

# HSC 1st Year Academic Program Pioneer Batch

## [Online/Combo]

### Last Part Class & Exam Routine -05

Date & Day	Live Class: 1	Live Class: 2	Live Exam	Online: From 8:00am to 11:55pm
	2:30 pm	6:30pm		Offline: From 9:00am to 5:00pm
29 December 2025 (Monday)	<b>Z-27</b> Zoology: Chapter-05	<b>HM-74</b> H.Math: Chapter-09		Daily Live Exam <b>C-04</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>P-50</b> MCQ (10×1=10); 10 min.
<b>30 December 2025 (Tuesday)</b>	Chemistry Problem Solving Class-05	<b>HM-27</b> H.Math: Chapter-04		Daily Live Exam <b>Z-27</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-74</b> MCQ (10×1=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-51</b> Physics: Chapter-8	<b>HM-28</b> H.Math: Chapter-04		Daily Live Exam <b>HM-27</b> MCQ (10×1=10); 10 min.
<b>02 January 2026 (Friday)</b> <b>Chapter-wise Exam-30</b>	<b>Physics Chapter-07 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min</b>			
<b>03 January 2026 (Saturday)</b> <b>Chapter-wise Exam-31</b>	<b>Zoology Chapter-04 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min</b>			
04 January 2026 (Sunday)	<b>HM-75</b> H.Math: Chapter-09	<b>P-52</b> Physics: Chapter-8		Daily Live Exam <b>P-51</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-28</b> MCQ (10×1=10); 10 min.
05 January 2026 (Monday)	<b>Z-28</b> Zoology: Chapter-05	<b>HM-76</b> H.Math: Chapter-09		Daily Live Exam <b>HM-75</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>P-52</b> MCQ (10×1=10); 10 min.
<b>06 January 2026 (Tuesday)</b>	<b>B-30</b> Botany: Chapter-06	<b>HM-29</b> H.Math: Chapter-04		Daily Live Exam <b>Z-28</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-76</b> MCQ (10×1=10); 10 min.
07 January 2026 (Wednesday)	<b>B-31</b> Botany: Chapter-07	<b>HM-77</b> H.Math: Chapter-10		Daily Live Exam <b>B-30</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-29</b> MCQ (10×1=10); 10 min.
08 January 2026 (Thursday)	<b>P-53</b> Physics: Chapter-8	<b>HM-30</b> H.Math: Chapter-04		Daily Live Exam <b>B-31</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-77</b> MCQ (10×1=10); 10 min.
<b>09 January 2026 (Friday)</b> <b>Chapter-wise Exam-32</b>	<b>Chemistry Chapter-01 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min</b>			
<b>10 January 2026 (Saturday)</b> <b>Chapter-wise Exam-33</b>	<b>H.Math 1st Paper Chapter-09 [Part-02 Lecture HM-71 to 76]; (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b>			
11 January 2026 (Sunday)	Biology Problem Solving Class-05	<b>P-54</b> Physics: Chapter-8		Daily Live Exam <b>P-53</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-30</b> MCQ (10×1=10); 10 min.
12 January 2026 (Monday)	<b>Z-29</b> Zoology: Chapter-05	<b>HM-78</b> H.Math: Chapter-10		Daily Live Exam <b>P-54</b> MCQ (10×1=10); 10 min.
<b>13 January 2026 (Tuesday)</b>	H.Math Problem Solving Class-06	<b>HM-31</b> H.Math: Chapter-04		Daily Live Exam <b>Z-29</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-78</b> MCQ (10×1=10); 10 min.
14 January 2026 (Wednesday)	<b>B-32</b> Botany: Chapter-07	<b>HM-79</b> H.Math: Chapter-10		Daily Live Exam <b>HM-31</b> MCQ (10×1=10); 10 min.
15 January 2026 (Thursday)	<b>P-55</b> Physics: Chapter-09	<b>HM-32</b> H.Math: Chapter-04		Daily Live Exam <b>B-32</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-79</b> MCQ (10×1=10); 10 min.
<b>16 January 2026 (Friday)</b> <b>Chapter-wise Exam-34</b>	<b>Botany Chapter-06 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min</b>			
<b>17 January 2026 (Saturday)</b> <b>Chapter-wise Exam-35</b>	<b>Physics Chapter-08 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min</b>			
18 January 2026 (Sunday)	-----	<b>P-56</b> Physics: Chapter-09		Daily Live Exam <b>P-55</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-32</b> MCQ (10×1=10); 10 min.
19 January 2026 (Monday)	<b>Z-30</b> Zoology: Chapter-05	<b>HM-80</b> H.Math: Chapter-10		Daily Live Exam <b>P-56</b> MCQ (10×1=10); 10 min.
20 January 2026 (Tuesday)	-----	<b>HM-33</b> H.Math: Chapter-04		Daily Live Exam <b>Z-30</b> MCQ (10×1=10); 10 min. Daily Live Exam <b>HM-80</b> MCQ (10×1=10); 10 min.

### HSC 1st Year Academic Program Pioneer Batch (Class & Exam Syllabus-05)

Physics 1 st Paper Reference Book: **मातालाल TEXT**

Lecture-based discussion

Chapter Lecture

<b>Chapter-8</b> Periodic Motion	P-51	CQ & Admission Standard mathematical problems related to displacement, velocity, and acceleration in simple harmonic motion, graphs of simple harmonic motion.
	P-52	Energy associated with simple harmonic motion, potential energy stored in spring, energy variation with time, graph of energy vs. displacement.
	P-53	Applications of simple harmonic motion, oscillation in the vertical plane, combined oscillations in springs, motion of a simple pendulum, derivation of the time period formula for a simple pendulum.
	P-54	Applications and mathematical problems related to the simple pendulum.
<b>Chapter-9</b> Wave	P-55	Waves, mechanical waves, origin of different mechanical waves, transverse waves, longitudinal waves, electromagnetic waves, waves and energy, different wave parameters and equations, medium transition.
	P-56	Progressive waves, equation of progressive waves, phase difference and path difference in progressive waves.
	P-57	Wave interference, stationary waves.
	P-58	Beats or sound modulation.
	P-59	Free and forced vibrations, resonance, wave intensity, standard intensity and intensity level, harmonics and sound spectrum, audible sound, musical notes and tones.
	P-60	Vibration in a stretched string, vibration in air columns, and mathematical problems.

#### H.Math 1st Paper Reference Book: **मातालालTEXT**

Chapter	Lecture	Lecture-based discussion
<b>Chapter-09</b> Differentiation	HM-74	Exercise - 9.7; Geometric applications.
	HM-75	Exercise - 9.8; Increasing, decreasing, maximum and minimum.
	HM-76	Exercise - 9.8; Mathematical problems of maximum and minimum.
<b>Chapter-10</b> Integration	HM-77	Exercise - 10.1; Basic concept of integration, some properties of integration, Use of the general integral Formula
	HM-78	Exercise - 10.1; Integration by simplification, Exercise - 10.2; Substitution method, $\int f(x) \cdot f'(x) dx$ , $\int f(g(x)) \cdot g'(x) dx$ ,
	HM-79	Exercise - 10.2; Of shape $\int \sin Ax \cos Bx dx$ , $\int \sin Ax \sin Bx dx$ , $\int \cos Ax \cos Bx dx$ , $\int \sin^m x \cos^n x dx$ , $\int \frac{dx}{1 \pm \sin ax}$ , $\int \frac{dx}{1 \pm \cos ax}$ , $\int (ax + b)^n dx$ , $\int \sin^n x dx$ , $\int \cos^n x dx$ .
	HM-80	Exercise - 10.3; Ideal integral, of shape $\int \frac{f'(x)}{f(x)} dx = \ln f(x)  + c$ , $\int \frac{f'(x)}{\sqrt{f(x)}} = 2\sqrt{f(x)} + c$ .
	HM-81	Exercise - 10.3; Fractions and irrational shape of quadratic expressions, in case of $\int \frac{ax+b}{cx+d} dx$ , $\int \frac{ax+b}{\sqrt{cx+d}} dx$ , $\int \frac{ax+b}{(cx+d)^n} dx$ shape, $a^2 + x^2$ , $a^2 - x^2$ , $x^2 - a^2$ related, of shape $\int \frac{dx}{a \cos^2 x + b \sin^2 x + c}$ .
	HM-82	Exercise - 10.3; Of shape $\int \frac{a+x}{a-x} dx$ , $\int \frac{\sqrt{ax+b}}{\sqrt{cx+d}} dx$ , $\int \frac{a \cos x + b \sin x}{c \cos x + d \sin x} dx$ , $\int \frac{dx}{a+be^{mx}}$ , $\int \frac{dx}{a+be^{-mx}}$ and $\int \frac{dx}{ae^{mx}+be^{-mx}}$ , $\int \frac{e^{mx}+e^{nx}}{e^{px}+e^{qx}} dx$ where, $m - n = p - q$ , $\int \frac{dx}{g(x) \cdot \sqrt{h(x)}}$ ; where $g(x)$ and $h(x)$ are polynomial function.
	HM-83	Exercise - 10.4; Integration by parts, use of LIATE, (Determining integration by parts), $\int \sec^n x dx$ ;
	HM-84	Exercise - 10.4; $\int e^{ax} \{a f(x) + f'(x)\} dx$ , Exercise - 10.5; Integration using partial fractions, $\frac{x}{(x-1)(x-2)}$ , $\frac{x}{(x-1)^2(x-2)}$ , $\frac{x}{(x-1)^2(x-2)^2}$ , $\frac{x}{(x-1)(x^2+1)}$ , $\frac{x^3}{(x-1)(x-2)(x-3)}$ .
	HM-85	Exercise - 10.6; Concept of definite integral, properties of definite integral, Fundamental theorem of calculus, use of Fundamental theorem of calculus, substitution method in case of definite integral, problems related to use of substitution method in case of definite integral.
	HM-86	Exercise - 10.6; Special properties of definite integral, area with net sign, definite integration of even and odd functions, integration of functions with absolute value, integration by graph shifting.
	HM-87	Exercise-10.7; Area determination by integration, Area of the region bounded by the line $y=f(x)$ and the x-axis within a certain limit, Area of the region bounded by the line $x=f(y)$ and the y-axis within a certain limit, Area of the region bounded by two curves and two straight lines parallel to the y-axis (area determination with respect to the x-axis), Area of the region bounded by two curves and two straight lines parallel to the x-axis (area determination with respect to the y-axis), Difference between integration and area.
	HM-88	Exercise - 10.7; Symmetry, Area determination related problems.
<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.
	HM-32	Exercise - 4.2; Problems related to tangent drawn from a point outside the circle, Determining the length of a chord of a circle.
	HM-33	Exercise - 4.2; Mutual position of two circles, fundamental axis and common chord.

#### Biology 1st Paper Reference Book: **मातालालTEXT**

Chapter	Lecture	Lecture-based discussion
<b>Chapter-6</b> Bryophyta and Pteridophyta	B-30	Pteridophyta: Characteristics of Pteridophyta, <i>Pteris</i> Physical structure of <i>Pteris</i> , Internal Structure, Reproduction of <i>Pteris</i> , Alternation of generation in <i>Pteris</i> , Economic importance of <i>Pteris</i> .
	B-31	Gymnosperms (Introduction, characteristics), <i>Cycas</i> (Characteristics, Structure, Reproduction)
<b>Chapter-7</b> Gymnosperms and Angiosperms	B-32	Angiosperms (Introduction, characteristics), Differences between Gymnosperm and angiosperm, Introduction to angiosperm families, Characteristics, Root, Stem, Leaf
	B-33	Inflorescence, Aestivation, Placentation, Fruits, Floral Formula, Floral Diagram

#### Chapter

Chapter	Lecture	Lecture-based discussion
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<b>Chapter-5</b> Human Physiology: Respiration and Breathing	Z-27	Respiration, Phases of respiration (Internal respiration and external respiration), Differences between internal and external respiration, Parts of the respiratory system
	Z-28	Lungs, Functions of the respiratory system, Breathing: inspiration and expiration, Gaseous exchange
	Z-29	Control of inspiration and expiration, Diseases of respiratory system, Artificial respiration
<b>Chapter-6</b> Human Physiology: Waste and Excretion	Z-30	Various types of waste products in humans, excretory system of humans, Structure and Function of kidney

