

TENDER HEART HIGH SCHOOL, SEC 33-B, CHD..

Notice – Vidyarthi Vigyan Manthan (VVM) By Vijana Bharti

18.09.2024

Dear Student/s,

It is our pleasure to inform that students from Class VI to Class X may register themselves for Vidyarthi Vigyan Manthan (VVM)-A Digital Based & Largest Science Talent Search Examination for Emerging India to create awareness about India's significant contributions to the field of science and to encourage young minds to engage with scientific knowledge. The details of the programme can also be accessed from the following link :

<https://vvm.org.in/>

Class-wise details of the programme and syllabus is attached with the notice for your reference.

Principal

VIDYARTHI VIGYAN MANTHAN 2024-25
SYLLABUS FOR ONLINE SCHOOL LEVEL (LEVEL-I) EXAMINATION

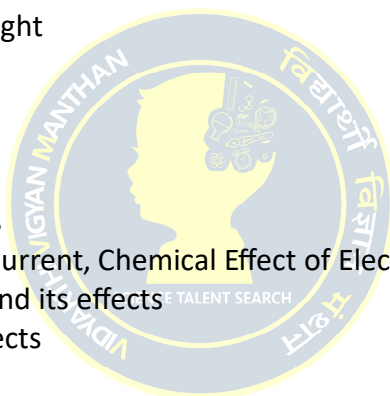
JUNIOR GROUP (CLASS - VI, VII & VIII)

A. PHYSICS

- Motion and Measurement of Distances, Measurement, Measurement of Length
- Light, Shadows and Reflections, Propagation of Light, Transparent, Translucent and Opaque Objects
- Electricity and Circuits. Electric Cell. Electric Bulb
- Fun with Magnets. Magnetic and Non-Magnetic Materials. Natural and Man-Made Magnets.
- Heat
- Temperature
- Transfer of heat
- Motion and time
- Types of motion
- Distance and displacement, speed and velocity
- Measurement of time and speed
- Electric current and its effects
- Symbols of electric components
- Heating effects of electric current
- Magnetic effect of electric current
- Light
- Rectilinear propagation of light
- Reflection of light
- Plane and spherical mirrors
- Sunlight
- Newton's disc
- Winds, storms and cyclones
- Chemical Effect of Electric Current, Chemical Effect of Electric Current and Its Applications
- Force and Pressure, Force and its effects
- Friction, Friction and its effects
- Light, Reflection of Light
- Some Natural Phenomena, Lightning and Earthquake
- Sound, Human Ear
- Stars and the Solar System

B. CHEMISTRY

- Sorting of materials into groups
- Separation of substances
- Changes around us
- Water
- Air around us
- Fibre to fabric
- Acids, bases, salts
- Heat
- Physical and chemical changes
- Soil
- Water
- Waste water story
- Coal and petroleum
- Combustion and flame



VIDYARTHI VIGYAN MANTHAN 2024-25
SYLLABUS FOR ONLINE SCHOOL LEVEL (LEVEL-I) EXAMINATION

- Pollution of air and water
- Synthetic fibre and plastic
- Materials - Metals and non-metals
- Definition of elements, compounds and mixture
- Names and Symbols of elements from atomic number 1-30
- Types of elements- metals, non-metals and metalloids

C. BIOLOGY

- Food components, balanced diet and deficiencies
- Plant types and parts of a plant
- Body joints and types of movements
- Characteristics of living organisms
- Nutrition in plants
- Nutrition in animals
- Respiration
- Transportations
- Reproduction in plants
- Forests
- Waste water
- Crop production and management
- microorganisms
- Conservation of animal and plants
- Animal reproduction
- Adolescence
- Ear structure

D. MATHEMATICS

- **Arithmetic** - Fractions, Percentage, Profit & Loss, LCM & HCF, Square, Cube, Square Root & Cube Root, Time, Work & Distance, Rational Number, Integers, Simple & Compound Interest
- **Algebra** - Simple Equation, Factorization, Algebraic Identities
- **Geometry** - Lines & Angles, Triangles, Polygon & Quadrilaterals, Circles
- **Mensuration** - Perimeter & Area of 2-Dimensions, Volume & Surface Area of Cube & Cuboid
- **Statistics** - Data Analysis, Mean, Median and Mode of discrete data, Graphical representation – Histogram, Bar Graph, Pie Chart, Frequency Polygon.

E. Logic & Reasoning –

Crypt arithmetic (Alphametics), Logical Sequence Series, Coding & decoding, Blood Relations, Input & Output, Binary Logic, Standard LR Sets, Cubes and Visual Puzzles, Word Problems, IQ puzzles, Sequencing, Grid Puzzles, Linear and Circular Seating Arrangements. Visual Puzzles, Cubes and Dices, Venn Diagrams, Math based reasoning, Direction, Order and Ranking, Clocks & Calendar, Analogy, Syllogism, Analytical puzzles, Inequalities, Image based sequence. Critical path, Decision making, Mirror image & water image, Odd one out, shape constructions, Paper folding, Figure matrix

Note: *The examination will be conducted separately for Junior Group (Class VI to VIII) and for Senior Group (Class IX to XI). Evaluation of students will be based on their individual performance in their respective class.*

VIDYARTHI VIGYAN MANTHAN 2024-25
SYLLABUS FOR ONLINE SCHOOL LEVEL (LEVEL-I) EXAMINATION
SENIOR GROUP (CLASS - IX, X & XI)

A. PHYSICS

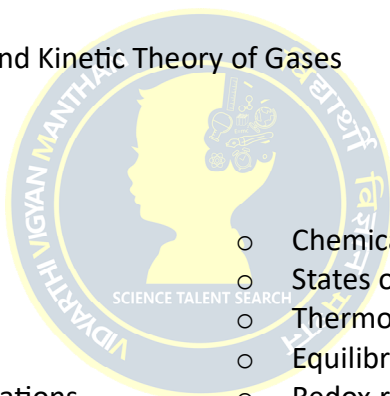
- Motion
- Force and Laws of Motion
- Gravitation
- Work and Energy
- Sound
- Light – Reflection and Refraction, dispersion and its application
- Electricity
- Magnetic Effects of Electric Current
- Sources of Energy
- Physical World and Measurement
- Kinematics
- Laws of Motion
- Work, Energy and Power
- Motion of System of Particles and Rigid Body
- Gravitation
- Properties of Bulk Matter
- Thermodynamics
- Behavior of Perfect Gases and Kinetic Theory of Gases
- Oscillations and Waves

B. CHEMISTRY

- Matter in our surrounding
- Is matter around us pure?
- Atoms and molecules
- Structure of atom
- Chemical reactions and equations
- Acids, bases and salts
- Metals and Non-metals
- Periodic classification of elements
- Carbon and its compounds
- Some Basic concepts of chemistry
- Structure of atom
- Periodic classification of elements and periodic properties
- Chemical bonding and molecular structure
- States of matter
- Thermodynamics
- Equilibrium
- Redox reactions
- Hydrogen
- s-block elements (Group1 and 2)
- p-block elements (groups 13, 14, 15)
- Some basic principles and techniques
- Hydrocarbons
- Environmental chemistry

C. BIOLOGY

- Cell organization
- Animal tissues
- Plant tissues
- Improvement of crop
- Animal husbandry
- Animal nutrition, respiration, circulation and excretion
- Plant nutrition, respiration, transportation and excretion
- Animal nervous system
- Coordination in plants (stimuli and hormones)



VIDYARTHI VIGYAN MANTHAN 2024-25
SYLLABUS FOR ONLINE SCHOOL LEVEL (LEVEL-I) EXAMINATION

- Animal reproduction
- Human eye
- Genetics
- Environment
- Animal diversity and kingdom
- Plant diversity and kingdom
- Organismic classification
- Morphology and anatomy of plants
- Structural organization of animals
- Cell biology
- Macromolecules
- Plant physiology (photosynthesis, respiration and plant growth and development)
- Animal physiology (respiratory, circulatory, excretory, nervous and endocrine systems)

D. MATHEMATICS

- **Arithmetic** - Law of Indices & Surds, Real Numbers, Logarithms, Calendar
- **Algebra** - Simultaneous & Quadratic Equation, Polynomials, Factor & Remainder Theorem, Permutations & Combination, Inequations, Functions, AP, GP & HP, Complex Number, Probability
- **Geometry** - Circle Theorem, Area of Parallelogram, Apollonius Theorem & Stewart's Theorem, Trigonometric Identity, Properties and Solution of Triangles, Straight Line, Differentiation, Conic Section
- **Mensuration** - Sphere, Cone, Cylinder, Pyramid, Prism
- **Statistics** - Measures of Central Tendency, Mean deviation and Median Deviation about Mean, Standard Deviation, Variance

E. Logic & Reasoning

Crypt arithmetic (Alphametics), Logical Sequence Series, Coding & decoding, Blood Relations, Input & Output, Binary Logic, Standard LR Sets, Cubes and Visual Puzzles, Word Problems, IQ puzzles, Sequencing, Grid Puzzles, Linear and Circular Seating Arrangements. Visual Puzzles, Cubes and Dices, Venn Diagrams, Math based reasoning, Direction, Order and Ranking, Clocks & Calender, Analogy, Syllogism, Analytical puzzles, Inequalities, Image based question.

Games and Tournaments, Input & Output, Binary Logic, Cubes and Visual Puzzles, Word Problems, IQ puzzles, Logical connectives, Sequencing, Grid Puzzles, Linear and Circular Seating Arrangements, Visual Puzzles, Cubes and Dices, Venn Diagrams, Math based reasoning, Critical path, Decision making, Mirror image & water image, Odd one out, shape constructions, Paper folding, Figure matrix

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