, Early Childhood Care and Education (iii) Competency based Education, Experiential learning, etc. (iv) Instructional Plans: -Year Plan, Unit Plan, Lesson Plan (v) Instructional material and resources (vi) Information and Communication Technology (ICT) for teaching- learning (vii) Assessment of learning, for learning and as learning: Meaning, purpose and considerations in planning each. Enhancing Teaching Learning processes: Classroom Observation and Feedback, Reflections and Dialogues as a means of constructivist teaching.

c) Creating Conducive Learning Environment

The concepts of Diversity, Disability, and Inclusion, implications of disability as social construct, types of disabilities-their identification and interventions, Concept of School Mental Health, addressing the curative, preventive and promotive dimensions of mental health for all students and staff. Provisioning for guidance and counselling, Developing School, and community as a learning resource.

(d) School Organization and Leadership

Leader as reflective practitioner, team builder, initiator, coach, and mentor, Perspectives on School Leadership: instructional, distributed, and transformative, Vision building, goal setting and creating a School development Plan, Using School Processes and forums for strengthening teaching learning- Annual Calendar, time-tabling, parent teacher forums, school assembly, teacher development forums, using achievement data for improving teaching —learning, School Self-Assessment, and Improvement, Creating partnerships with community, industry and other neighboring schools and Higher Education Institutes — forming learning communities.

(e) Perspectives in Education

NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency based learning and Education, Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education; School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment

Mathematics **(Weightage 50%)**

Number system, Polynomials, linear Equations & their applications, Properties of lines and angles, Triangle, Similarity of triangles, Tholes Theorem, Pythagoras Theorem and its applications, Quadrilateral types and properties area &perimeters of Two dimensional objects, surface area and volume of Three dimensional objects, Quadratic Equation & its properties, introduction to trigonometry, height and distance (using trigonometry), sets and operation on set, application of set operations Cartesian product of sets, Relations and its types Functions types of functions domain and range of functions, composition of functions, Trigonometrical functions, Principles of mathematical Inductions, Complex Number linear inequality and its Practical applications, Permutation and combinations, (Principle of counting factorial, application of formals of Permutation and combination under different conditions, Binomial Theorem, Statement and Proof of Binomial Theorem, application of Binomial Theorem in calculating different relation between binomial coefficients, Arithmetical. Progression (General term, sum of intern and its application Arithmetical mean Geometrical progression (nth term sum of GP

Sum of finite terms of GP, Geometrical means, Arithmetic & Geometric series and its sum, Co-ordinate Geometry system of co-ordinates distance formula, section formula, Equation of line in various forms, Equation of circle and its

properties, Parabola and its equation ellipse and its Equation, hyperbola and its Equation application of 2 dimensional geometry, Three Dimensional geometry, Co-ordinate axis and Co-ordinate planes in three dimensional geometry, Co-ordinates of a point in space, Distance formula, Section formula, Equation of line in space, Equations of plane in three dimension sphere Equations, central tendency Dispersions, analysis of frequency distributions, Probability distribution, normal distribution, Poisson distributions, Bayes Theorem, conditional Probability law of total probability, trigonometrical functions, solution of trigonometrical Equations, inverse trigonometrical Equations matrices, types of matrices, operation on matrices, inverse of a matrix, determinant of square matrix up to third order, minors cofactors and application of determinant in calculating area & solving equation limits of (algebraic functions, trigonometrical functions, logarithmic functions, exponential functions and Inverse trigonometrical functions, Differentiations, application of derivatives, Curve tracing in Cartesian and polar coordinates reduction formulae, volume and. Surface of solid of revolutions, Differential Equations (up to graduation)

Algebra & Trigonometry

- Matrices, Determinants, Hermitian& Skew Hermitian matrices. Rank of Matrix, Properties of Determinant, Eigen Values, Characteristic equation of matrix. Carey Hamilton Theory
- Relation b/w roots & coefficient of gen. polynomial eq in one variable: Descartes' rule of sign. Solution of cubic Eq & biquadratic Eq.
- G.C.D, L.C.M, fundamental theorem of Arithmetic Linear cong., Fermat's theorem there, Wilson theorem, Euler function. Eulala's generalization of Fermat's theorem.
- DeMarre's theorem & its application. Expansion of Trigonometric functions. Gregory's series. Summation of series.

Calculus

- Definition of Limit of a function, Continuity &Differentiability & a function. Differentiation, Successive differentiation, Asymptotes, Curvature, Tracing of Curves in Cartesian & Polar coordinates.
- Reduction formulae. Volume & Surface area of solids of revolution.
- Exact diff Eq. First-order higher-degree equations. Linear differential Eq" with content coefficient Homogeneous Linter ordinary diff Eq",
- Linear diff Eq of 2^{nd} order. Transformation of the Eq by changing the dependent variables the independent variable

Probability

- Random experiment, Sample space, Cumulative distribution function, discrete & continuous random variable. Mean, Variance, Moment generality Functions.
- Discrete distribution: Bernoulli, binomial, geometric &Poisson.
- Continuous dist. - Uniform, exponential, gamma & normal. Conditional Prob. Bayes theorem.

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Diff. Geometry

- Local theory of curve: Tangent, Principal normal, curvature, Centre of curvature, spherical curvature.
- Involutes &evaluates of curves, Bertrand curves, surface, tangent& normal envelopes, edge of regression &developable surfaces.
- First Fundamental form, Direction on a surface, Curvature of normal section.
- Principal direction & curvatures. First & 2nd order Curvature, Grecian curvature. Euler's theorem, Gauss formula
- Linear Algebra, Complex Analysis, Functions of several Variables & Partial Diff. Eq.
- Numerical Methods, Mathematical statistics, operations research.

Differential Eq's

- Series solutions of diff. eq. Power series method · Bessel Legendre&. Hyper geometer Eq. Orthogonality of fruition. Orthogonality of eight functions.
- Laplace transformations: existence theory for L.T. Laplace transforms of derivatives & integrals. Solutions of integral equations & systems of diff equations using the L.T
- Partial Diff. Eq of First order. LaGrange's sol" Char pit's gen. method of soI4. P.D questions of the 2nd & higher order. Mono & non. Homogeneous Eq with constant coefficient.

Mechanics

- Equilibrium of Coplanar forces. Virtual work. Forces in 3-dim. Point set's central axis, wrenches, Null lines & planes.
- Velocities & acceleration along radial &transverse direction and along tangential & normal direction.
- Central Orbit, Kepler's law of motion. Motion of a particle in 3-dim. Acceleration in terms of t h e coordinate system.

Vector Analysis & Geometry

- Vector Integration, Gauss, Green & States theorem &problem based or them.
- Scalar & Vector product of three vectors. Products of four vectors., Reciprocal vector Gradient, Divergence & Curl of vectors.
- Tracing of conics, System of conics, Polar Eq. of Conic. Sphere, Cone, Cylinder.

Advanced Calculus

- Theorems on limits of sequences. Bounded & monotonic seq. Cauchy's convergence criterion, Cauchy's Integral test, Ratio test, DE Morgan& Bertrand's test, Leibniz's theorem
- Properties of Continuous functions. Chain Rule of Differentiability. Mean value theorem. Limit& continuity of fun of two variables. Partial diff., Euler's theorem of

homogeneous functions. Taylor's theorem.

- Envelopes, Evaluates, Maxima, Minima & saddle pls & functions of two variables.
- Beta & Gamma functions. Double & Triple integrals

Important Note: The Weightage as mentioned against the syllabus is tentative & may vary.

Skill Test – 30 Marks

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Syllabus for the written examination for TGT Music

Total Marks -100 **Written Test – 70 Marks**

1. ENVIRONMENTAL AWARENESS **(Weightage 10%)**

Introduction: Basics of ecology, eco system- concept, and sustainable development, Sources, advantages, disadvantages of renewable and non-renewable energy, Rain water harvesting, Deforestation – its effects & control measures.

Air and Noise Pollution: Air Pollution: Source of air pollution. Effect of air pollution on human health, economy, Air pollution control methods, Noise Pollution: Source of noise pollution, Unit of noise, Effect of noise pollution, Acceptable noise level, Different method of minimizing noise pollution.

Water and Soil Pollution: Water Pollution: Impurities in water, Cause of water pollution, Source of water pollution. Effect of water pollution on human health, Concept of DO, BOD, COD. Prevention of water pollution- Water treatment processes, Sewage treatment. Water quality standard, Soil Pollution: Sources of soil pollution, Effects and Control of soil pollution, Types of Solid waste- House hold, Industrial, Agricultural, Biomedical, Disposal of solid waste, Solid waste management E-waste, E – waste management.

Impact of Energy Usage on Environment: Global Warming, Green House Effect, Depletion of Ozone Layer, Acid Rain. Eco-friendly Material, Recycling of Material, Concept of Green Buildings, Concept of Carbon Credit & Carbon footprint.

2. Haryana General Knowledge and Welfare schemes of Haryana Government. (Weightage 20%)

Haryana history, current affairs, literature, Geography, Civics, Environment, Culture etc. and Welfare schemes run by state Government of Haryana and provisions there-in.

3. Road Safety Awareness **(Weightage 5%)**

Traffic Rules, importance of traffic rules, authority to implement traffic rules, punishment for violating traffic rules, authority to issue driving license, procedure to get driving license, classification of vehicles, traffic signs, knowledge of safety measures in vehicles.

4. Perspectives on Education and Leadership **(Weightage 15%)**

(a) Understanding the Learner

Concept of growth, maturation and development, principles and debates of development, development tasks and challenges, Domains of Development: Physical, Cognitive, Socio-emotional, Moral etc., deviations in development and its implications, Understanding Adolescence: Needs, challenges and implications for designing institutional support, Role of Primary and Secondary Socialization agencies. Ensuring Home school continuity.

(b) Understanding Teaching Learning

Theoretical perspectives on Learning -Behaviorism, Cognitivism and Constructivism with special reference to their implications for: (i) The role of teacher (ii) The role of learner (iii) Nature of the teacher-student relationship (iv) Choice of teaching methods (v) Classroom environment (vi) Understanding of discipline, power etc.

Factors affecting learning and their implications for: (i) Designing classroom instructions, (ii) Planning student activities and, (iii) Creating learning spaces in school.

Planning and Organization of Teaching-Learning; e-Perspectives in Education, NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency-based learning and Education. Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and

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Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education;

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c) Creating Conducive Learning Environment

The concepts of Diversity, disability and Inclusion, implications of disability as social construct, types of disabilities-their identification and interventions, Concept of School Mental Health, addressing the curative, preventive and promotive dimensions of mental health for all students and staff. Provisioning for guidance and counselling, Developing School, and community as a learning resource.

(d) School Organization and Leaders-hip

Leader as reflective practitioner, team builder, initiator, coach, and mentor, Perspectives on School Leadership: instructional, distributed, and transformative, Vision building, goal setting and creating a School development Plan, Using School Processes and forums for strengthening teaching learning-Annual Calendar, time-tabling, parent teacher forums, school assembly, teacher development forums, using achievement data for improving teaching —learning, School Self-Assessment, and Improvement, Creating partnerships with community, industry and other neighboring schools and Higher Education Institutes — forming learning communities.

(e) Perspectives in Education

NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency based learning and Education, Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education; School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment

पाठ्यक्रम **(Weightage 50%)**

संगीत, स्वर, श्रुति, सप्तक, आरोह-अवरोह, पकड़, राग, ताल, लय, नाद, थाट, अलंकार, वर्ण, ग्राम, मूर्च्छना, गमक, खटका, मुर्की, कण, तराना, ध्वनि, आलाप, तान, मींड, कृन्तन, जमजमा, लोकगीत, गत, लोकनृत्य, आदि।

गायन शैलियाँ- ध्रुपद, धमार, ख्याल, टप्पा, ठुमरी, दादरा, सादरा, होरी, चतुरंग, तराना आदि।

राग वर्गीकरण, रागों का समय सिद्धांत, स्वरलिपि पद्धतियाँ - भातखण्डे वरिगम्बर पलुस्कर, गायन के घराने, वाद्ययन्त्रों का विकास, भारतीय संगीत का इतिहास व अन्य सैधान्तिकविषय, राग तत्व विबोध, चतुप्रकाशिका

संगीत ग्रन्थ- संगीत रत्नाकर, संगीत पारिजात, नाट्मशास्त्र, संगीत दर्पण, बृद्देशी, अष्टाध्यायी, नारदीय शिक्षा, संगीत मकरंद, गीतगोबिन्दव अन्य प्रमुख ग्रंथ।

वाद्ययन्त्र-तानपुरा, सितार, तबला, मृरंग/परवावज, वार्यालन, बाँसुरीव अन्य मुख्यवाळायन्त्र।

राग-भारत में प्रचलित समस्त राण, प्रचलित सभी ताल।

संगीतकारों-सक्लेव, विनी. भातखण्डे, कि.रि पलुस्कर, उस्तार अब्दुल करीयका जीवन परिचय व संगीत में उनका योगदान, गायन और वादन के घराने।

Important Note: The Weightage as mentioned against the syllabus is tentative & may vary.

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Skill Test – 30 Marks

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Syllabus for written examination for TGT Social Studies

Total Marks -100 **Written Test – 70 Marks**

1. ENVIRONMENTAL AWARENESS (Weightage 10%)

Introduction: Basics of ecology, eco system- concept, and sustainable development, Sources, advantages, disadvantages of renewable and non-renewable energy, Rain water harvesting, Deforestation – its effects & control measures.

Air and Noise Pollution: Air Pollution: Source of air pollution. Effect of air pollution on human health, economy, Air pollution control methods, Noise Pollution: Source of noise pollution, Unit of noise, Effect of noise pollution, Acceptable noise level, Different method of minimizing noise pollution.

Water and Soil Pollution: Water Pollution: Impurities in water, Cause of water pollution, Source of water pollution. Effect of water pollution on human health, Concept of DO, BOD, COD. Prevention of water pollution- Water treatment processes, Sewage treatment. Water quality standard, Soil Pollution: Sources of soil pollution, Effects and Control of soil pollution, Types of Solid waste- House hold, Industrial, Agricultural, Biomedical, Disposal of solid waste, Solid waste management E-waste, E – waste management.

Impact of Energy Usage on Environment: Global Warming, Green House Effect, Depletion of Ozone Layer, Acid Rain. Eco-friendly Material, Recycling of Material, Concept of Green Buildings, Concept of Carbon Credit & Carbon footprint.

2. Haryana General Knowledge and Welfare schemes of Haryana Government. (Weightage 20%)

Haryana history, current affairs, literature, Geography, Civics, Environment, Culture etc. and Welfare schemes run by state Government of Haryana and provisions there-in.

3. Road Safety Awareness (Weightage 5%)

Traffic Rules, importance of traffic rules, authority to implement traffic rules, punishment for violating traffic rules, authority to issue driving license, procedure to get driving license, classification of vehicles, traffic signs, knowledge of safety measures in vehicles.

4. Perspectives on Education and Leadership (Weightage 15%)

(a) Understanding the Learner

Concept of growth, maturation and development, principles and debates of development, development tasks and challenges, Domains of Development: Physical, Cognitive, Socio-emotional, Moral etc., deviations in development and its implications, Understanding Adolescence: Needs, challenges and implications for designing institutional support, Role of Primary and Secondary Socialization agencies. Ensuring Home school continuity.

(b) Understanding Teaching Learning

Theoretical perspectives on Learning-Behaviorism, Cognitivism and Constructivism with special reference to their implications for: (i) The role of teacher (ii) The role of learner (iii) Nature of teacher-student relationship (iv)Choice of teaching methods (v) Classroom environment (vi) Understanding of discipline, power etc.

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School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment, (i) Concept of Syllabus and Curriculum, Overt and Hidden Curriculum (ii) Foundational Literacy and Numeracy, Early Childhood Care and Education (iii) Competency based

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Syllabus for written examination for TGT Social Studies

Total Marks -100 **Written Test – 70 Marks**

1. ENVIRONMENTAL AWARENESS **(Weightage 10%)**

Introduction: Basics of ecology, eco system- concept, and sustainable development, Sources, advantages, disadvantages of renewable and non-renewable energy, Rain water harvesting, Deforestation – its effects & control measures.

Air and Noise Pollution: Air Pollution: Source of air pollution. Effect of air pollution on human health, economy, Air pollution control methods, Noise Pollution: Source of noise pollution, Unit of noise, Effect of noise pollution, Acceptable noise level, Different method of minimizing noise pollution.

Water and Soil Pollution: Water Pollution: Impurities in water, Cause of water pollution, Source of water pollution. Effect of water pollution on human health, Concept of DO, BOD, COD. Prevention of water pollution- Water treatment processes, Sewage treatment. Water quality standard, Soil Pollution: Sources of soil pollution, Effects and Control of soil pollution, Types of Solid waste- House hold, Industrial, Agricultural, Biomedical, Disposal of solid waste, Solid waste management E-waste, E – waste management.

Impact of Energy Usage on Environment: Global Warming, Green House Effect, Depletion of Ozone Layer, Acid Rain. Eco-friendly Material, Recycling of Material, Concept of Green Buildings, Concept of Carbon Credit & Carbon footprint.

2. Haryana General Knowledge and Welfare schemes of Haryana Government.
(Weightage 20%)

Haryana history, current affairs, literature, Geography, Civics, Environment, Culture etc. and Welfare schemes run by state Government of Haryana and provisions there-in.

3. Road Safety Awareness **(Weightage 5%)**

Traffic Rules, importance of traffic rules, authority to implement traffic rules, punishment for violating traffic rules, authority to issue driving license, procedure to get driving license, classification of vehicles, traffic signs, knowledge of safety measures in vehicles.

4. Perspectives on Education and Leadership **(Weightage 15%)**

(a) Understanding the Learner

Concept of growth, maturation and development, principles and debates of development, development tasks and challenges, Domains of Development: Physical, Cognitive, Socio-emotional, Moral etc., deviations in development and its implications, Understanding Adolescence: Needs, challenges and implications for designing institutional support, Role of Primary and Secondary Socialization agencies. Ensuring Home school continuity.

(b) Understanding Teaching Learning

Theoretical perspectives on Learning-Behaviorism, Cognitivism and Constructivism with special reference to their implications for: (i) The role of teacher (ii) The role of learner (iii) Nature of teacher-student relationship (iv)Choice of teaching methods (v) Classroom environment (vi) Understanding of discipline, power etc.

Factors affecting learning and their implications for: (i) Designing classroom instructions, (ii) Planning student activities and, (iii) Creating learning spaces in school.

Planning and Organization of Teaching-Learning;e-Perspectives in Education, NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency based learning and Education. Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education;

School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment, (i) Concept of Syllabus and Curriculum, Overt and Hidden Curriculum (ii) Foundational Literacy and Numeracy, Early Childhood Care and Education (iii) Competency based

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Education, Experiential learning, etc. (iv) Instructional Plans: -Year Plan, Unit Plan, Lesson Plan (v) Instructional material and resources (vi) Information and Communication Technology (ICT) for teaching-learning (vii) Assessment of learning, for learning and as learning: Meaning, purpose and considerations in planning each. Enhancing Teaching Learning processes: Classroom Observation and Feedback, Reflections and Dialogues as a means of constructivist teaching.

c) Creating Conducive Learning Environment

The concepts of Diversity, disability and Inclusion, implications of disability as social construct, types of disabilities-their identification and interventions, Concept of School Mental Health, addressing the curative, preventive and promotive dimensions of mental health for all students and staff. Provisioning for guidance and counselling, Developing School, and community as a learning resource.

(d)School Organization and Leaders-hip

Leader as reflective practitioner, team builder, initiator, coach, and mentor, Perspectives on School Leadership: instructional, distributed, and transformative, Vision building, goal setting and creating a School development Plan, Using School Processes and forums for strengthening teaching learning-Annual Calendar, time-tabling, parent teacher forums, school assembly, teacher development forums, using achievement data for improving teaching —learning, School Self-Assessment, and Improvement, Creating partnerships with community, industry and other neighbouring schools and Higher Education Institutes — forming learning communities.

(e) Perspectives in Education

NEP-2020: Early Childhood Care and Education: The Foundation of Learning; Foundational Literacy and Numeracy; Curriculum and Pedagogy in Schools: Holistic & Integrated Learning; Equitable and Inclusive Education: Learning for All; Competency based learning and Education, Guiding Principles for Child Rights, Protecting and provisioning for rights of children to safe and secure school environment, Right of Children to free and Compulsory Education Act, 2009, Historically studying the National Policies in education with special reference to school education; School Curriculum Principles: Perspective, Learning and Knowledge, Curricular Areas, School Stages — Pedagogy & Assessment.

Social Studies **Weightage- 50%**

इतिहास

सरस्वती सिंधु सभ्यता, वैदिक काल, रामायण व महाभारत काल, मौर्यवंश, इस्लाम का उदय,जैन धर्म, बौध धर्म, शंकराचार्य का जीवन, विदेशीयों के आक्रमण एवं उनका भारतीय संस्कृति में समावेश, गुप्तकाल, हर्शवर्धन और तात्कालीन समाज, दक्षिण के राज्य चालुक्य, पल्लव एवं चोलपाल, प्रतिहार एवं राष्ट्रकूट, विश्व में भारतीय संस्कृति का प्रकार, प्राचीन भारत में शिक्षा, साहित्य एवं कला, राजा दाहिर एवं राजा आनन्दपाल,सुहेलदेव एवं पृथ्वीराज चौहान, मोहम्मद गौरी, कुतुबद्दीन ऐबक, इल्तुतमिश,रजिया, बलबन, अलाउद्दीन खिलजी, तुगलकवंश, तैमूर, दिलावर खां, विजय नगर साम्राज्य, बाबर, राणा संग्राम सिंह, मोहन सिंह मंढार, हुमायूँ, शेर शाहसूरी, अकबर, हेम चन्द्र विक्रमादित्य, रानी दुर्गावती, महाराणा प्रताप, जहांगीर, शाहजहाँ, औरंगजेब, सिक्ख गुरु, भक्ति आंदोलन, भक्तिगुरु शंकराचार्य, गुरुनानक, कबीर, मीरा, रस खान, दारा शिकोह आदि, छत्रपति शिवाजी एवं पेशवा, 17वीं शताब्दी में मुगलों का क्षेत्रीय प्रतिरोध, 18वीं शताब्दी का भारत :– स्वतंत्र राज्यों का उदय, मराठा शक्ति, पानीपत का तीसरा युद्ध, बंगाल, अवध, राजपुताना, सिक्ख, हैदराबाद, कर्नाटक, जात, सहेलखण्ड, बुन्देलखण्ड, राज्य, यूरोपीय शक्तियाँ, संस्कृतियों का टकराव, यूरोपीयन घुस पैठ तथा विस्तारवादी नीतियाँ, 1857 की क्रान्ति, कांग्रेस की स्थापना, मुस्लिम लीग, महात्मा गांधी और राष्ट्रीय आन्दोलन, क्रांतिकारी आंदोलन, विभाजन को समझना, संविधान का निर्माण, औध्योगिक क्रांति, भारतीय राष्ट्रीय आंदोलन में हरियाणा की भूमिका।

भूगोल

सौर मंडल में पृथ्वी, ग्लोब अक्षांश रेखा एवं देशांतर रेखा, पृथ्वी की गतियाँ, पृथ्वी के प्रमुख परिमण्डल, पृथ्वी के प्रमुख स्थलरुप, पृथ्वी के अन्दर, भारत, जलवायु, वनस्पति, वन्य प्राणी, वायु, जल, भूमि, मृदा, कृषि, पर्यावरण, बस्तियाँ, परिवहन एवं संचार, रेगिस्तान में जीवन, संसाधन, उद्योग, मानव संसाधन, खनिज, उर्जा संसाधन, विनिमार्ण उद्योग।

राजनीति शास्त्र

राजनीतिक सिद्धांत :– स्वतंत्रता, समानता, सामाजिक न्याय, अधिकार, कर्तव्य, नागरिकता, राष्ट्रवाद, धर्म निरपेक्षता, शांति, विकास, संविधान, मौलिक अधिकार, चुनाव, कार्यपालिका, विधानपालिका, न्यायपालिका, संघवाद, स्थानीय शासन, संविधान एक जीवन, दस्तावेज, राष्ट्र निर्माण मे चुनौतियाँ, नियोजित विकास, भारत के विदेशी सम्बन्ध, कांग्रेस प्रणाली :–चुनौतियाँ और पुनर्स्थापना, लोकतांत्रिक व्यवस्था का संकट, जन आन्दोलन, भारतीय राजनीति के नए बदलाव, शीत युद्ध का दौर, दो ध्रुवीयता का अंत, समकालीन विश्व में अमेरिका, वर्च स्वसत्ता के वैकल्पिक केन्द्र, समकालीन दक्षिण एशिया, समकालीन विश्व की सुरक्षा, अर्न्तराष्ट्रीय संगठन, गुट निरपेक्ष आंदोलन, अर्थशास्त्र, उदारीकरण, वैश्वीकरण, विकास, भारतीय अर्थव्यवस्था के क्षेत्रक, मुद्रा और साख, उपभोक्ता अधिकार।

Important Note: The Weightage as mentioned against the syllabus is tentative & may vary.

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Skill Test – 30 Marks

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SVSU Sr. Sec. School VT Exam Scheme & syllabus

SVSU Sr. Sec. VT Exam Subject	Total Marks	Written Test Marks	Interview Marks
VT MSFC	100	70	30
VT Automotive	100	70	30
VT Beauty & Wellness	100	70	30
VT Health Care	100	70	30
VT Japanese Language	100	70	30

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Syllabus for Written Examination for VT Multi Skill Foundation Course

Total Marks -100 **Written Test – 70 Marks**

WORKSHOP & ENGINEERING SECTION: measuring instrument, workshop tools and equipment, safety precautions, advantages and the disadvantages of Wood, methods to prevent pest attack on wood, use of thread, safety precautions to be followed while drilling, safety precautions for making objects, various types of material that can be used for making objects, various types of building materials and their applications, various types of construction tools and equipment, various types of walls, different types of bond and their application, safety precautions while handling and laying of the brick, Safety precautions while using piping material, various components of plumbing accessories.

ENERGY & ENVIRONMENT SECTION: Symbols and describe their usage, purpose of symbols, health and safety risks and procedures involved in the use of electrical tools, equipment and materials, different types of wire, cable and switches, use of Standard/ American wire Gauge, types of joints, simple circuits such as electrical potential, difference/ voltage, conductive path, electrical, resistance, potential difference, transistor, conventional current, direct, current, capacitor, attractive current, ohm's law, ohm's etc., planning and executing staircase wiring, Describe the factors to be considered for planning and executing godown wiring Identify the tools and materials to be used for staircase wiring, earthing types and function of fuse, miniature circuit breaker (mcb), soldering, maintenance of lead acid battery, maintenance and application of various types of stoves, types of light, generate electricity bill and measures to save electricity, soak pit / septic tank – purpose and operating system, waste management and regeneration.

INTRODUCTION TO BASICS OF GARDENING, NURSERY, & AGRICULTURE: machines and equipment's for agriculture, land cultivation, crop plantation, fertilizer application, mulching, seed plantation and seed treatment, prepare vermi compost and vermiwash, advantages of vermi compost and vermiwash, prepare organic pesticide, advantages of organic pesticide, methods of determining the weight and age of animals, type of the animal feed, determine the expenditure of consumed feed from the weight of an animal, domesticated animals, diseases & care (cow, buffalo, goat), domesticated animals, diseases & care (dog), innovative gardening (urban school).

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FOOD PROCESSING TECHNIQUES: utensils and equipment used in cooking, characteristics of raw food material –identification (cereals, pulses and dals, species andcondiments), food processing methods (boiling, steaming, shallow frying, baking, sauteing) and fuel conservation methods, food preservation methods (drying, pickling, brining- putting in syrup, freezing, canning), costing, packing and labelling of food products, food and nutrition requirements of adolescent boys and girls, methods of identifying food adulteration.

WORKSHOP & ENGINEERING SECTION: Welding Technique & Welding Joint Test (Simulation or observation only), Types of GI pipe fitting, Introduction of Engineering Drawing Instruments, Engineering Drawing (Orthographic & Isometric Projection), Basic Techniques In Building Construction - Ferro Cement Sheet, Making of RCC Column, Plastering and Painting, Costing of Construction.

ENERGY & ENVIRONMENT: Introduction To Electrical Techniques And Practices, Introduction Of Electric Pump, DOL Starter, And Inverter, Introduction Of Electric Pump, DOL Starter, And Inverter, Introduction Of Electric Pump, DOL Starter, And Inverter, Solar Energy, Functioning And Operation Of A Petrol Or Diesel Engine, Bio Gas Concept And Use, Bio Gas Concept and Use, Water Conservation Concept, Land Survey Method, Rainfall Measurement Method.

GARDENING, NURSERY & AGRICULTURE TECHNIQUE

Nursery Techniques, Irrigation & Water Conservation Methods, Interpreting Results of Soil Testing, Artificial Insemination, and Preparing Fodder for Animals.

PERSONAL HEALTH & HYGIENE: Balanced Diet, Personal Health & Hygiene, Community Health & Mental Health, Communicable & Non- Communicable Diseases, Vaccination, Dehydration, and Emergency First Aid, Dehydration, Blood & Blood Group-Basic Information And Blood Pressure And Measuring Hemoglobin, Pollution-Sources, Effects And Solutions And Water Quality Testing, Community Health & Environment Care, Pollution-Sources, Effects And Solutions And Water Quality Testing, Handling Of Food Products Perishable & Non-Perishable Food, Packed & Loose Food And Fresh & Stale Food Product,

Skill Test – 30 Marks

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Syllabus for Written Examination for VT AUTOMOTIVE

Total Marks -100 **Written Test – 70 Marks**

Regular Maintenance of an Engine: Inspection of an Engine, washing of an Engine, Tuning the fuel system of an Engine, Tuning of the Ignition System of an Engine, Tuning of the Engine Lubrication System, Tuning of the Engine Cooling System, Tightening of Fastener (Nut/Bolt/Screw), Engine Timing (Tuning)

Regular Maintenance of Transmission System: Transmission System, Clutch Maintenance, and Adjustments

Regular Maintenance of the Gearbox: Lubrication of the gearbox, setting of the gearbox

Servicing of the Wheels: Importance of Wheels, Importance of Hub Greasing and Bearing Play Adjustments

Regular Maintenance of Tubes and Tyres: Tyre and Tube Maintenance, Repairing of Punctured Tubes

Regular Maintenance of Brakes: Brakes and Maintenance, Brakes and Adjustment

Measuring & service Equipment: Air Compressor, Car Washer, Tyre Inflators, Spark Plug Cleaner and Tester, Wheel Balancing- Procedure of Wheel Balancing/ Working of Wheel Balancing Machine.

Steering system: Ackerman's Steering Principle of Steering, Steering Geometry, Steering Gear Box, Steering Linkages, Power Steering, Troubleshooting and Remedies

Suspension System: Introduction, Types of Suspension Systems, Description of Suspension System, Components of a Suspension System, Servicing of the Shock Absorber

Transmission and Final Drive System: Transmission & Final Drive System (Propeller Shaft & Universal Joint Propeller Shaft Types of Universal Joint, Transmission & Final Drive System (Propeller Shaft & Universal Joint Universal Joint Trouble shooting chart for Transmission and Final Drive System Trouble Shooting Chart for Clutch, Trouble Shouting Chart for Gearbox, Transmission & Final Drive System (Differential and Rear Axle) Final Drive, Transmission & Final Drive System (Differential and Rear Axle) Differential, Transmission & Final Drive System (Differential and Rear Axle) Rear Axle

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Automotive Electrical and electronic system: Purpose: Electrical System of Automotive, Layout of an Automotive, Electrical System (Charging & Starting System & Different Electrical Circuit), Charging System, Starting System, Different Circuit Diagrams of a Car, Automobile DC Generator, Construction of Alternator.

Motor Vehicle Act and Rules: Provision regarding Issue of Driving, Registration of Vehicle, Insurance, Claims, Transfer License of Ownership, Fitness Certificate, Indian Traffic Rules & Signs, Hand Signals used by the Drivers, The Driving Hand Signals used by the Driver, Hand Signals used by the Traffic Personnel, Traffic Police Hand Signals (Manual), Emission, Sources of Emission, Types of Emission, Emission Control, Emission Norms in India.

Skill Test – 30 Marks

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Syllabus for Written Examination for VT BEAUTY AND WELLNESS

Total Marks -100 **Written Test – 70 Marks**

Introduction to Beauty and Wellness Industry and Beauty Therapy: Introduction to beauty & wellness industry, different services in beauty therapy, various setups for treatment work area. Different sterilisation and disinfection processes, Method to prepare client record cards, Pre & post treatment preparation for clients, Waste Disposal methods, Safe &effective hygiene practices for beauty services, Understand the manufacturer's instructions related to equipment and product use and cleaning. Contra-indications related to beauty treatments., Knowledge of applicable legislation relating to the workplace, Norms for storing &handling products, tools and equipment safely to meet the manufacturer's instructions

Skin Care Services: Anatomical structure of the skin-The layers of the epidermis: the dermis, the subcutaneous layer; the hair follicle, the hair shaft, the sebaceous gland, arrectorpili muscle, sweat gland, and sensory nerve endings, Functions of the skin- Sensitivity, heat regulation, absorption, protection, excretion, secretion and vitamin D production, Characteristics of the skin and skin types- oily, dry, combination etc., Actions of the facial, neck and shoulder muscles bones of the head, neck and shoulder girdle, position of the head, face, neck, chest and shoulder., Effect of the natural ageing process on the skin, facial muscles and muscle tone, Different types of skin products and methods to apply, Importance of cleansing, toning, patch test &bleach., Need for skin warming, different types of skin warming devices and their effect on the skin, Black head/ white head extraction, Bleach preparation & application, Face clean-up, Different types of masks and their effects on the skin Masks: Cream, warm oil, clay, peel off, thermal, etc. links between mask application timing and skin condition.

Manicure and Pedicure Services: Understand how to work safely and effectively when providing manicure & pedicure services, Understand how to perform client consultation, treatment planning and preparation, Anatomical structure, function, characteristics of nail and the process of nail growth, Anatomy & physiology of hand &feet, Structure and functions of the lymphatic vessels of the lower leg, foot, hand and arm, Knowledge on different products & tools for manicure & pedicure services, Understand different manicure & pedicure techniques, Understand how to provide aftercare advice for clients

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Depilation Services: Equipment, materials, products, techniques and treatment planning for waxing, Anatomy and physiology of skin that relates to waxing treatment, Contra-indications & contra-actions that affect or restrict waxing treatments, Understand how to work safely and effectively when providing waxing treatments to the clients, Various techniques associated with and working temperatures for the different types of hot wax and warm wax, suitability of specific products based on hair type/ hair growth, Method of application and removal of waxing products in relation to the direction of hair growth advantages, disadvantages and limitations of facial waxing and suitable alternative facial hair removal procedures e.g. sugaring, tweezing, shaving, depilatory creams, electrical depilatory, abrasive mitts, depilation, intensive pulse light, laser, Types of tools and materials used for threading-e.g. scissors, disposable eye brow brush etc. materials: thread, Types of products suitable for pre and post-threading services, Different types of threading techniques, Shape and proportion of the eyebrows in relation to facial features and existing eyebrow shape, Method to carry out the threading techniques.

Make Up Services: Basic skin types and skin tones. (Oily, dry, normal and combination; Skin tone: Fair, dark, pink, yellow, pale), Select and apply the correct make-up products to enhance facial features, to suit the client's needs and achieve the desired effect, Various Make-up products: Foundation, powder, blusher, mascara, eye shadows, eye liner, eyebrow pencil, lip liner and lip stick/gloss, etc, Colour wheel and how to use it for selecting right makeup products, Importance of Highlighting and contouring with respect to make up, Basic bindi designs, Different draping techniques, Various make-up removal products and procedures

Facial Beauty Services: Electrical/electronic machine equipment for beauty services, Brush Machine/Brush Unit, Facial Steamer (Vapour Zone), High, Frequency, Galvanic (Iontophoresis, Faradic, Vacuum suction, Micro current, Electro-muscle Stimulator, Lymphatic Drainage Equipment, Microdermabrasion, Ultra-sonic, Contraindications & contractions for use of different machines. Using the equipment for facial beauty.

Salon Reception Duties: Importance of customer satisfaction for business and professional success, Information required for booking an appointment and the purpose of each item of information, Features and operational procedures of computerized booking systems, Importance of managing customers during waiting periods and possible ways to do that, Customer service principles including privacy and protection to modesty of the customers, Data protection, its importance, application and relevant practices

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Create a positive impression at work place: Effective consultation techniques to identify treatment objectives, Effective communication techniques when dealing with clients, Professional etiquettes.

Skill Test – 30 Marks

***** Skill Test of 30 Marks will be based on the Above Syllabus and Qualifications. *****

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Syllabus for Written Examination for VT HEALTH CARE

Total Marks -100 **Written Test – 70 Marks**

Hospital Management System: Overview of healthcare delivery, departments, and roles.

Role of GDA for Outpatient Care: Assisting in clinics and outpatient departments.

Role of GDA for Inpatient Care: Assisting with patient admission, hygiene, and nutrition.

First Aid: Techniques and Emergency Procedures.

Maintaining Safe, Healthy, and Secure Environment: Infection control, waste management, and safety protocols.

Medical Record/Documentation: Preparing medical record, Principles of documentation, Content of medical documentation, Maintaining record, Purpose, principles, contents, and maintenance of medical records; Source/problem-oriented records; GDA role in documentation.

Role of GDA in Elderly and Child Care: Introduction to care of elderly, Age related changes in people, Basic needs of elderly, Taking care of common problems of elderly, Caring for infants and children, Myths vs. facts of ageing, physical changes in the elderly, basic needs, common geriatric problems, and care for infants.

Bio-waste Management: Introduction to bio-medical waste, segregation, handling, and transportation, Sources and disposal of bio- medical waste, Segregations and transportation of bio medical waste, Role of hospital staff in bio-medical waste management.

Operation Theatre: Understanding the OT environment, sterilization, and disinfection techniques, Zones and areas in operation theatre complex, Organization of operation theatre, Preparation of patient for operation, post-operative care

Role of GDA in Disaster Management and Emergency Response: Disaster management and emergency response, Response team fighting fire, handling emergencies and disasters in a hospital setting.

Self-Management and Career Scope: Goal setting, Strategies, Time Management, Critical

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Thinking, Career opportunities and personal management in health care.

Skill Test – 30 Marks

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Syllabus for Written Examination for VT JAPANESE

Total Marks -100 **Written Test – 70 Marks**

A) Reading comprehension: Unseen passages related to syllabus (explanatory, opinion text)-short stories, articles.

B) Writing skills: Guided paragraph writing on the following topics in about 400 characters. No marks deducted for spelling mistakes.

- すきな スポーツ
- Completing conversation passages 2nd Term
- わたしが　ほしい もの。
- しゅうがくりょこうの おしらせ　：ポスター つくり(poster making)
- Completing conversation passages

C) Grammar:

1st term lesson 21- 24 (4 lessons)

2nd term-lesson 25-28 (4 lessons)

とおもいます、といいます、でしょう、NでNがあります、

Vないとnoun modification , 時間/約束/用事があります、とき、と、くれます、あげます、もらいます、たら、Vて、けいようし-くて、

くても、もし、いくら、んです、いただけませんか、Vたらいいですか、すき、きらい、上手、下手 Potential verbs, potential verb sentences. しかありません、 ながら、--し—し、 ましょう、それに, それで、よく、

V ています.

D) Script: 101-150 kanji (N4 list, both reading and writing)

E) Culture: (Internal Assessment): Efforts should be made to introduce the students' Japanese customs, habits, and festivals in 1st term.

A – Periodic Tests : Tests may be based on grammar/vocabulary/kanji / script

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B - Notebook Submission: Students are expected to maintain notebook for classwork and other home based enrichment exercises. Assessment may be done on the basis of Regularity Assignment Completion Neatness and upkeep of Notebook

C –Subject Enrichment PBL: The teacher should assess students on the skills of language learning namely, Listening and Speaking. The assessment should be done on 10 and then reduced to 5 marks. The topics for Listening and Speaking may be taken from the themes of the lessons in the syllabus. The details of this component are as follows:

Components & Weightage Suggested Activities: Listening to small narrations and analyzing. Speaking Conversations & Dialogues, spontaneous question answers, recitation and narration.

PBL (project based learning) Any one of the following topics in Japanese :

1. おとしよりのひと
2. こうつうきかん（Transport system of India）
3. インドのしょくじ-けんこうにいい？（Healthy food habits in INDIA）

Skill Test – 30 Marks

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