HSC 1st Year Academic Program Pioneer Batch [Online/Combo]

Class & Exam Routine Part-03

Date & Day	Live Class: 1 2:30 pm	Live Class: 2 6:45pm	Live Exam Online: From 8:00am to 11:55pm Offline: From 9:00am to 5:00pm
01 September 2025 (Monday)	**HM-05** H.Math: Chapter-01	**Z-01** Zoology: Chapter-01	Daily Live Exam **P-25** MCQ (10×1=10); 10 min. Daily Live Exam **C-29** MCQ (10×1=10); 10 min.
02 September 2025 (Tuesday) **Chapter-wise Exam-12**	**Botany Chapter-05 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
03 September 2025 (Wednesday	**HM-06** H.Math: Chapter-01	**Z-02** Zoology: Chapter-01	Daily Live Exam **HM-05** MCQ (10×1=10); 10 min. Daily Live Exam **Z-01** MCQ (10×1=10); 10 min.
04 September 2025 (Thursday)	**Biology Problem Solving Class-02 (Evening- 6:30 PM)**		
05 September 2025 (Friday)	**P-26** Physics: Chapter-04	**C-30** Chemistry: Chapter-03	Daily Live Exam **HM-06** MCQ (10×1=10); 10 min. Daily Live Exam **Z-02** MCQ (10×1=10); 10 min.
06 September 2025 (Saturday)	**P-27** Physics: Chapter-04	**C-31** Chemistry: Chapter-03	Daily Live Exam **P-26** MCQ (10×1=10); 10 min. Daily Live Exam **C-30** MCQ (10×1=10); 10 min.
08 September 2025 (Monday)	**HM-07** H.Math: Chapter-01	**Z-03** Zoology: Chapter-01	Daily Live Exam **P-27** MCQ (10×1=10); 10 min. Daily Live Exam **C-31** MCQ (10×1=10); 10 min.
10 September 2025 (Wednesday)	**HM-08** H.Math: Chapter-01	**Z-04** Zoology: Chapter-01	Daily Live Exam **HM-07** MCQ (10×1=10); 10 min. Daily Live Exam **Z-03** MCQ (10×1=10); 10 min.
11 September 2025 (Thursday)	**Physics Problem Solving Class-03 (Evening- 6:30 PM)**		
12 September 2025 (Friday)	**P-28** Physics: Chapter-04	**C-32** Chemistry: Chapter-03	Daily Live Exam **HM-08** MCQ (10×1=10); 10 min. Daily Live Exam **Z-04** MCQ (10×1=10); 10 min.
13 September 2025 (Saturday)	**HM-45** H.Math: Chapter-07	**C-33** Chemistry: Chapter-03	Daily Live Exam **P-28** MCQ (10×1=10); 10 min. Daily Live Exam **C-32** MCQ (10×1=10); 10 min.
14 September 2025 (Sunday) **Chapter-wise Exam-13**	**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.**		
15 September 2025 (Monday)	**P-29** Physics: Chapter-04	**Z-05** Zoology: Chapter-01	Daily Live Exam **HM-45** MCQ (10×1=10); 10 min. Daily Live Exam **C-33** MCQ (10×1=10); 10 min.
16 September 2025 (Tuesday) **Chapter-wise Exam-14**	**H.Math 1st Paper Chapter-01 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
17 September 2025 (Wednesday)	**HM-46** H.Math: Chapter-07	**Z-06** Zoology: Chapter-01	Daily Live Exam **P-29** MCQ (10×1=10); 10 min. Daily Live Exam **Z-05** MCQ (10×1=10); 10 min.
18 September 2025 (Thursday)	**Chemistry Problem Solving Class-03 (Evening- 6:30 PM)**		
Revised routine (Sun-Mon-Wed-Thursday)			
21 September 2025 (Sunday)	**P-30** Physics: Chapter-04	**Z-15** Zoology: Chapter-03	Daily Live Exam **HM-46** MCQ (10×1=10); 10 min. Daily Live Exam **Z-06** MCQ (10×1=10); 10 min.
22 September 2025 (Monday)	**C-34** Chemistry: Chapter-03	**HM-47** H.Math: Chapter-07	Daily Live Exam **P-30** MCQ (10×1=10); 10 min. Daily Live Exam **Z-15** MCQ (10×1=10); 10 min.
23 September 2025 (Tuesday)	**Guideline Seminar-03**		
24 September 2025 (Wednesday)	**HM-48** H.Math: Chapter-07	**Z-16** Zoology: Chapter-03	Daily Live Exam **C-34** MCQ (10×1=10); 10 min. Daily Live Exam **HM-47** MCQ (10×1=10); 10 min.
25 September 2025 (Thursday)	**C-35** Chemistry: Chapter-03	**P-31** Physics: Chapter-05	Daily Live Exam **HM-48** MCQ (10×1=10); 10 min. Daily Live Exam **Z-16** MCQ (10×1=10); 10 min.
26 September 2025 (Friday) **Chapter-wise Exam-15**	**Zoology Chapter-01 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
27 September 2025 (Saturday **Chapter-wise Exam-16**	**Physics 1st Paper Chapter-04 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
28 September 2025 (Sunday)	**P-32** Physics: Chapter-05	**Z-17** Zoology: Chapter-03	Daily Live Exam **C-35** MCQ (10×1=10); 10 min. Daily Live Exam **P-31** MCQ (10×1=10); 10 min.
29 September 2025 (Monday)	**C-36** Chemistry: Chapter-03	**HM-49** H.Math: Chapter-07	Daily Live Exam **P-32** MCQ (10×1=10); 10 min. Daily Live Exam **Z-17** MCQ (10×1=10); 10 min.
Online classes and exams will be closed from September 30 to October 4 on the occasion of Sharadiya Durga Puja.			

05 October 2025 (Sunday)	**P-33** Physics: Chapter-05	**HM-50** H.Math: Chapter-07	Daily Live Exam **C-36** MCQ (10×1=10); 10 min. Daily Live Exam **HM-49** MCQ (10×1=10); 10 min.
06 October 2025 (Monday)	**C-37** Chemistry: Chapter-04	**Z-18** Zoology: Chapter-03	Daily Live Exam **P-33** MCQ (10×1=10); 10 min. Daily Live Exam **HM-50** MCQ (10×1=10); 10 min.
07 October 2025 (Tuesday)	**H.Math Problem Solving Class-03 (Evening- 6:30 PM)**		
08 October 2025 (Tuesday)	**HM-51** H.Math: Chapter-07	**B-19** Botany: Chapter-04	Daily Live Exam **C-37** MCQ (10×1=10); 10 min. Daily Live Exam **Z-18** MCQ (10×1=10); 10 min.
09 October 2025 (Thursday)	**C-38** Chemistry: Chapter-04	**P-34** Physics: Chapter-05	Daily Live Exam **HM-51** MCQ (10×1=10); 10 min. Daily Live Exam **B-19** MCQ (10×1=10); 10 min.
10 October 2025 (Friday) **Chapter-wise Exam-17**	**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.**		
12 October 2025 (Sunday)	**P-35** Physics: Chapter-05	**B-20** Botany: Chapter-04	Daily Live Exam **C-38** MCQ (10×1=10); 10 min. Daily Live Exam **P-34** MCQ (10×1=10); 10 min.
13 October 2025 (Monday)	**C-39** Chemistry: Chapter-04	**HM-52** H.Math: Chapter-07	Daily Live Exam **P-35** MCQ (10×1=10); 10 min. Daily Live Exam **B-20** MCQ (10×1=10); 10 min.
14 October 2025 (Tuesday)	**Biology Problem Solving Class-03 (Evening- 6:30 PM)**		
15 October 2025 (Wednesday)	**HM-53** H.Math: Chapter-07	**B-21** Botany: Chapter-04	Daily Live Exam **C-39** MCQ (10×1=10); 10 min. Daily Live Exam **HM-52** MCQ (10×1=10); 10 min.
16 October 2025 (Thursday)	**C-40** Chemistry: Chapter-04	**P-36** Physics: Chapter-05	Daily Live Exam **HM-53** MCQ (10×1=10); 10 min. Daily Live Exam **B-21** MCQ (10×1=10); 10 min.
17 October 2025 (Friday) **Chapter-wise Exam-18**	**Zoology Chapter-03 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
19 October 2025 (Sunday)	**P-37** Physics: Chapter-06	**B-22** Botany: Chapter-04	Daily Live Exam **C-40** MCQ (10×1=10); 10 min. Daily Live Exam **P-36** MCQ (10×1=10); 10 min.
20 October 2025 (Monday)	**C-41** রসায়ন: অধ্যায়-০৪	**HM-54** H.Math: Chapter-07	Daily Live Exam **P-37** MCQ (10×1=10); 10 min. Daily Live Exam **B-22** MCQ (10×1=10); 10 min.
22 October 2025 (Wednesday)	**B-23** Botany: Chapter-04	**P-38** Physics: Chapter-06	Daily Live Exam **C-41** MCQ (10×1=10); 10 min. Daily Live Exam **HM-54** MCQ (10×1=10); 10 min.
23 October 2025 (Thursday)	**C-42** Chemistry: Chapter-04	**HM-55** H.Math: Chapter-07	Daily Live Exam **B-23** MCQ (10×1=10); 10 min. Daily Live Exam **P-38** MCQ (10×1=10); 10 min.
24 October 2025 (Friday) **Chapter-wise Exam-19**	**Physics Chapter-05 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
26 October 2025 (Sunday)	**P-39** Physics: Chapter-06	**B-24** Botany: Chapter-04	Daily Live Exam **C-42** MCQ (10×1=10); 10 min. Daily Live Exam **HM-55** MCQ (10×1=10); 10 min.
27 October 2025 (Monday)	**C-43** Chemistry: Chapter-04	**HM-56** H.Math: Chapter-07	Daily Live Exam **P-39** MCQ (10×1=10); 10 min. Daily Live Exam **B-24** MCQ (10×1=10); 10 min.
28 October 2025 (Tuesday)	**Physics Problem Solving Class-04 (Evening- 6:30 PM)**		
29 October 2025 (Wednesday)	**HM-57** H.Math: Chapter-08	**Z-07** Zoology: Chapter-02	Daily Live Exam **C-43** MCQ (10×1=10); 10 min. Daily Live Exam **HM-56** MCQ (10×1=10); 10 min.
30 October 2025 (Thursday)	**C-44** Chemistry: Chapter-04	**P-40** Physics: Chapter-06	Daily Live Exam **HM-57** MCQ (10×1=10); 10 min. Daily Live Exam **Z-07** MCQ (10×1=10); 10 min.
31 October 2025 (Friday) **Chapter-wise Exam-20**	**Botany Chapter-04 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
01 November 2025 (Saturday) **Chapter-wise Exam-21**	**H.Math Chapter-07 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.**		
02 November 2025 (Sunday)	**C-45** Chemistry: Chapter-04	**P-41** Physics: Chapter-06	Daily Live Exam **C-44** MCQ (10×1=10); 10 min. Daily Live Exam **P-40** MCQ (10×1=10); 10 min.
03 November 2025 (Monday)	**Z-19** Zoology: Chapter-04	**HM-58** H.Math: Chapter-08	Daily Live Exam **C-45** MCQ (10×1=10); 10 min. Daily Live Exam **P-41** MCQ (10×1=10); 10 min.
04 November 2025 (Tuesday)	**Guideline Seminar-04**		
05 November 2025 (Wednesday)	**HM-59** H.Math: Chapter-08	**Z-08** Zoology: Chapter-02	Daily Live Exam **Z-19** MCQ (10×1=10); 10 min. Daily Live Exam **HM-58** MCQ (10×1=10); 10 min.
06 November 2025 (Thursday)	**C-46** Chemistry: Chapter-04	**P-42** Physics: Chapter-06	Daily Live Exam **HM-59** MCQ (10×1=10); 10 min. Daily Live Exam **Z-08** MCQ (10×1=10); 10 min.
07 November 2025 (Friday) **Chapter-wise Exam-22**	**Chemistry 1st Paper Chapter-04 [Part-01 Lecture C-37 to 44]; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min**		
09 November 2025 (Sunday)	**C-47** Chemistry: Chapter-04	**P-61** Physics: Chapter-10	Daily Live Exam **C-46** MCQ (10×1=10); 10 min. Daily Live Exam **P-42** MCQ (10×1=10); 10 min.
10 November 2025 (Monday)	**Z-20** Zoology: Chapter-04	**HM-60** H.Math: Chapter-08	Daily Live Exam **C-47** MCQ (10×1=10); 10 min. Daily Live Exam **P-61** MCQ (10×1=10); 10 min.
11 November 2025 (Tuesday)	**Chemistry Problem Solving Class-04 (Evening- 6:30 PM)**		

12 November 2025 (Wednesday)	**HM-61** H.Math: Chapter-08	**Z-09** Zoology: Chapter-02	Daily Live Exam **Z-20** MCQ (10×1=10); 10 min. Daily Live Exam **HM-60** MCQ (10×1=10); 10 min.

The next class and exam routine (Part-04) will be published...

*****The routine can change or be modified in case of special necessities*****

- **Online Class and Exam Procedure:**
- To participate in classes and exams, visit udvash.com and click on the "Join Now" menu. **Log in** using your admitted registration number.
- **Daily Live** Classes will be held as per the schedule, with **two separate subject classes per day** at the mentioned date and time.
- **Daily Live Exams** will be available as per the schedule from **8:00am to 11:55pm**, where students can take the exam once per with two **separate Subject**. However, for additional practice, students can take the Practice Exam multiple times with the same syllabus.
- To watch recorded videos and PDFs of daily classes, use the "**Past Classes/Course & Content**" option.
- To access **Archive Classes & One Shot CQ-MCQ Classes**, use the **"Course & Content" option.**
- The **Q&A** option is available **24/7** to resolve subject-related queries after the class.
- All students enrolled in the Combo Batch can take chapter-based exams both online and at any nearby branch (from 9:00am to 5:0

HSC 1st YeaAcademic Program Pioneer Batch (Class & Exam Syllabus-03)

Physics 1st paper **Reference Book:** শ্যামালাল TEXT		
Chapter	**Lecture**	**Lecture-based discussion**
Chapter-4 Newtonian Mechanics	P-26	Center of mass, impulse and impact force, applicability and applications of Newton's laws, standing on the ground, walking, pulling a horse cart, towing a boat, space missions and rocket motion, interrelation of Newton's laws of motion.
	P-27	Uniform circular motion, centripetal force, centrifugal force, banking of curved roads for vehicles (bicycles, trains, motor vehicles).
	P-28	Rotational inertia: moment of inertia, radius of gyration, perpendicular axis theorem, parallel axis theorem.
	P-29	CQ & Admission Standard Problems to moment of inertia, torque, quantities for torque, vector representation of torque, torque and angular acceleration
	P-30	Angular momentum, equivalent methods for calculating angular momentum, angular momentum of a rotating object in circular motion, relationship between torque (τ) and angular momentum ($\vec{L}$), Newton's laws for rotational motion, applications of Newton's laws in rotational motion, mathematical problems.
Chapter-5 Work, Energy and Power	P-31	Work, positive, negative, and zero work, constant and variable force, work done by a constant force.
	P-32	Work done by a variable force, spring force, work done in rotational motion, displacement of the center of mass and mathematical problems.
	P-33	CQ & Admission Standard mathematical problems related to center of mass displacement, dependency of work done on the path, kinetic energy and work-energy theorem, kinetic energy of a rotating object, kinetic energy of an object undergoing both translational and rotational motion.
	P-34	Conservative forces, non-conservative forces, potential energy, gravitational potential energy, elastic potential energy, relationship between potential energy and force.
	P-35	Problems related to potential energy and kinetic energy, Changes in work done and mechanical energy, conservation of mechanical energy, principle of conservation of energy.
	P-36	Power, efficiency, mathematical problems, and problems related to work done, wells and cisterns.
Chapter-6 Gravitation and Gravity	P-37	Falling objects, Kepler's laws of planetary motion, gravitation, vector representation of gravitational force, inertial mass and gravitational mass, gravity and gravitational acceleration.
	P-38	Determination of g: relationship between gravitational constant and gravitational acceleration, variations in gravitational acceleration, changes in g due to the shape of the Earth, variation of g with altitude, variation of g with depth from the Earth's surface, variation of g due to Earth's rotation.
	P-39	Center of gravity, gravitational field, gravitational field intensity.
	P-40	Gravitational potential, relationship between gravitational field intensity and gravitational potential, gravitational potential energy
	P-41	Escape velocity, applications of the law of gravitation, application of the law of gravitation in hollow spheres, application of the law of gravitation in solid spheres.
	P-42	Relationship between Newton's law of gravitation and Kepler's laws, applications of the law of gravitation: satellite motion, quantities related to, geostationary satellites, polar satellites, applications of the law of gravitation: weightlessness in space, applications of the law of gravitation: exploration of natural resources and material research.
Chapter-10 Ideal gas and kinetics of gases	P-61	Gases, pressure of gases, volume of gases, temperature of gases, number of gases, gas laws, relationship between pressure and volume, relationship between volume and temperature, Boyle's law or pressure law.

Chemistry 1st Paper **Reference Book:**		
Chapter	**Lecture**	**Lecture-based discussion**
Chapter-3 Periodic	C-30	Electron affinity, Electronegativity, Melting point/Boiling point.
	C-31	Chemical Bonds- Ionic bond, Metallic bond, Covalent bond, Classification of covalent bond, lewis dot structure.

Properties and Bonding in Elements	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.
Chapter-4 Chemical Changes	C-37	Chemical Reaction and Rate of Reaction- Green Chemistry, Reaction Direction:(Irreversible Reaction and Reversible reaction), Rate of reaction.
	C-38	Rate constant
	C-39	Order of reaction, molecularity of reaction
	C-40	Effect of temperature on rate of reaction (Arrhenius equation), Activation energy, Collision theory.
	C-41	Effect of Pressure on rate of reaction, Effect of concentration on rate of reaction, Effect of catalyst on rate of reaction.
	C-42	Equilibrium of Chemical Reaction- Equilibrium and its Dynamics.
	C-43	Le-Chatelier's Principle Effect of temperature, pressure and concentration on equilibrium, Use in industry (Le-Chatelier's Principle).
	C-44	Law of mass action, Discussion about equilibrium constant (K_p and K_c).
	C-45	Derivation of mathematical expression of K_p and K_c

H.Math 1st Paper Reference Book: মাতালাল TEXT		
Chapter	**Lecture**	**Lecture-based discussion**
Chapter-1 Matrix & Determinant	HM-05	Exercise - 1.2; Minors and co-factors of determinant, singular and non-singular matrix and problems related to singular and non-singular matrix.
	HM-06	Exercise - 1.2; Inverse matrix, problems related to inverse matrix, properties of determinant.
	HM-07	Exercise - 1.2; Problems related to proof of identity with determinants, proof without expansion.
	HM-08	Exercise - 1.2; Solving equations with determinants, Solving systems of equations - Cramer's rule, solving systems of equations - Inverse matrix method, Problems related to solving systems of equations, Special formula related to the magnitude of determinants.
Chapter-7 Trigonometric Ratios of Associated and Compound Angles	HM-45	Exercise – 7.1; Trigonometric ratio of θ or positive acute angle: (-θ) or negative angle: (90° – θ), i.e. trigonometric ratio of angle θ: Co-function: Trigonometric ratio of angle (90° + θ), (180° – θ), (180° +θ), (270° - θ), (270° + θ), Trigonometric quantities
	HM-46	Exercise – 7.1; problems involving associated angles, Problems related to sum of squares of trigonometric ratios, Multiplication and problems of Tangent or Cotangent ratios, Determination of values and problems using various trigonometric formulas.
	HM-47	Exercise - 7.2; Trigonometric ratio of compound angles, A and B are positive acute angles where A > B, Problems related to trigonometric ratios.
	HM-48	Exercise – 7.2; $A \pm B$ related formulae and problems, problems related to trigonometric expansions, problems related to $\frac{\cos A \pm \sin A}{\cos A \mp \sin A}$ formula, problems related to A + B = constant, Finding the maximum/minimum value of a trigonometric expression.
	HM-49	Exercise – 7.3; Formulae and problems related to $\sin(A+B) \pm \sin(A-B)$ or $\cos(A+B) \pm \cos(A-B)$, Problems related to $TF_1C \pm TF_2D$, problems related to $\sin A + \cos A$.
	HM-50	Exercise – 7.4; Trigonometric ratios of multiple angles, Formulae and problems for trigonometric ratios of 2A angles, series related (arithmetic and geometric series) and problems.
	HM-51	Exercise - 7.4; Problems related to periodic square roots, Trigonometric ratios of 3A angles and problems, Trigonometric ratios of specific angles.
	HM-52	Exercise – 7.5; Formulae and problems related to proof, Problems related to determining the values of various trigonometric ratios from the values of cos x + cos y and sinx + siny.
	HM-53	Exercise – 7.6; Problems related to tangent and cotangent, problems related to sine and cosine.
	HM-54	Exercise – 7.7; Sine law of a triangle, law of tangents, problems related to law of tangent.
	HM-55	Exercise – 7.7; Cosine law, related to cosine law of a triangle, perpendicular projection, perpendicular projection related.
	HM-56	Exercise – 7.7; progression related, trigonometric ratios of half angles of a triangle and formulae, Area of a triangle related, relationship between the in-radius and the circumradius: Area related, determining the nature of a triangle based on conditions, others.
Chapter-8 Functions and Graph of Functions	HM-57	Exercise – 8; Sets and their variations, applications, set mapping and Cartesian properties. finitary relations, functions and their identification, clear concept of functions with the help of mapping, domain, range and codomain, role of variables and constants in functions, functions and graphs of functions, Piecewise Function.
	HM-58	Exercise – 8; Problems related to determining the value of functions, One-one function and many-one function, Onto function, Bijective function.
	HM-59	Exercise – 8; Inverse function and inverse relation, discussion on inverse function, domain-range determination method
	HM-60	Exercise – 8; Transformation of functions and relations, transformation of graphs, change in shape of graphs, reflection of graphs, symmetry of graphs.
	HM-61	Exercise – 8; Various functions related to square roots, rational functions $\left(f(x) = \frac{P(x)}{Q(x)}\right)$, n-th root related functions, absolute value related functions, exponential functions $(y = a^x;\ a > 0, a \neq 1)$, logarithmic functions,

Zoology 2nd Paper Reference Book: মাতালাল TEXT		
Chapter	**Lecture**	**Lecture-based discussion**
Chapter-1	Z-01	Animal Diversity: types of animal diversity, classification of animal kingdom, Basis of animal classification, Principles of animal classification
	Z-02	Nomenclature of animals, principles of nomenclature of animals, classification of animal kingdom, major phyla of animal kingdom: Non-chordate

Animal Diversity and Classification	Z-03	Porifera, Cnidaria, Platyheminthes, Nematoda.
	Z-04	Mollusca, Annelida, Arthropoda, Echinodermata.
	Z-05	Chordata: characteristics of various sub-phylum and classes of chordata, classification of vertebrates (cyclostomata)
	Z-06	Classification of vertebrates (Gnathostomata)
Chapter-3 Human Physiology: Digestion and Absorption	Z-15	Digestion: Types of digestion, Digestive system, Oral Cavity, Digestion of food in mouth, Dental formula, Pharynx, Esophagus
	Z-16	Stomach, Digestion of food in stomach, Small Intestine, Digestion of food in small intestine, Large intestine
	Z-17	Digestive glands: salivary glands, liver, pancreas, gastric glands, intestinal glands, Role of nervous system and hormones in digestion
	Z-18	Absorption of digested food: components of food and their absorption, fate of absorbed nutrientts, Obesity
Chapter-2 Animal Identity	Z-07	Hydra, External structure of Hydra, Internal structure of Hydra, Cells of body wall of Hydra, Cells of Epidermis, Structure of ideal cnidocyte, Types of nematocyst, Mechanism of Discharge of nematocyst-thread
	Z-08	Cells of gastrodermis, Mesoglea, Coelenteron, Ingestion and digestion of food of Hydra, Locomotion of Hydra, Reproduction of Hydra, Regeneration of Hydra, Division of Labor of Hydra, Symbiosis
	Z-09	Grasshopper, External structure of grasshopper, Tagmata of Grasshopper, Mouth parts of grasshopper
Chapter-4 Human Physiology: Blood and Circulation	Z-19	Blood, Components of blood, Plasma, Blood Corpuscle, Red Blood Corpuscle
	Z-20	White Blood Corpuscle, Types of White Blood Corpuscle, Platelets

Botany 1st Paper Reference Book: मातालाल TEXT		
Chapter	**Lecture**	**Lecture-based discussion**
Chapter-4 Microorganisms	B-19	virus: contribution of scientists in the discovery of virus, structure of virus, classification of virus, parasitism of virus, emerging virus, subviral entities, T_2 bacteriophage, COVID-19 Corona virus
	B-20	Lifecycle of virus, importance of virus, viral diseases at a glance, description of some viral diseases
	B-21	Bacteria: Characteristics of bacteria: distribution and habitat of bacteria: types of bacteria, structure of an ideal bacterium
	B-22	Reproduction of bacteria, importance of bacteria, some bacterial diseases
	B-23	Malaria: Infection of malaria, Prevention and control of Malaria, Lifecycle of malarial parasite in human body
	B-24	Lifecycle of Malarial parasite in mosquito, Alternation of generation of malarial parasite