



# HSC 1st Year

## Academic Program Progressive Batch

### [Online/Combo]

(Two subject class per day)

#### Class & Exam Routine [Part-03]

Date & Day	Live Class: 1	Live Class: 2	Live Exam	Online: From 8:00am to 11:55pm
	2:30 pm	6:30 pm		Offline: From 9:00am to 5:00pm
29 December 2025 (Monday)	<b>B-18</b> Botany: Chapter-3	<b>C-38</b> Chemistry: Chapter-4		Daily Live Exam <b>C-37</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-59</b> MCQ (10x1=10); 10 min.
30 December 2025 (Tuesday)	<b>Z-07</b> Zoology: Chapter-2	<b>P-32</b> Physics: Chapter-5		Daily Live Exam <b>B-18</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-38</b> MCQ (10x1=10); 10 min.
<b>31 December 2025 (Wednesday)</b>	<b>Online classes and exams will be closed on the occasion of the national general holiday.</b>			
01 January 2026 (Thursday)	<b>P-37</b> Physics: Chapter-6	<b>HM-63</b> H.Math: Chapter-9		Daily Live Exam <b>Z-07</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-32</b> MCQ (10x1=10); 10 min.
<b>02 January 2026 (Friday)</b>	<b>Chemistry Problem Solving Class-03</b>			
<b>03 January 2026 (Saturday)</b> <b>Chapter-wise Exam-18</b>	<b>H.Math Chapter-07 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>			
04 January 2026 (Sunday)	<b>C-39</b> Chemistry: Chapter-4	<b>HM-60</b> H.Math: Chapter-8		Daily Live Exam <b>P-37</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-63</b> MCQ (10x1=10); 10 min.
05 January 2026 (Monday)	<b>Z-08</b> Zoology: Chapter-2	<b>C-40</b> Chemistry: Chapter-4		Daily Live Exam <b>C-39</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-60</b> MCQ (10x1=10); 10 min.
06 January 2026 (Tuesday)	<b>Z-09</b> Zoology: Chapter-2	<b>P-33</b> Physics: Chapter-5		Daily Live Exam <b>Z-08</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-40</b> MCQ (10x1=10); 10 min.
07 January 2026 (Wednesday)	<b>P-34</b> Physics: Chapter-5	<b>HM-64</b> H.Math: Chapter-9		Daily Live Exam <b>Z-09</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-33</b> MCQ (10x1=10); 10 min.
08 January 2026 (Thursday)	<b>P-38</b> Physics: Chapter-6	<b>HM-65</b> H.Math: Chapter-9		Daily Live Exam <b>P-34</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-64</b> MCQ (10x1=10); 10 min.
<b>10 January 2026 (Saturday)</b> <b>Chapter-wise Exam-19</b>	<b>Biology Problem Solving Class-03</b>			
	<b>Botany Chapter-03 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>			
11 January 2026 (Sunday)	<b>C-41</b> Chemistry: Chapter-4	<b>HM-61</b> H.Math: Chapter-8		Daily Live Exam <b>P-38</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-65</b> MCQ (10x1=10); 10 min.
12 January 2026 (Monday)	<b>P-35</b> Physics: Chapter-5	<b>C-42</b> Chemistry: Chapter-4		Daily Live Exam <b>C-41</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-61</b> MCQ (10x1=10); 10 min.
13 January 2026 (Tuesday)	<b>Z-10</b> Zoology: Chapter-2	<b>P-36</b> Physics: Chapter-5		Daily Live Exam <b>P-35</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-42</b> MCQ (10x1=10); 10 min.
14 January 2026 (Wednesday)	<b>Z-11</b> Zoology: Chapter-2	<b>HM-66</b> H.Math: Chapter-9		Daily Live Exam <b>Z-10</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-36</b> MCQ (10x1=10); 10 min.
15 January 2026 (Thursday)	<b>P-39</b> Physics: Chapter-6	<b>HM-67</b> H.Math: Chapter-9		Daily Live Exam <b>Z-11</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-66</b> MCQ (10x1=10); 10 min.
<b>16 January 2026 (Friday)</b>	<b>H.Math Problem Solving Class-04</b>			
<b>17 January 2026 (Saturday)</b> <b>Chapter-wise Exam-20</b>	<b>Physics Chapter-05 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>			
18 January 2026 (Sunday)	<b>C-43</b> Chemistry: Chapter-4	<b>HM-62</b> H.Math: Chapter-8		Daily Live Exam <b>P-39</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-67</b> MCQ (10x1=10); 10 min.
19 January 2026 (Monday)	<b>P-61</b> Physics: Chapter-10	<b>C-44</b> Chemistry: Chapter-4		Daily Live Exam <b>C-43</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-62</b> MCQ (10x1=10); 10 min.
20 January 2026 (Tuesday)	<b>Z-12</b> Zoology: Chapter-2	<b>P-62</b> Physics: Chapter-10		Daily Live Exam <b>P-61</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-44</b> MCQ (10x1=10); 10 min.
21 January 2026 (Wednesday)	<b>Z-13</b> Zoology: Chapter-2	<b>HM-68</b> H.Math: Chapter-9		Daily Live Exam <b>Z-12</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-62</b> MCQ (10x1=10); 10 min.
22 January 2026 (Thursday)	<b>P-40</b> Physics: Chapter-6	<b>HM-69</b> H.Math: Chapter-9		Daily Live Exam <b>Z-13</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-68</b> MCQ (10x1=10); 10 min.
<b>23 January 2026 (Friday)</b>	<b>Physics Problem Solving Class-04</b>			
<b>24 January 2026 (Saturday)</b> <b>Chapter-wise Exam-21</b>	<b>H.Math Chapter-08 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>			
25 January 2026 (Sunday)	<b>C-45</b> Chemistry: Chapter-4	<b>HM-27</b> H.Math: Chapter-4		Daily Live Exam <b>P-40</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-69</b> MCQ (10x1=10); 10 min.
26 January 2026 (Monday)	<b>P-63</b> Physics: Chapter-10	<b>C-46</b> Chemistry: Chapter-4		Daily Live Exam <b>C-45</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-27</b> MCQ (10x1=10); 10 min.

27 January 2026 (Tuesday)	<b>Z-14</b> Zoology: Chapter-2	<b>P-64</b> Physics: Chapter-10	Daily Live Exam <b>P-63</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-46</b> MCQ (10x1=10); 10 min.			
28 January 2026 (Wednesday)	<b>B-25</b> Botany: Chapter-5	<b>HM-70</b> H.Math: Chapter-9	Daily Live Exam <b>Z-14</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-64</b> MCQ (10x1=10); 10 min.			
29 January 2026 (Thursday)	<b>P-41</b> Physics: Chapter-6	<b>HM-71</b> H.Math: Chapter-9	Daily Live Exam <b>B-25</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-70</b> MCQ (10x1=10); 10 min.			
<b>30 January 2026 (Friday)</b> <b>Chapter-wise Exam-22</b>	<b>Chemistry Problem Solving Class-04</b> <b>H.Math 1st Paper Chapter-09 [Part-01 Lecture HM-63 to 70]; (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
	<b>Chemistry 1st Paper Chapter-04 [Part-01 Lecture C-37 to 44]; (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
01 February 2026 (Sunday)	<b>C-47</b> Chemistry: Chapter-4	<b>HM-28</b> H.Math: Chapter-4	Daily Live Exam <b>P-41</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-71</b> MCQ (10x1=10); 10 min.			
02 February 2026 (Monday)	<b>Z-19</b> Zoology: Chapter-4	<b>C-48</b> Chemistry: Chapter-4	Daily Live Exam <b>C-47</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-28</b> MCQ (10x1=10); 10 min.			
03 February 2026 (Tuesday)	<b>B-26</b> Botany: Chapter-5	<b>P-65</b> Physics: Chapter-10	Daily Live Exam <b>Z-19</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-48</b> MCQ (10x1=10); 10 min.			
04 February 2026 (Wednesday)	<b>P-66</b> Physics: Chapter-10	<b>HM-72</b> H.Math: Chapter-9	Daily Live Exam <b>B-26</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-65</b> MCQ (10x1=10); 10 min.			
05 February 2026 (Thursday)	<b>P-42</b> Physics: Chapter-6	<b>HM-73</b> H.Math: Chapter-9	Daily Live Exam <b>P-66</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-72</b> MCQ (10x1=10); 10 min.			
<b>06 February 2026 (Friday)</b> <b>Chapter-wise Exam-24</b>	<b>Biology Problem Solving Class-04</b> <b>Zoology Chapter-02 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
	<b>Physics 1st Paper Chapter-10 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
08 February 2026 (Sunday)	<b>C-49</b> Chemistry: Chapter-4	<b>HM-29</b> H.Math: Chapter-4	Daily Live Exam <b>P-42</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-73</b> MCQ (10x1=10); 10 min.			
09 February 2026 (Monday)	<b>Z-20</b> Zoology: Chapter-4	<b>C-50</b> রসায়ন: অধ্য্যায়-8	Daily Live Exam <b>C-49</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-29</b> MCQ (10x1=10); 10 min.			
<b>All classes and exams will be closed on the occasion of the National Assembly elections (February 10 to February 14).</b>						
15 February 2026 (Sunday)	<b>C-51</b> রসায়ন: অধ্য্যায়-8	<b>HM-30</b> H.Math: Chapter-4	Daily Live Exam <b>Z-20</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-50</b> MCQ (10x1=10); 10 min.			
16 February 2026 (Monday)	<b>Z-21</b> Zoology: Chapter-4	<b>C-52</b> Chemistry: Chapter-4	Daily Live Exam <b>C-51</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-30</b> MCQ (10x1=10); 10 min.			
17 February 2026 (Tuesday)	<b>B-27</b> Botany: Chapter-5	<b>P-49</b> Physics: Chapter-8	Daily Live Exam <b>Z-21</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-52</b> MCQ (10x1=10); 10 min.			
18 February 2026 (Wednesday)	<b>P-43</b> Physics: Chapter-7	<b>HM-74</b> H.Math: Chapter-9	Daily Live Exam <b>B-27</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-49</b> MCQ (10x1=10); 10 min.			
19 February 2026 (Thursday)	<b>P-44</b> Physics: Chapter-7	<b>HM-75</b> H.Math: Chapter-9	Daily Live Exam <b>P-43</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-74</b> MCQ (10x1=10); 10 min.			
<b>20 February 2026 (Friday)</b> <b>Chapter-wise Exam-26</b>	<b>H.Math Problem Solving Class-05</b> <b>Physics 1st Paper Chapter-06 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
	<b>All classes and exams will be closed on 21st February 2026 (Saturday) on the occasion of International Mother Language Day.</b>					
22 February 2026 (Sunday)	<b>C-53</b> Chemistry: Chapter-5	<b>HM-31</b> H.Math: Chapter-4	Daily Live Exam <b>P-44</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-75</b> MCQ (10x1=10); 10 min.			
23 February 2026 (Monday)	<b>Z-22</b> Zoology: Chapter-4	<b>C-54</b> Chemistry: Chapter-5	Daily Live Exam <b>C-53</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-31</b> MCQ (10x1=10); 10 min.			
24 February 2026 (Tuesday)	<b>B-28</b> Botany: Chapter-5	<b>P-50</b> Physics: Chapter-8	Daily Live Exam <b>Z-22</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>C-54</b> MCQ (10x1=10); 10 min.			
25 February 2026 (Wednesday)	<b>P-45</b> Physics: Chapter-7	<b>HM-76</b> H.Math: Chapter-9	Daily Live Exam <b>B-28</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>P-50</b> MCQ (10x1=10); 10 min.			
26 February 2026 (Thursday)	<b>P-46</b> Physics: Chapter-7	<b>HM-77</b> H.Math: Chapter-10	Daily Live Exam <b>P-45</b> MCQ (10x1=10); 10 min. Daily Live Exam <b>HM-76</b> MCQ (10x1=10); 10 min.			
<b>27 February 2026 (Friday)</b> <b>Chapter-wise Exam-27</b>	<b>Physics Problem Solving Class-05</b> <b>Botany Chapter-05 (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
	<b>Chemistry 1st Paper Chapter-04 [Part-02 Lecture C-45 to 52]; (CQ 2x10=20); Time: 50min &amp; (Pre-Admission MCQ 10x1=10); Time: 10min.</b>					
<b>The next class and exam routine (Part-04) will be published...</b>						
<b>***The routine can change or be modified in case of special necessities***</b>						

**Online Class and Exam Procedure:**

- To participate in classes and exams, visit [udvash.com](http://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 5:00pm).
- To get updates quickly, join our Facebook group (**HSC & Admission উন্নয়ন সংবেদন**).

### HSC 1st Year Academic Program Progressive Batch (Class & Exam Syllabus-03)

Physics 1st paper Reference Book: সারলাল TEXT

Chapter	Lecture	Lecture-based discussion
Chapter-5 Work, Energy and Power	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-7 Structural Properties of Matter	P-43	Intermolecular forces, intermolecular forces in solids, intermolecular forces in liquids, intermolecular forces in gases, bonding, intermolecular forces and elasticity of materials, intermolecular attraction and repulsion forces, potential energy, analysis of graphs, analysis of potential energy graphs, summary of graphs, quantities related to elasticity.
	P-44	Elasticity-based classification of materials, deformation, stress, types of deformation, types of stress, Hooke's law, elastic constants and general mathematical problems, relationships among different elastic constants.
	P-45	CQ & Admission Standard mathematical problems related to elastic constants, elastic potential energy, Poisson's ratio.
	P-46	Laminar and turbulent flow, viscosity, friction and viscosity, effects of pressure and temperature on viscosity, terminal velocity and Reynolds number.
	P-47	Stokes' law, terminal velocity, surface tension, factors affecting surface tension of liquids.
Chapter-8 Periodic Motion	P-49	Periodic motion, spatial periodicity, temporal periodicity, characteristics of periodic motion, oscillatory motion, simple harmonic motion, ideal spring, spring constant, motion of a mass attached to an ideal spring, conditions for simple harmonic motion, differential equation of simple harmonic motion, parameters of simple harmonic motion.
	P-50	Relation between simple harmonic motion and circular motion, displacement in simple harmonic motion, solution of the differential equation of simple harmonic motion, relation between velocity and acceleration, mathematical problems.
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.
	P-62	Ideal gases, properties of ideal gases, real gases, fundamental assumptions of the kinetic theory of gases.
	P-63	Kinetic molecular theory of gases, applications of kinetic theory, Different types of velocities of gas molecules, mean free path,
	P-64	Degrees of freedom, Monatomic gases, diatomic gases, polyatomic gases, linear polyatomic gases, nonlinear polyatomic gases, principle of equipartition of energy
	P-65	Water vapor and atmospheric pressure, gases and vapors, evaporation, condensation, saturated and unsaturated vapor pressure, relationship between vapor pressure and volume at constant temperature, relationships among different parameters of water vapor, dew point and relative humidity. Common mathematical problem
	P-66	Humidity measuring instruments and humidity determination, description of wet and dry bulb hygrometer, working principle of wet and dry bulb hygrometer, CQ & Admission Standard Mathematical Problems on Relative Humidity and Dew Point, some phenomena related to hygrometry.

Chemistry 1st Reference Book: সারলাল TEXT

Chapter	Lecture	Lecture-based discussion
Chapter-4 Chemical Changes	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 $K_c$
	C-46	Mathematical Problem of $K_p$ and $K_c$
	C-47	Acid-Base equilibrium- Theories related to acid-base, Ionic product of water

	C-48	Dissociation constant of acid-base, Degree of dissociation, Acid-Base strength.
	C-49	$P_H$ & $P_{OH}$
	C-50	Buffer solution
	C-51	Thermochemistry- Law of conservation of mass and energy, Thermochemical equation, Heat of reaction.
<b>Chapter-5</b> Vocational Chemistry	C-52	Bond energy, Lavoisier and Hess's law, determining heat of reaction using Lavoisier and Hess's law.
	C-53	Food Safety- (Chemistry in enhancing food production, Importance of various elements as fertilizers, Role of chemistry in food preservation, Drying method of foodstuff, Cooling method of foodstuff).
	C-54	Food Preservatives- (Natural Food Preservatives, Artificial Food Preservatives, Anti-Microbial Agents, Antioxidants, Vinegar).

**H.Math 1st Paper Reference Book: સારાલાલ TEXT**

Chapter	Lecture	Lecture-based discussion
<b>Chapter-4</b> Circle	HM-27	Exercise - 4.1; Concept of circle, equation of a circle with center at origin and radius r, equation of a circle with given center and radius, general equation of a circle, some properties of general equation of a circle / condition of equation of a circle, signs of g and f in different quadrants, classification of circle.
	HM-28	Exercise - 4.1; Position of a point with respect to a circle.
	HM-29	Exercise - 4.1; Determining the equation of a circle from two points on the diameter, determining the point on the diameter of a circle, determining the equation of a circle if the center and any point on the circumference are given.
	HM-30	Exercise - 4.1; Equation of a circle passing through the intersection of a straight line/circle and another circle, Equation of a circle passing through three fixed points, Equation of a circle centered on a fixed straight line.
	HM-31	Exercise - 4.1; Regarding the circumference and the incircle, Exercise - 4.2; Equation of tangent and perpendicular to a circle at a fixed point.
<b>Chapter-8</b> Functions and Graph of Functions	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 ( $f(x) = \frac{P(x)}{Q(x)}$ ), n-th root related functions, absolute value related functions, exponential functions ( $y = a^x$ ; $a > 0, a \neq 1$ ), logarithmic functions,
	HM-62	Exercise – 8; Determining the Domain range related, adjoint functions.
<b>Chapter-9</b> Differentiation	HM-63	Exercise - 9.1; Basic concepts of limits, undefined, infinite, existence of limits,
	HM-64	Exercise - 9.1; Limits, basic theorems of limits, Existence of limits and general limits, factor analysis related, related to multiplying denominator and numerator of $\lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}$ by conjugate.
	HM-65	Exercise - 9.1; Limits at infinite points and infinite limits, some special limits; Infinite limits related. $\lim_{x \rightarrow 0} \frac{\sin x}{x}$ ; $\lim_{x \rightarrow 0} \frac{\tan x}{x}$
	HM-66	Exercise - 9.1; $\lim_{x \rightarrow 0} (1 + x)^{\frac{1}{x}}$ ; $\lim_{x \rightarrow \infty} (1 + \frac{1}{x})^x$ related, Series related; Continuity of Functions, Sandwich theorem.
	HM-67	Exercise - 9.2; Differentiability of functions, Differentiation by first principle rule.
	HM-68	Exercise - 9.2; General formulae of differentiation, Exercise - 9.3; Derivative of products of functions. Derivative of quotients of functions.
	HM-69	Exercise - 9.4; Differentiation of conjugate functions, La Hôpital's Rule (Admission Special).
	HM-70	Exercise - 9.4; Concept of inverse trigonometric functions, Differentiation using logarithms related
	HM-71	Exercise - 9.5; Derivative of undefined functions, Differentiation of parametric equations; Differentiation of functions with respect to Functions, Exercise.
	HM-72	Exercise - 9.6; Periodic differentiation, nth derivative, Proof of periodic differentiation (trigonometry related).
	HM-73	Exercise - 9.6; Proof with periodic differentiation (residue), Exercise - 9.7; Physical applications.
	HM-74	Exercise - 9.7; Geometric applications.
<b>Chapter-10</b> Integration	HM-75	Exercise - 9.8; Increasing, decreasing, maximum and minimum.
	HM-77	Exercise - 10.1; Basic concept of integration, some properties of integration, Use of the general integral formula

**Biology 1st Paper Reference Book: સારાલાલ TEXT**

Chapter	Lecture	Lecture-based discussion
<b>Chapter-3</b> Cell Chemistry	B-18	Enzyme: Characteristics of enzyme, mechanism of action of enzyme, theories regarding mechanism of action of enzyme. Classification of enzyme, regulators of enzyme, Uses of enzyme
<b>Chapter-5</b> Algae and Fungi	B-25	Algae (Characteristics, Physical structure, Cellular structure), Reproduction of algae (Vegetative reproduction, asexual reproduction, sexual reproduction)
	B-26	<i>Ulothrix</i> (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 (advantages and disadvantages)
	B-28	<i>Agaricus</i> (Habitat, Physical structure), Economic importance of <i>Agaricus</i> , Fungal diseases, Lichen (Habitat, Characteristics, Structure, Classification), Importance of Lichen.

**Biology 2nd paper Reference Book: સારાલાલ TEXT**

Chapter	Lecture	Lecture-based discussion
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<b>Chapter-2</b>  <b>Animal Identity</b>	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
	Z-10	Digestive system of grasshopper (Alimentary Canal, Digestive Glands), Ingestion and Digestion of food
	Z-11	Blood circulatory system of grasshopper, respiratory system, excretory system
	Z-12	Sensory organs of grasshopper, Compound eye of grasshopper, Mechanism of vision, process of reproduction, metamorphosis, role of hormone in metamorphosis
	Z-13	Rohu fish, External Structure, Scales, Blood Circulatory system of Rohu fish, Blood, Heart, Blood Vessels (Arterial system of Rohu fish)
	Z-14	Venous system of grasshopper, Respiratory system, Structure of gills, mechanism of respiration, air bladder, Reproduction and lifecycle of Rohu fish
<b>Chapter-4</b>  <b>Human Physiology: Blood and Circulation</b>	Z-19	Blood, Components of blood, Plasma, Blood Corpuscle, Red Blood Corpuscle
	Z-20	White Blood Corpuscle, Types of White Blood Corpuscle, Platelets
	Z-21	Mechanism of blood clotting, Lymph, Lymphatic System, Blood Vessel, Types of blood vessels
	Z-22	Heart (Location, Shape and size, Covering, Wall), Structure of cardiac muscle, Chambers of the heart, Valves of the heart, Circulation of blood through the heart



**উদ্বাশ**

একাডেমিক এন্ড এডমিশন কেয়ার



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