

HSC 1st Year Academic Program

Prime Batch

Online Batch Time

English Version – 3:00 pm

Class & Exam

New routine

Online Exam Time

From 9:00 am to 11:00 pm

Part -01

Date and time	Live Class (Online Smart Board)	Live Exam (Online)
13 August 2024 (Tuesday)	Live class (C-17+18) Chemistry: Chapter- 02	Daily Live Exam (C-15+16) MCQ (10×1=10); 10 min
14 August 2024 (Wednesday)	Live class (Z-03+04) Zoology: Chapter- 01	Daily Live Exam (C-17+18) MCQ (10×1=10); 10 min
15 August 2024 (Thursday)	Live class (C-19+20) Chemistry: Chapter- 02	Daily Live Exam (Z-03+04) MCQ (10×1=10); 10 min
17 August 2024 (Saturday)	Chapter-wise Exam [H.Math 1st Paper Chapter-03] (Part-02); Lecture HM-17 to 24; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
18 August 2024 (Sunday)	Live class (Z-05+06) Zoology: Chapter- 01	Daily Live Exam (C-19+20) MCQ (10×1=10); 10 min
19 August 2024 (Monday)	Live class (P-13+14) Physics: Chapter- 02	Daily Live Exam (Z-05+06) MCQ (10×1=10); 10 min
20 August 2024 (Tuesday)	Live class (C-21+22) Chemistry: Chapter- 02	Daily Live Exam (P-13+14) MCQ (10×1=10); 10 min
21 August 2024 (Wednesday)	Live class (B-09+10) Botany: Chapter- 02	Daily Live Exam (C-21+22) MCQ (10×1=10); 10 min
22 August 2024 (Thursday)	Live class (B-11+12) Botany: Chapter- 02	Daily Live Exam (B-09+10) MCQ (10×1=10); 10 min
23 August 2024 (Friday)	Chapter-wise Exam [Physics 1st Paper Chapter-02] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
24 August 2024 (Saturday)	Chapter-wise Exam [Zoology Chapter-01] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	

Part-02

25 August 2024 (Sunday)	Live class (Z-07+08) Zoology: Chapter- 02	Daily Live Exam (B-11+12) MCQ (10×1=10); 10 min
26 August 2024 (Monday)	Live class (P-01+02) Physics: Chapter- 01	Daily Live Exam (Z-07+08) MCQ (10×1=10); 10 min
27 August 2024 (Tuesday)	Live class (C-23+24) Chemistry: Chapter- 03	Daily Live Exam (P-01+02) MCQ (10×1=10); 10 min
28 August 2024 (Wednesday)	Live class (HM-01+02) H.Math: Chapter- 01	Daily Live Exam (C-23+24) MCQ (10×1=10); 10 min
29 August 2024 (Thursday)	Live class (P-15+16) Physics: Chapter- 03	Daily Live Exam (HM-01+02) MCQ (10×1=10); 10 min
30 August 2024 (Friday)	Chapter-wise Exam [Chemistry 1st Paper Chapter-02] (Part-01); Lecture C-05 to 12; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
31 August 2024 (Saturday)	Chapter-wise Exam [Botany Chapter-02] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
01 September 2024 (Sunday)	Live class (Z-09+10) Zoology: Chapter- 02	Daily Live Exam (P-15+16) MCQ (10×1=10); 10 min
02 September 2024 (Monday)	Live class (P-17+18) Physics: Chapter- 03	Daily Live Exam (Z-09+10) MCQ (10×1=10); 10 min
03 September 2024 (Tuesday)	Live class (C-25+26) Chemistry: Chapter- 03	Daily Live Exam (P-17+18) MCQ (10×1=10); 10 min
04 September 2024 (Wednesday)	Live class (HM-03+04) H.Math: Chapter- 01	Daily Live Exam (C-25+25) MCQ (10×1=10); 10 min
05 September 2024 (Thursday)	Live class (HM-05+06) H.Math: Chapter- 01	Live Exam (HM-03+04) MCQ (10×1=10); 10 min
06 September 2024 (Friday)	Chapter-wise Exam [Physics 1st Paper Chapter-01] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min	
07 September 2024 (Saturday)	Chapter-wise Exam [Chemistry 1st Paper Chapter-02] (Part-02); Lecture C-13 to 22; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
08 September 2024 (Sunday)	Live class (HM-37+38) H.Math: Chapter- 06	Daily Live Exam (HM-05+06) MCQ (10×1=10); 10 min
09 September 2024 (Monday)	Live class (P-19+20) Physics: Chapter- 03	Daily Live Exam (HM-37+38) MCQ (10×1=10); 10 min
10 September 2024 (Tuesday)	Live class (C-27+28) Chemistry: Chapter- 03	Daily Live Exam (P-19+20) MCQ (10×1=10); 10 min
11 September 2024 (Wednesday)	Live class (Z-11+12) Zoology: Chapter- 02	Daily Live Exam (C-27+28) MCQ (10×1=10); 10 min
12 September 2024 (Thursday)	Live class (HM-41+42) H.Math: Chapter- 07	Daily Live Exam (Z-11+12) MCQ (10×1=10); 10 min
13 September 2024 (Friday)	Chapter-wise Exam [H.Math 1st Paper Chapter-01] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
14 September 2024 (Saturday)	Chapter-wise Exam [Physics 1st Paper Chapter-03] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	

15 September 2024 (Sunday)	Live class (HM-39+40) H.Math: Chapter- 06	Daily Live Exam (HM-41+42) MCQ (10×1=10); 10 min
16 September 2024 (Monday)	Live class (P-21+22) Physics: Chapter- 04	Daily Live Exam (HM-39+40) MCQ (10×1=10); 10 min
17 September 2024 (Tuesday)	Live class (C-29+30) Chemistry: Chapter- 03	Daily Live Exam (P-21+22) MCQ (10×1=10); 10 min
18 September 2024 (Wednesday)	Live class (Z-13+14) Zoology: Chapter- 02	Daily Live Exam (C-29+30) MCQ (10×1=10); 10 min
19 September 2024 (Thursday)	Live class (HM-43+44) H.Math: Chapter- 07	Daily Live Exam (Z-13+14) MCQ (10×1=10); 10 min
20 September 2024 (Friday)	Chapter-wise Exam [H.Math 1st Paper Chapter-06] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
22 September 2024 (Sunday)	Live class (HM-53+54) H.Math: Chapter- 08	Daily Live Exam (HM-43+44) MCQ (10×1=10); 10 min
23 September 2024 (Monday)	Live class (P-23+24) Physics: Chapter- 04	Daily Live Exam (HM-53+54) MCQ (10×1=10); 10 min
24 September 2024 (Tuesday)	Live class (C-31+32) Chemistry: Chapter- 03	Daily Live Exam (P-23+24) MCQ (10×1=10); 10 min
25 September 2024 (Wednesday)	Live class (B-13+14) Botany: Chapter- 03	Daily Live Exam (C-31+32) MCQ (10×1=10); 10 min
26 September 2024 (Thursday)	Live class (HM-45+46) H.Math: Chapter- 07	Daily Live Exam (B-13+14) MCQ (10×1=10); 10 min
27 September 2024 (Friday)	Chapter-wise Exam [Chemistry 1st Paper Chapter-03] (Part-01); Lecture C-23 to 30; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
28 September 2024 (Saturday)	Chapter-wise Exam [Zoology Chapter-02] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
29 September 2024 (Sunday)	Live class (HM-55+56) H.Math: Chapter- 08	Daily Live Exam (HM-45+46) MCQ (10×1=10); 10 min
30 September 2024 (Monday)	Live class (P-25+26) Physics: Chapter- 04	Daily Live Exam (HM-55+56) MCQ (10×1=10); 10 min
01 October 2024 (Tuesday)	Live class (C-33+34) Chemistry: Chapter- 03	Daily Live Exam (P-25+26) MCQ (10×1=10); 10 min
02 October 2024 (Wednesday)	Live class (B-15+16) Botany: Chapter- 03	Daily Live Exam (C-33+34) MCQ (10×1=10); 10 min
03 October 2024 (Thursday)	Live class (HM-47+48) H.Math: Chapter- 07	Daily Live Exam (B-15+16) MCQ (10×1=10); 10 min
06 September 2024 (Sunday)	Live class (HM-57+58) H.Math: Chapter- 08	Daily Live Exam (HM-47+48) MCQ (10×1=10); 10 min
07 September 2024 (Monday)	Live class (P-27+28) Physics: Chapter- 04	Daily Live Exam (HM-57+58) MCQ (10×1=10); 10 min
08 October 2024 (Tuesday)	Live class (C-35+36) Chemistry: Chapter- 03	Daily Live Exam (P-27+28) MCQ (10×1=10); 10 min
09 October 2024 (Wednesday)	Live class (B-17+18) Botany: Chapter- 03	Daily Live Exam (C-35+36) MCQ (10×1=10); 10 min
10 October 2024 (Thursday)	Live class (HM-49+50) H.Math: Chapter- 07	Daily Live Exam (B-17+18) MCQ (10×1=10); 10 min
11 October 2024 (Friday)	Chapter-wise Exam [H.Math 1st Paper Chapter-08] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
Online classes and exams will be closed on October 12 and 13 on the occasion of Sharadiya Durga Puja.		
14 September 2024 (Monday)	Live class (P-29+30) Physics: Chapter- 04	Daily Live Exam (HM-49+50) MCQ (10×1=10); 10 min
15 October 2024 (Tuesday)	Live class (P-31+32) Physics: Chapter- 05	Daily Live Exam (P-29+30) MCQ (10×1=10); 10 min
16 October 2024 (Wednesday)	Live class (Z-15+16) Zoology: Chapter- 03	Daily Live Exam (P-31+32) MCQ (10×1=10); 10 min
17 October 2024 (Thursday)	Live class (HM-51+52) H.Math: Chapter- 07	Daily Live Exam (Z-15+16) MCQ (10×1=10); 10 min
18 October 2024 (Friday)	Chapter-wise Exam [Chemistry 1st Paper Chapter-03] (Part-02); Lecture C-31 to 36; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
19 October 2024 (Saturday)	Chapter-wise Exam [Botany Chapter-03] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
20 October 2024 (Sunday)	Live class (Z-17+18) Zoology: Chapter- 03	Daily Live Exam (HM-51+52) MCQ (10×1=10); 10 min
21 October 2024 (Monday)	Live class (P-33+34) Physics: Chapter- 05	Daily Live Exam (Z-17+18) MCQ (10×1=10); 10 min
22 October 2024 (Tuesday)	Live class (P-35+36) Physics: Chapter- 05	Daily Live Exam (P-33+34) MCQ (10×1=10); 10 min
23 October 2024 (Wednesday)	Live class (B-25+26) Botany: Chapter- 05	Daily Live Exam (P-35+36) MCQ (10×1=10); 10 min
24 October 2024 (Thursday)	Live class (B-27+28) Botany: Chapter- 05	Daily Live Exam (B-25+26) MCQ (10×1=10); 10 min
25 October 2024 (Friday)	Chapter-wise Exam [Physics 1st Paper Chapter-04] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	
26 October 2024 (Saturday)	Chapter-wise Exam [H.Math 1st Paper Chapter-07] (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.	

Next Class and Exam Routine (Part-03) will be published

Online Classes & Exam Procedure:

* Go to this website **udvash.com** and click on '**Join Now**' menu to give **Live Class & Exam**. Login to class **11th academic program Prime Batch** using your admitted registration number to participate in classes and exams.

* The **Daily Live Exam** will run from **09:00 am to 11:00 pm** as per the date mentioned in the routine. A student can participate in the **Live Exam** only once during this period. However, for more practice, students can participate in the **Practice Exam** of the same syllabus multiple times.

HSC 1st Year Academic Program Prime Batch Part-02 Syllabus-2024 (Online)

Physics 1st Paper (Reference Book: UDVASH Parallel Text)		
Chapter	Chapter	Syllabus
Chapter-2 Vector	P-13	Calculus, Differentiation, Integration, Functions with Multiple Variables and Partial Differentiation.
	P-14	Scalar and Vector Field, Gradient, Divergence, Curl.
Chapter-1 Physical World and Measurement	P-01	Scope of Physics, Physics and Other Branches of Science, Evolution of Physics, Definition of concepts, Formulae, postulates and theories of Physics. Measurement, Unit, Dimension, Equation of Dimension, Principle of Homogeneity, Unit conversion of physical quantities, Limitations of dimensional equations, Error, Instrumental Errors, Observational Errors, Random Errors, Systematic Errors, Least Count Error, Calculation of Error, Accuracy and Precision, Significant Figures.
	P-02	Some instruments of measurement, Vernier Scale, Slide Callipers, Screw Gauge, Spherometer, Scale Balance, All Important Formulae at a Glance, Mathematical Problems.
Chapter-3 Dynamics	P-15	Reference Frame, Rest and Motion, Distance and Displacement, Average Velocity and Average Speed, Instantaneous Velocity and Instantaneous Speed, Acceleration. Laws of Motion for Uniform Acceleration.
	P-16	Describing motion with Graphs, Determining velocity with the concepts of slope and area.
	P-17	Motion of Free-Falling Bodies, Vertical Projectile, Some Special Equations for Vertical Projectiles, Proof of Galileo's Laws from the Equations of Motion.
	P-18	Motion of an object in a curve, Vector Equations of the Laws of Motion for Uniform Acceleration, Projectile Motion, Equations for Projectile Motion, Equations relating to Projectiles.
	P-19	Some problems related to projectiles.
	P-20	Uniform Circular Motion, Some Quantities related to Uniform Circular Motion, Centripetal Acceleration, Equations relating to Centripetal Acceleration, Resultant of Acceleration, Equations for Angular Motion.
Chapter-4 Newtonian Mechanics	P-21	Primary concept of Force, Newtonian Mechanics, Newton's first Law of motion, Inertia of rest and motion, Intuitive Idea of Force, General Characteristics of Force, Types of Force, Fundamental Forces, Gravitational Force, Electromagnetic Force, Strong Nuclear Force, Weak Nuclear Force.
	P-22	Momentum, Newton's second law of motion, Equilibrium of Forces.
	P-23	Newton's third law of motion, System, External and Internal Force, Types of forces, Gravitational Force, Normal Force, Weight, Tension.
	P-24	Friction, Friction angle, Static Angle.
	P-25	Conservation of momentum, Vector format of Conservation of momentum, Collision, Quantities of One dimensional collision.
	P-26	Center of mass, Impulse, Application of Newton's forces, standing of the ground, Walking, running horse cart, Pulling Boat, Motion of Rocket, Relation between Newton's Laws.
	P-27	Uniform Circular motion, Centripetal force, Centrifugal force, Banking on roads. Cycle, Train/Cars.
	P-28	Rotational inertia: Moment of inertia, Radius of gyration, Perpendicular Axis theorem, Parallel axis theorem.
	P-29	Moment of inertia in various objects, Torque, equations of torque, Vector format of torque, Torque and angular acceleration.
	P-30	Angular momentum, Equivalent way of measuring angular momentum, angular momentum of circular motion, relation between torque and angular momentum, Newton's law of angular motion, Important formulas together, Mathematical Problems.
Chapter-5 Work, Energy and Power	P-31	Work, Positive, negative and zero work, Constant force and changing force, Work done for constant force.
	P-32	Work done for changing force, Spring force, Work done for rotation.
	P-33	Dependency of work done on path, Kinetic Energy and Work-Energy theorem, Kinetic energy of rotating body, Kinetic energy rotating and spinning body.
	P-34	Conservative force, non-conservative force, Potential energy, Gravitational potential energy, Elastic potential energy, Relation between force and potential energy.
	P-35	Work done and change of mechanical energy, Conservation of mechanical energy, Conservation of energy.
	P-36	Power, Efficiency, Mathematical Problems, Displacement of center of mass, Well and reservoir related problems.

Chemistry 1st Paper (Reference Book: **UDVASH** Parallel Text)

Chapter	Chapter	Syllabus
Chapter-2 Qualitative Chemistry Introduction	C-17	Principle of Solubility Product, Application of the principle of Solubility Product Common ion and its effect to change solubility
	C-18	Application of common ion, effect of pH on solubility, Related Math.
	C-19	Qualitative Analysis (Ion identification)- Flame test, wet test (+ve and -ve ion identification), detecting presence of Carbon in organic compounds, detection of Hydrogen in organic compounds, Detection of N, S, X (F, Cl, Br, I) in organic compounds.

	C-20	Applications of Qualitative Chemistry (Physical Analysis)- crystallization, distillation and partial distillation, steam distillation, sublimation, low pressure distillation,
	C-21	solvent extraction.
	C-22	Nernst's distribution formula, chromatography, column chromatography, thin layer chromatography, paper chromatography, importance of qualitative analysis.
Chapter-3 Periodic Properties and Bonding in Elements	C-23	History, idea and significance of periodic table, Classification of elements based on e^- configuration, Block elements (s, p, d, f) characteristics.
	C-24	Chemical properties of block elements (Chemical properties of s block elements).
	C-25	Chemical properties of block elements (Chemical properties of p block elements) Part-01
	C-26	Chemical properties of block elements (Chemical properties of p block elements) Part-02
	C-27	Chemical properties of block elements (Chemical properties of d block elements, Chemical properties of f block elements).
	C-28	Transitional Element, properties of transitional element.
	C-29	Periodic properties- atomic size, Ionization energy, electron affinity.
	C-30	Electronegativity, Melting point/Boiling point, Acidity/Basicity of oxides.
	C-31	Chemical Bonds- Ionic bond, Metallic bond, Covalent bond, Classification of covalent bond, lewis dot structure.
	C-32	Orbital overlapping. Hybridization, Classification of Hybrid orbitals.
	C-33	Determination of Hybridization state of central atom, Relation between Shapes of covalent compounds and hybrid orbitals, Effect of lone pair electrons on Molecular shapes.
	C-34	Ligand, Coordinate covalent bond.
	C-35	Effect of electronegativity on compounds with chemical bonds- Polarization or deformation of ion, Covalent properties in ionic compounds, Fajan's rule, Effect of polarization on salt.
	C-36	Weak chemical bonds- Vander Waals force, H bond, Importance of H bond, Naming of inorganic compounds.

H.Math 1st Paper (Reference Book: **UDVASH** Parallel Text)

Chapter	Chapter	Syllabus
Chapter-1 Matrix and Determinant	HM-01	Exercise – 1.1; Types of Matrix, Problems Related to Types of Matrix, Addition and subtraction of matrices, Problems on Matrix Addition and Subtraction, Equality of matrices, Problems on Equality of matrices.
	HM-02	Exercise – 1.1; Scalar Product of Matrix, Matrix multiplication of matrices, Problems related to multiplication of matrix, Exponent of matrix, Problems related to polynomials in matrices, Some special matrices, Properties of some special matrices.
	HM-03	Exercise – 1.1; Related to trace of matrix, Matrix in Real life, Problems related to Matrix in Real life, Exercise – 1.2; Minor of determinant, Co-factor, Value of Determinant, Determinant values, coefficients, regression problems.
	HM-04	Exercise – 1.2; Singular and Non-singular matrix, Problems related to singular and non-singular matrix, Inverse Matrix, Problems related to inverse matrix.
	HM-05	Exercise – 1.2; Properties of determinant, Invariant Proof Problems with Determinants, prove without expansion, Solving equations with determinants.
	HM-06	Exercise – 1.2; Solving set of equations – Cramer's Method, Solving Set of Equations – Inverse Matrix Method, Problems related to solving set of equations, Special Formulas regarding the value of determinants, Special formulas for determining value of determinants.
Chapter-6 Trigonometric ratio	HM-35	Exercise – 6; Types of trigonometry, Quadrant, Two-Dimensional Angle, Measurement of two-dimensional angles, Radian angle is a constant angle, Relation between Degrees and Radians, Three-Dimensional Angle and its Measurement, Problems related to interconversion of sexagesimal, centesimal, and circular systems of angle, Determination of length of arc, Determination of area of sector.
	HM-36	Exercise - 6; Angle between hour and minute hands of a clock, Interior Angle of Polygon, Similar Triangle, Ratio of trigonometric angles, Basic theory, Trigonometric ratio of axial angles, Relationship between ratios of trigonometric angles.
	HM-37	Exercise - 6; Problems related to mutual conversion and determination of values of trigonometric ratios, Proof related problems, Trigonometric identities related problems, Circular functions and their domain range.
	HM-38	Exercise - 6; Graphs of trigonometric functions, Problems related to Graphs, Period of Trigonometric functions, Different changes in the graph of trigonometric functions, Related to Fundamental Period.
Chapter-7 Trigonometric Ratio of Associated Angle	HM-41	Exercise – 7.1; θ or Trigonometric ratio of positive acute angle: $(-\theta)$ or Trigonometric ratio of negative angle: $(90^\circ - \theta)$, i.e. Trigonometric ratio of θ angle: Co-function: $(90^\circ + \theta)$, $(180^\circ - \theta)$, $(180^\circ + \theta)$, $(270^\circ - \theta)$, $(270^\circ + \theta)$ are the trigonometric ratios of the angles, Trigonometric Equations and Problems involving Associated Angles, Sum of Squares of Trigonometric Ratios and Problems.
	HM-42	Exercise – 7.1; Properties and problems of tangent or cotangent ratios, determination of values and problems using various trigonometric formulae, Exercise - 7.2; Trigonometric Proportions of Compound Angles, A and B are positive acute angles where $A > B$, Problems on Trigonometric ratios.
	HM-43	Exercise - 7.2; Formulas and Problems on $A \pm B$, Expansion related problem, $\frac{\cos A \pm \sin A}{\cos A \mp \sin A}$ Formula related problems, $A + B = \text{constant}$ related problems.

	HM-44	Exercise - 7.2; Determination of maximum/minimum values of trigonometric expressions, Exercise - 7.3; Formulas and problems related to $\sin(A + B) \pm \sin(A - B)$ or $\cos(A + B) \pm \cos(A - B)$.
	HM-45	Exercise - 7.3; $TF_1C \pm TF_2D$ related problems, $\sin A + \cos A$ related problems.
	HM-46	Exercise - 7.4; Trigonometric Ratios of Multiple Angles, Formulas and Problems related to Trigonometric Ratios of Angles 2A, Series (Arithmetic and Geometric series) and Problems.
	HM-47	Exercise - 7.4; Periodic Square Roots related and Problems, Trigonometric Ratios of 3A Angles and Problems related to Trigonometric Ratios of 3A Angles, Trigonometric Ratios of Certain Angles.
	HM-48	Exercise - 7.5; Formulas and problems related to proof, problems related to determination of values of various trigonometric ratios from values of $\cos x + \cos y$ and $\sin x + \sin y$.
	HM-49	Exercise - 7.6; problems related to tangent and cotangent, related to sine and cosine.
	HM-50	Exercise - 7.7; Related to sine rule of triangle, tangent rule or Napier's formula, Tangent rule related problems.
	HM-51	Exercise - 7.7; Cosine rule, Cosine rule of triangle, Projection rule, Perpendicular projection, Progression Related, Trigonometric ratios and Formulas of half-angles of triangles.
	HM-52	Exercise - 7.7; Area of Triangle, Relationship between Inradius and Circumradius: Area, Determining nature of triangle subject to conditions, Others.
Chapter-8 Functions & Graph	HM-53	Exercise - 8; Set and its types, Interval, Set mapping & cartesian product, relation and their identification, clear idea of set through mapping, Domain. Range and Co-domain, role of constant and co-efficient in function, Function and its graph, Piecewise Function, problems related to value determination of function.
	HM-54	Exercise - 8; One-one function and many-one function, Onto function, Bijective function.
	HM-55	Exercise - 8; Inverse function related, Inverse function and inverse relation, Discussion related to domain range determination.
	HM-56	Exercise - 8; Interconversion of function and relation, graph shifting or translation, graph, scaling graph reflecting Symmetry of graph.
	HM-57	Exercise - 8; Square root functions, rational functions, $(f(x) = \frac{P(x)}{Q(x)})$.
	HM-58	Exercise - 8; n^{th} root functions, Absolute value function, exponential functions, ($y = a^x$; $a > 0, a \neq 1$), logarithmic functions, Composite function.

Botany (Reference Book: **UDVASH** Parallel Text)

Chapter	Chapter	Syllabus
Chapter-2 Cell Division	B-09	Amitosis, Cell Cycle: Cell Cycle Regulators, Interphase: G_1 Phase, S Phase, G_2 Phase.
	B-10	M-phase (prophase, prometaphase, metaphase, anaphase, telophase)
	B-11	Importance of mitosis, uncontrolled mitosis, cell death. Meiosis Cell Division: Meiosis-1: Prophase-1, Metaphase-1, Anaphase-1, Telophase-1, Interkinesis-1
	B-12	Meiosis-2: Prophase-2, Metaphase-2, Anaphase-2, Telophase-2, Cytokinesis-2, Characteristics of Meiosis, Importance of Meiosis, Crossing over.
Chapter-3 Cell Chemistry	B-13	Carbohydrates: Properties of Carbohydrates, Types of Carbohydrates (Sugars): Monosaccharides (Triose, Tetrose, Pentose).
	B-14	Monosaccharides (hexose, heptose), disaccharides.
	B-15	Oligosaccharides, Polysaccharides, Functions of Carbohydrates.
	B-16	Amino acid, classification of amino acid, protein, classification of protein.
	B-17	Lipid, classification of lipid, function of lipid.
	B-18	Enzymes: Properties of Enzymes, Mechanism of action of Enzymes, Types of Enzymes, Effectors on Enzymes, Uses of Enzymes.
Chapter-5 Algae and Fungi	B-25	Algae (Characteristics, Physical Structure, Cellular Structure), Reproduction of Algae (Vegetative Reproduction, Asexual Reproduction, Sexual Reproduction).
	B-26	Ulothrix (Habitat, Physical Structure, Reproduction), Economic Importance of Algae.
	B-27	Fungi (Characteristics, Physical Structure, Cellular Structure), Reproduction of Fungi (Vegetative Reproduction, Asexual Reproduction, Sexual Reproduction), Importance of Fungi (Beneficial and Harmful Effects).
	B-28	Agaricus (Habitat, Physical Structure), Economic Importance of Agaricus, Fungal Diseases, Lichen (Habitat, Characteristics, Structure, Classification), Importance of Lichen.

Zoology (Reference Book: **UDVASH** Parallel Text)

Chapter	Chapter	Syllabus
Chapter-1 Animal diversity and Classification	Z-03	Poriphera, Cnidaria, Platyheminthes.
	Z-04	Nematoda, Mollusca, Annelida.
	Z-05	Arthropoda, Echinodermata.
	Z-06	Chordata: Characteristics of the various subphylums and classes of the order Chordata, classification of vertebrata.

Chapter-2 Introduction to Animal	Z-07	Hydra, external structure of hydra, internal structure of hydra, cells of epidermis, structure of ideal cnidocyte, types of nematocyst, technique of nematocyst discharge.
	Z-08	Cells of Gastrodermis, Mesogleia, Coelenteron, Feeding and Digestion mechanism of Hydra, Locomotion of Hydra, Reproduction of Hydra, Regeneration of Hydra, Division of Labor in Hydra, symbiosis.
	Z-09	Grasshopper, external structure of grasshopper, regions of grasshopper, Mouthparts of grasshopper.
	Z-10	Alimentary system (alimentary canal, alimentary glands), Feeding and digestion of grasshopper.
	Z-11	Circulatory system, respiratory system, excretory system.
	Z-12	Sensory organs of grasshopper, Compound eye of grasshopper, vision mechanism, reproduction process, metamorphosis, role of hormones in metamorphosis.
	Z-13	The Rohu fish, external structure, scale, circulatory system, blood, heart, blood vessels (arterial system).
	Z-14	Fish venous system, respiratory system, structure of gills, respiratory mechanism, air bladder, reproduction and life cycle of fish.
Chapter-3 Human Physiology: Digestion and Absorption	Z-15	Digestion, types of digestion, digestive system, oral cavity, digestion of food inside oral cavity, dental formula, pharynx, oesophagus.
	Z-16	Stomach, digestion of food inside stomach, small intestine, digestion of food inside small intestine, large intestine.
	Z-17	Digestive glands: salivary gland, Liver, pancreas, gastric gland, intestinal gland, role of nervous system and hormone in digestion.
	Z-18	Absorption of digested food materials, Fate of absorbed food materials, obesity.

For any information regarding the online program contact the following numbers

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Branches outside Dhaka: Mymensingh (Natun Bazar)-01713-236716, Mymensingh (KB)-01713-236769, Kishoreganj-01713-236739
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