

**UDVASH**

Academic And Admission Care

**HSC 2nd Year Academic Program Progressive Batch****Class & Exam Routine-02****Helpline****09 666 77 55 66**

| Date & Day                                           | Live Class-01<br>2:30pm                                                                                                              | Live Class-02<br>6:45pm            | Live Exam<br>Online: From 8:00am to 11:55pm                                                 |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------|
| 05 September 2026 (Saturday)                         | Physics (P-25)                                                                                                                       | H.Math (HM-39)                     | Daily Live Exam C-18 MCQ (10×1=10); 10 min.<br>Daily Live Exam Z-06 MCQ (10×1=10); 10 min.  |
| 06 September 2026 (Sunday)                           | Chemistry (C-19)                                                                                                                     | Physics (P-26)                     | Daily Live Exam P-25 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-39 MCQ (10×1=10); 10 min. |
| 07 September 2026 (Monday)                           | Physics (P-16)                                                                                                                       | H.Math (HM-21)                     | Daily Live Exam C-19 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-26 MCQ (10×1=10); 10 min.  |
| 08 September 2026 (Tuesday)                          | Chemistry (C-42)                                                                                                                     | H.Math (HM-22)                     | Daily Live Exam P-16 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-21 MCQ (10×1=10); 10 min. |
| 09 September 2026 (Wednesday)                        | Zoology (Z-16)                                                                                                                       | H.Math (HM-40)                     | Daily Live Exam C-42 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-22 MCQ (10×1=10); 10 min. |
| 10 September 2026 (Thursday)                         | Chemistry (C-20)                                                                                                                     | Botany (B-05)                      | Daily Live Exam Z-16 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-40 MCQ (10×1=10); 10 min. |
| 11 September 2026 (Friday)<br>Chapter wise exam-09   | Guideline seminar-02                                                                                                                 |                                    |                                                                                             |
|                                                      | Chemistry 2nd Paper Chapter- 02 [Part-01, Lecture C-11 to 19]; (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min. |                                    |                                                                                             |
| 12 September 2026 (Saturday)<br>Chapter wise exam-10 | Physics (P-27)                                                                                                                       | H.Math (HM-41)                     | Daily Live Exam C-20 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-05 MCQ (10×1=10); 10 min.  |
|                                                      | Physics 2nd Paper Chapter- 03 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.                                  |                                    |                                                                                             |
| 13 September 2026 (Sunday)                           | Chemistry (C-21)                                                                                                                     | Physics (P-28)                     | Daily Live Exam P-27 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-41 MCQ (10×1=10); 10 min. |
| 14 September 2026 (Monday)                           | Physics (P-17)                                                                                                                       | H.Math (HM-29)                     | Daily Live Exam C-21 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-28 MCQ (10×1=10); 10 min.  |
| 15 September 2026 (Tuesday)                          | Chemistry (C-43)                                                                                                                     | H.Math (HM-30)                     | Daily Live Exam P-17 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-29 MCQ (10×1=10); 10 min. |
| 16 September 2026 (Wednesday)                        | Zoology (Z-17)                                                                                                                       | H.Math (HM-42)                     | Daily Live Exam C-43 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-30 MCQ (10×1=10); 10 min. |
| 17September 2026 (Thursday)                          | Chemistry (C-22)                                                                                                                     | Botany (B-06)                      | Daily Live Exam Z-17 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-42 MCQ (10×1=10); 10 min. |
| 18 September 2026 (Friday)<br>Chapter wise exam-11   | H. Math Problem Solving Class- 04                                                                                                    | Chemistry Problem Solving Class-03 |                                                                                             |
|                                                      | H.Math 2nd Paper Chapter- 02 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.                                   |                                    |                                                                                             |
| 19 September 2026 (Saturday)                         | Physics (P-29)                                                                                                                       | H.Math (HM-43)                     | Daily Live Exam C-22 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-06 MCQ (10×1=10); 10 min.  |
| 20 September 2026 (Sunday)                           | Chemistry (C-23)                                                                                                                     | Physics (P-30)                     | Daily Live Exam P-29 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-43 MCQ (10×1=10); 10 min. |
| 21 September 2026 (Monday)                           | Physics (P-18)                                                                                                                       | H.Math (HM-31)                     | Daily Live Exam C-23 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-30 MCQ (10×1=10); 10 min.  |
| 22 September 2026 (Tuesday)                          | Chemistry (C-44)                                                                                                                     | H.Math (HM-32)                     | Daily Live Exam P-18 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-31 MCQ (10×1=10); 10 min. |
| 23 September 2026 (Wednesday)                        | Zoology (Z-07)                                                                                                                       | H.Math (HM-44)                     | Daily Live Exam C-44 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-32 MCQ (10×1=10); 10 min. |
| 24 September 2026 (Thursday)                         | Chemistry (C-24)                                                                                                                     | Botany (B-07)                      | Daily Live Exam Z-07 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-44 MCQ (10×1=10); 10 min. |
| 25 September 2026 (Friday)<br>Chapter wise exam-12   | Biology Problem Solving Class-02                                                                                                     | Physics Problem Solving Class-03   |                                                                                             |
|                                                      | Physics 2nd Paper Chapter- 02 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.                                  |                                    |                                                                                             |
| 26 September 2026 (Saturday)<br>Chapter wise exam-13 | Physics (P-31)                                                                                                                       | H.Math (HM-45)                     | Daily Live Exam C-24 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-07 MCQ (10×1=10); 10 min.  |
|                                                      | H.Math 2nd Paper Chapter- 04 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min.                                   |                                    |                                                                                             |
| 27 September 2026 (Sunday)                           | Chemistry (C-25)                                                                                                                     | Physics (P-37)                     | Daily Live Exam P-31 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-45 MCQ (10×1=10); 10 min. |
| 28 September 2026 (Monday)                           | Physics (P-32)                                                                                                                       | H.Math (HM-33)                     | Daily Live Exam C-25 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-37 MCQ (10×1=10); 10 min.  |
| 29 September 2026 (Tuesday)                          | Chemistry (C-45)                                                                                                                     | H.Math (HM-34)                     | Daily Live Exam P-32 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-33 MCQ (10×1=10); 10 min. |

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|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------|
| 30 September 2026 (Wednesday)                                                                              | Zoology (Z-08)                                                                                                                                  | H.Math (HM-46) | Daily Live Exam C-45 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-34 MCQ (10×1=10); 10 min. |
| 01 October 2026 (Thursday)                                                                                 | Chemistry (C-26)                                                                                                                                | Botany (B-08)  | Daily Live Exam Z-08 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-46 MCQ (10×1=10); 10 min. |
| <b>02 October 2026 (Friday)<br/>Chapter wise exam-14</b>                                                   | <b>H. Math Problem Solving Class- 05</b>                                                                                                        |                |                                                                                             |
|                                                                                                            | <b>Zoology Chapter- 09 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b>                                            |                |                                                                                             |
| <b>03 October 2026 (Saturday)<br/>Chapter wise exam-15</b>                                                 | Physics (P-38)                                                                                                                                  | H.Math (HM-47) | Daily Live Exam C-26 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-08 MCQ (10×1=10); 10 min.  |
|                                                                                                            | <b>H.Math 2nd Paper Chapter- 07 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b>                                   |                |                                                                                             |
| 04 October 2026 (Sunday)                                                                                   | Chemistry (C-27)                                                                                                                                | Physics (P-39) | Daily Live Exam P-38 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-47 MCQ (10×1=10); 10 min. |
| 05 October 2026 (Monday)                                                                                   | Physics (P-33)                                                                                                                                  | H.Math (HM-35) | Daily Live Exam C-27 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-39 MCQ (10×1=10); 10 min.  |
| 06 October 2026 (Tuesday)                                                                                  | Chemistry (C-46)                                                                                                                                | H.Math (HM-36) | Daily Live Exam P-33 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-35 MCQ (10×1=10); 10 min. |
| 07 October 2026 (Wednesday)                                                                                | Zoology (Z-09)                                                                                                                                  | H.Math (HM-48) | Daily Live Exam C-46 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-36 MCQ (10×1=10); 10 min. |
| 08 October 2026 (Thursday)                                                                                 | Chemistry (C-28)                                                                                                                                | Botany (B-09)  | Daily Live Exam Z-09 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-48 MCQ (10×1=10); 10 min. |
| <b>09 October 2026 (Friday)<br/>Chapter wise exam-16</b>                                                   | <b>Chemistry Problem Solving Class-04</b>                                                                                                       |                |                                                                                             |
|                                                                                                            | <b>Botany Chapter- 08 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b>                                             |                |                                                                                             |
| <b>10 October 2026 (Saturday)<br/>Chapter wise exam-17</b>                                                 | Physics (P-40)                                                                                                                                  | H.Math (HM-49) | Daily Live Exam C-28 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-09 MCQ (10×1=10); 10 min.  |
|                                                                                                            | <b>Chemistry 2nd Paper Chapter- 02 [Part-02, Lecture C-20 to 27]; (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min</b>  |                |                                                                                             |
| 11 October 2026 (Sunday)                                                                                   | Chemistry (C-29)                                                                                                                                | Physics (P-41) | Daily Live Exam P-40 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-49 MCQ (10×1=10); 10 min. |
| 12 October 2026 (Monday)                                                                                   | Physics (P-34)                                                                                                                                  | H.Math (HM-37) | Daily Live Exam C-29 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-41 MCQ (10×1=10); 10 min.  |
| 13 October 2026 (Tuesday)                                                                                  | Chemistry (C-47)                                                                                                                                | H.Math (HM-38) | Daily Live Exam P-34 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-37 MCQ (10×1=10); 10 min. |
| 14 October 2026 (Wednesday)                                                                                | Zoology (Z-10)                                                                                                                                  | H.Math (HM-50) | Daily Live Exam C-47 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-38 MCQ (10×1=10); 10 min. |
| 15 October 2026 (Thursday)                                                                                 | Chemistry (C-30)                                                                                                                                | Botany (B-10)  | Daily Live Exam Z-10 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-50 MCQ (10×1=10); 10 min. |
| <b>16 October 2026 (Friday)<br/>Chapter wise exam-18</b>                                                   | <b>Physics Problem Solving Class-04</b>                                                                                                         |                |                                                                                             |
|                                                                                                            | <b>Chemistry 2nd Paper Chapter- 03 [Part-01, Lecture C-39 to 44]; (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b> |                |                                                                                             |
| <b>17 October 2026 (Saturday)<br/>Chapter wise exam-19</b>                                                 | Physics (P-42)                                                                                                                                  | H.Math (HM-51) | Daily Live Exam C-30 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-10 MCQ (10×1=10); 10 min.  |
|                                                                                                            | <b>Physics 2nd Paper Chapter- 04 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b>                                  |                |                                                                                             |
| 18 October 2026 (Sunday)                                                                                   | Chemistry (C-31)                                                                                                                                | Physics (P-43) | Daily Live Exam P-42 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-51 MCQ (10×1=10); 10 min. |
| <b>Online classes and exams will be closed from October 19-21 on the occasion of Sharadiya Durga Puja.</b> |                                                                                                                                                 |                |                                                                                             |
| 22 October 2026 (Thursday)                                                                                 | Chemistry (C-32)                                                                                                                                | Botany (B-11)  | Daily Live Exam C-31 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-43 MCQ (10×1=10); 10 min.  |
| <b>23 October 2026 (Friday)<br/>Chapter wise exam-20</b>                                                   | <b>H. Math Problem Solving Class- 06</b>                                                                                                        |                |                                                                                             |
|                                                                                                            | <b>H.Math 2nd Paper Chapter- 06 (CQ 2×10=20); Time: 50min &amp; (Pre-Admission MCQ 10×1=10); Time: 10min.</b>                                   |                |                                                                                             |
| 24 October 2026 (Saturday)                                                                                 | Physics (P-44)                                                                                                                                  | H.Math (HM-52) | Daily Live Exam C-32 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-11 MCQ (10×1=10); 10 min.  |
| 25 October 2026 (Sunday)                                                                                   | Chemistry (C-33)                                                                                                                                | Physics (P-45) | Daily Live Exam P-44 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-52 MCQ (10×1=10); 10 min. |
| 26 October 2026 (Monday)                                                                                   | Physics (P-35)                                                                                                                                  | H.Math (HM-59) | Daily Live Exam C-33 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-45 MCQ (10×1=10); 10 min.  |
| 27 October 2026 (Tuesday)                                                                                  | Chemistry (C-48)                                                                                                                                | H.Math (HM-60) | Daily Live Exam P-35 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-59 MCQ (10×1=10); 10 min. |
| 28 October 2026 (Wednesday)                                                                                | Zoology (Z-11)                                                                                                                                  | H.Math (HM-53) | Daily Live Exam C-48 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-60 MCQ (10×1=10); 10 min. |
| 29 October 2026 (Thursday)                                                                                 | Chemistry (C-34)                                                                                                                                | Botany (B-12)  | Daily Live Exam Z-11 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-53 MCQ (10×1=10); 10 min. |

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| 30 October 2026 (Friday)<br>Chapter wise exam-21                           | Biology Problem Solving Class-03                                                                    | Guideline seminar-03               |                                                                                             |
|                                                                            | Physics 2nd Paper Chapter- 06 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min. |                                    |                                                                                             |
| 31 October 2026 (Saturday)                                                 | Physics (P-46)                                                                                      | H.Math (HM-54)                     | Daily Live Exam C-34 MCQ (10×1=10); 10 min.<br>Daily Live Exam B-12 MCQ (10×1=10); 10 min.  |
| 01 November2026 (Sunday)                                                   | Chemistry (C-35)                                                                                    | Physics (P-47)                     | Daily Live Exam P-46 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-54 MCQ (10×1=10); 10 min. |
| 02 November 2026 (Monday)                                                  | Physics (P-36)                                                                                      | H.Math (HM-61)                     | Daily Live Exam C-35 MCQ (10×1=10); 10 min.<br>Daily Live Exam P-47 MCQ (10×1=10); 10 min.  |
| 03 November 2026 (Tuesday)                                                 | Chemistry (C-49)                                                                                    | H.Math (HM-62)                     | Daily Live Exam P-36 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-61 MCQ (10×1=10); 10 min. |
| 04 November (Wednesday)                                                    | Zoology (Z-12)                                                                                      | H.Math (HM-55)                     | Daily Live Exam C-49 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-62 MCQ (10×1=10); 10 min. |
| 05 November 2026 (Thursday)                                                | Chemistry (C-36)                                                                                    | Botany (B-13)                      | Daily Live Exam Z-12 MCQ (10×1=10); 10 min.<br>Daily Live Exam HM-55 MCQ (10×1=10); 10 min. |
| 06 November 2026 (Friday)<br>Chapter wise exam-22                          | Physics Problem Solving Class-05                                                                    | Chemistry Problem Solving Class-05 |                                                                                             |
|                                                                            | Physics 2nd Paper Chapter- 05 (CQ 2×10=20); Time: 50min & (Pre-Admission MCQ 10×1=10); Time: 10min. |                                    |                                                                                             |
| The next class and exam routine-03 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](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 subjects**. 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 উদ্ভাস-উদ্ভাস**).

#### HSC 2nd Year Progressive Batch Syllabus-02

| Physics 2nd Paper                                                     |         |                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chapter                                                               | Lecture | Lecture-based discussion topics                                                                                                                                                                                                                                                           |
| <b>Chapter- 2</b><br>Static Electricity                               | P-16    | CQ and Admission standard Mathematical Problems related to capacitors, Use of capacitors.                                                                                                                                                                                                 |
|                                                                       | P-17    | Torque of a dipole in uniform electric field, Work done by rotation of dipole, Potential energy of a dipole, Gauss' Theorem, Electric flux, Electric flux in a closed surface, Gauss' law from Coulomb's law.                                                                             |
|                                                                       | P-18    | Use of Gauss's theorem, Electric field for charged conductor sphere, Electric field for charged insulator sphere, Electric field for line of charges, Electric field for charged conductor plate, Electric field for charged conductor parallel plates.                                   |
| <b>Chapter-4</b><br>Magnetic Effects of Current and Magnetism         | P-25    | Basic concepts of magnetic materials, magnetic field, magnetic force, Lorentz force, and related mathematical problems, motion of a charge in a magnetic field, circular motion, and related mathematical problems.                                                                       |
|                                                                       | P-26    | Helical motion of a charge and mathematical problems, Hall effect, Hall voltage, and related mathematical problems, force on a current-carrying conductor in a magnetic field, Fleming's left-hand rule, and related mathematical problems.                                               |
|                                                                       | P-27    | Torque acting on a closed current loop in a magnetic field, and general mathematical problems, Oersted's Principle, Biot-Savart's Law, Application of the Biot-Savart's Law, Magnetic Field for a Straight Electric Wire of Infinite Length and related CQ & Admission Standard Problems. |
|                                                                       | P-28    | Magnetic Field for a Straight Electric Wire of Finite Length, Determination of the magnitude and direction of the magnetic field at the center of a current-carrying circular coil, Force Between Two Infinitely Long Parallel Current-Carrying Conductors.                               |
|                                                                       | P-29    | Ampere's law, applications of Ampere's Law and Mathematical Problems Related to Magnetic Field Determination.                                                                                                                                                                             |
|                                                                       | P-30    | Magnetic Field Due to the Orbital Motion of an Electron and the Expression for Magnetic Dipole Moment, Magnetic Dipole Moment Due to the Spin of an Electron at its Rotation About Its Own Axis.                                                                                          |
|                                                                       | P-31    | Geomagnetism, Quantities related to Magnets and Magnetic Materials, Different Types of Magnetic Materials, Hysteresis.                                                                                                                                                                    |
| <b>Chapter-5</b><br>Electromagnetic Induction and Alternating Current | P-32    | Electromagnetic Induction, Magnetic Flux, Faraday's Laws of Electromagnetic Induction, First Law, Second Law, Lenz's Law, Lenz's Law and the Conservation of Energy, and Related Mathematical Problems.                                                                                   |
|                                                                       | P-33    | CQ & Admission Standard Mathematical Problems on Faraday's Law and Lenz's Law, Self-Induction, Determination of Self-Inductance Coefficient, Direction of Induced Electromotive Force Due to Self-Induction, and General Mathematical Problems                                            |
|                                                                       | P-34    | CQ & Admission Standard Mathematical Problems on Self-Induction, Non-Inductive Coil, Mutual Induction, Applications of Mutual Induction: Transformer and General Mathematical Problems.                                                                                                   |
|                                                                       | P-35    | CQ & Admission Standard Mathematical Problems on Mutual Induction, Alternating Current, Various Parameters of Alternating Current, Generation of Alternating Current,                                                                                                                     |
|                                                                       | P-36    | Average and Root Mean Square Value of Alternating Current. All Mathematical Problems Related to Alternating Current.                                                                                                                                                                      |

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| <b>Chapter-6</b><br>Geometrical Optics | P-37 | Reflection of Light, Mirrors, Refraction of Light, Refractive Index, General Form of Snell's Law, Image Formation Due to Refraction, Critical Angle.                                                                 |
|                                        | P-38 | Fermat's Principle, Concept of Fermat's Principle, Refraction at a Spherical Surface, Sign Conventions and Related Mathematical Problems.                                                                            |
|                                        | P-39 | Lenses, Types of Lenses, Functioning of Lenses, Essential Quantities Related to Lenses, Ray Diagrams in Lenses, Image of an Extended Object.                                                                         |
|                                        | P-40 | Lens Formula, Lens Maker's Formula, and General Mathematical Problems.                                                                                                                                               |
|                                        | P-41 | CQ & Admission Standard Mathematical Problems on Lenses, Power of a Lens, Combination of Lenses, and Equivalent Lens.                                                                                                |
|                                        | P-42 | Prism, Refraction of Light in a Prism, Prism, Spectrum, Dispersion of Light, Newton's Experiment, and General Mathematical Problems on Prisms.                                                                       |
|                                        | P-43 | CQ & Admission Standard Mathematical Problems on Prisms, Optical Instruments, Human Eye, Vision Aids or Optical Instruments, Various Types of Microscopes and Their Variants, and General Mathematical Problems.     |
|                                        | P-44 | Telescope and General Mathematical Problems, CQ & Admission Standard Mathematical Problems on Optical Instruments                                                                                                    |
| <b>Chapter-7</b><br>Physical Optics    | P-45 | Primary concepts of light, Newton's particle theory, Electromagnetic wave, Pointing vector, Electromagnetic spectrum, Wave and wavefront, Huygen's wave theory.                                                      |
|                                        | P-46 | Explanation of reflection and refraction with Huygen's theorem, Superposition of Wave, Coherent source.                                                                                                              |
|                                        | P-47 | Interference, Young's double slit experiment, Central maximum, Position of light and dark points, Constructive interference, Destructive interference, Fringe distance, Fringe width, General Mathematical problems. |

### Chemistry 2nd Paper

| Chapter                                      | Lecture | Lecture-based discussion topics                                                                                                              |
|----------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chapter- 2</b><br>Organic Chemistry       | C-19    | Unsaturated hydrocarbon (Alkyne and everything of alkyne)                                                                                    |
|                                              | C-20    | Benzene and Its Discussion, Source of Benzene, Characteristics and specialty of benzene, Aromaticity and Huckel law.                         |
|                                              | C-21    | Preparation and technique of benzene reaction, Homologous of benzene.                                                                        |
|                                              | C-22    | Toluene and everything of it                                                                                                                 |
|                                              | C-23    | Alkyl halide and everything about it.                                                                                                        |
|                                              | C-24    | Nucleophile substitution ( $S_N1$ and $S_N2$ ), Electrophilic elimination ( $E1$ and $E2$ )                                                  |
|                                              | C-25    | Aryl Halide and everything of it                                                                                                             |
|                                              | C-26    | Everything about alcohol and ether.                                                                                                          |
|                                              | C-27    | Phenol and everything about it.                                                                                                              |
|                                              | C-28    | Aldehyde-Ketone introduction & preparation                                                                                                   |
|                                              | C-29    | Aldehyde-Ketone chemical reaction and everything else                                                                                        |
|                                              | C-30    | Aromatic aldehyde-ketone and everything of it.                                                                                               |
|                                              | C-31    | Carboxylic acid and everything about it.                                                                                                     |
|                                              | C-32    | Benzoic acid and everything about it.                                                                                                        |
|                                              | C-33    | Amine and everything about it.                                                                                                               |
|                                              | C-34    | Aniline and everything of it                                                                                                                 |
|                                              | C-35    | Aromatic Nitro compound and everything of it.                                                                                                |
|                                              | C-36    | Benzene Diazonium Chloride and everything of it.                                                                                             |
| <b>Chapter-3</b><br>Stoichiometric Chemistry | C-42    | Percentage (%W/V, %W/W, %V/V), ppm, ppb, ppt, Dilution.                                                                                      |
|                                              | C-43    | Acid-base reaction- Introduction and neutralization reaction, Acid base titration + Math                                                     |
|                                              | C-44    | Indicator, Titration, Neutralization point, Titration graph.                                                                                 |
|                                              | C-45    | Oxidation number, Valency and latent valency, Oxidation-reduction (Basic concept), Compatibility, Incompatibility, Auto oxidation-reduction. |
|                                              | C-46    | Balancing oxidation-reduction.                                                                                                               |
|                                              | C-47    | Oxidation-reduction titration (Determination of amount of metal ion and impurity,)                                                           |
|                                              | C-48    | Iodimetry and iodometry                                                                                                                      |
|                                              | C-49    | Use of Beer-Lambert law to determine conc. Of solution, atomic absorption spectroscopy.                                                      |

### H.Math 2nd Paper

| Chapter                                                   | Lecture | Lecture-based discussion topics                                                                                                                            |
|-----------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chapter- 4</b><br>Polynomials and Polynomial equations | HM-21   | Exercise-4; Relationship between coefficients and roots of polynomial equations and formation of polynomial equations, equations with symmetric roots.     |
|                                                           | HM-22   | Exercise-4; Trigonometric polynomial functions and their types, equations with roots included in the progression, value of symmetric terms of roots.       |
| <b>Chapter-6</b><br>Conics                                | HM-29   | Exercise-6.1; Introduction and properties of conic (section of conic, different elements of conic, eccentricity), parabola, standard equation of parabola. |
|                                                           | HM-30   | Exercise-6.1; Axis shift, focal distance.                                                                                                                  |



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|                                                                                 | HM-31 | Exercise-6.1; Parametric equation of parabola, determining equation of parabola from definition of conic.                                                                                                                                                                                            |
|                                                                                 | HM-32 | Exercise-6.1; Minimum distance of parabola from external point, determining equation of parabola from end point of latus rectum, application of parabola equation in real life problems.                                                                                                             |
|                                                                                 | HM-33 | Exercise-6.2; Ellipse, standard equation of parabola, axis shift.                                                                                                                                                                                                                                    |
|                                                                                 | HM-34 | Exercise-6.2; Determine the equation of the ellipse from various elements, $SP + S'P$ = length of the major axis, parametric coordinates of the ellipse.                                                                                                                                             |
|                                                                                 | HM-35 | Exercise-6.2; Determining the equation of an ellipse from the definition of a conic, determining the equation from a focus, its opposite directrix and eccentricity of an ellipse related, special problems, Exercise-6.3; Hyperbola, standard equation of hyperbola.                                |
|                                                                                 | HM-36 | Exercise-6.3; Axis transfer, determining the equation of a hyperbola from various materials.                                                                                                                                                                                                         |
|                                                                                 | HM-37 | Exercise-6.3; $ SP - S'P $ = minor axis length, asymptote, rectangular hyperbola, parametric coordinates of a hyperbola, determining the equation of a hyperbola from the definition of a conic.                                                                                                     |
|                                                                                 | HM-38 | Exercise-6.3; General equation of conic, location of point with respect to conic, tangent and intersection of conic related, identification of conic.                                                                                                                                                |
| <b>Chapter-7</b><br>Inverse Trigonometric Functions and Trigonometric Equations | HM-39 | Exercise-7.1; Conditions and graph of inverse trigonometric function (proof of formula, and examples), Arc function.                                                                                                                                                                                 |
|                                                                                 | HM-40 | Exercise-7.1; Value of inverse trigonometric function, domain range of inverse trigonometric function, some necessary relations.                                                                                                                                                                     |
|                                                                                 | HM-41 | Exercise-7.1; Transformation of inverse trigonometric function, formula of inverse trigonometric function.                                                                                                                                                                                           |
|                                                                                 | HM-42 | Exercise-7.1; Determination of value of inverse trigonometric function related problems, solution and proof of inverse trigonometric function related problems.                                                                                                                                      |
|                                                                                 | HM-43 | Exercise-7.2; General solution of trigonometric equation, solution of trigonometric equation in certain range, square related problems.                                                                                                                                                              |
|                                                                                 | HM-44 | Exercise-7.2; Extraneous root, $a \sin \theta + b \cos \theta = c$ related solution.                                                                                                                                                                                                                 |
|                                                                                 | HM-45 | Exercise-7.2; Solve secant/cosecant related problems using the formula for $\tan (x + y)$ .                                                                                                                                                                                                          |
|                                                                                 | HM-46 | Exercise-7.2; Solution from the sum of trigonometric expressions, solution from the product of trigonometric expressions.                                                                                                                                                                            |
| <b>Chapter-8</b><br>Statics                                                     | HM-47 | Exercise-8.1; Basic concepts of mechanics, triangles in solving statics problems related Definition of some topics, resultant of two forces acting on a particle, addition of forces, determination of magnitude and direction of resultant of two forces acting at an angle $\alpha$ to each other. |
|                                                                                 | HM-48 | Exercise-8.1; Application of parallelogram law in determining resultant, determination of angle included between two forces, direction of resultant unchanged related.                                                                                                                               |
|                                                                                 | HM-49 | Exercise-8.1; Resolution of force, determination of resolved parts of force, application of sine law of force related, determination of resultant of force with the help resolved parts.                                                                                                             |
|                                                                                 | HM-50 | Exercise-8.1; Resultant of three or more forces, the application of the theorem of resolved parts or direct formula to determine the resultant of two or more forces related problems                                                                                                                |
|                                                                                 | HM-51 | Exercise-8.2; Equilibrium of forces, triangle law of equilibrium, conditions for equilibrium of co-planer forces, determination of the internal angle between three forces that creates equilibrium, Lami's theorem of equilibrium, inverse of Lami's theorem.                                       |
|                                                                                 | HM-52 | Exercise-8.2; Mathematical problems related to Lami's theorem.                                                                                                                                                                                                                                       |
|                                                                                 | HM-53 | Exercise-8.2; Different centers of triangle related problems, inverse formula of triangle law in equilibrium and its application related mathematical problems.                                                                                                                                      |
|                                                                                 | HM-54 | Exercise-8.2; Problems related to proof of equilibrium using the theorem of resolved parts, equilibrium of an inclined plane                                                                                                                                                                         |
|                                                                                 | HM-55 | Exercise-8.3; Resultant of parallel forces acting on paired objects, determining the magnitude of the resultant of two similar parallel forces, determining direction and point of action.                                                                                                           |
| <b>Chapter-9</b><br>Motion of particles in a plane                              | HM-59 | Exercise-9.1; Displacement, velocity, average speed and velocity, distance between moving objects, finding the velocity.                                                                                                                                                                             |
|                                                                                 | HM-60 | Exercise-9.1; Crossing a river related problem.                                                                                                                                                                                                                                                      |
|                                                                                 | HM-61 | Exercise-9.2; Determining relative velocity, determining relative velocity related problems.                                                                                                                                                                                                         |
|                                                                                 | HM-62 | Exercise-9.3; Uniform acceleration, laws of motion of a particle moving in a straight line with uniform acceleration, description of motion with the help of diagrams and solution of laws of motion problems.                                                                                       |

| Botany                                        |         |                                                                                                          |
|-----------------------------------------------|---------|----------------------------------------------------------------------------------------------------------|
| Chapter                                       | Lecture | Lecture-based discussion topics                                                                          |
| <b>Chapter-08</b><br>Tissue and Tissue System | B-05    | Meristematic Tissue, Types of meristematic tissue, Differences between permanent and meristematic tissue |
|                                               | B-06    | Epidermal tissue system, stomata, hydathode.                                                             |
|                                               | B-07    | Ground tissue system, Vascular tissue system.                                                            |
|                                               | B-08    | Internal structure of monocot root and monocot stem, Primary internal structure of dicot stem.           |

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| <b>Chapter-09</b><br>Plant Physiology | B-09 | Mineral salt absorption, Essential elements for plants, Availability of mineral salts for plants, Mechanism of mineral salt absorption by plants.                                                                           |
|                                       | B-10 | Transpiration, Types of transpiration, Factors of transpiration, Structure of stomata.                                                                                                                                      |
|                                       | B-11 | Explanation of some relevant terms related to transpiration, Mechanism of opening and closing of stomata.                                                                                                                   |
|                                       | B-12 | Photosynthesis, Photosynthetic organs and pigments, Absorption spectrum of light, Effective spectrum of light, Photosystem, Mechanism of photosynthesis, Light dependent phase, cyclic and non-cyclic photophosphorylation. |
|                                       | B-13 | Light independent phase, Calvin cycle, Hatch and Slack cycle, Comparison between $C_3$ and $C_4$ plants, Comparison between Calvin cycle and Slack cycle, Characteristics and importance of $C_4$ plants.                   |

| Zoology                                                           |         |                                                                                                                                                                                                                                                                                                 |
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| Chapter                                                           | Lecture | Lecture-based discussion topics                                                                                                                                                                                                                                                                 |
| <b>Chapter-8</b><br>Human Physiology:<br>Coordination and Control | Z-07    | Nervous coordination, function of the nervous system, neurons, types of neurons, neuroglia, neurotransmitters, synapses, transmission of stimuli through synapses.                                                                                                                              |
|                                                                   | Z-08    | Central nervous system, brain, forebrain, midbrain, hindbrain.                                                                                                                                                                                                                                  |
|                                                                   | Z-09    | Brain ventricles, cerebrospinal fluid, human cranial nerves (names, origins, branches, distribution, nature and functions), spinal cord.                                                                                                                                                        |
|                                                                   | Z-10    | Human sensory organs, eye-organ of vision, eyeball, accessory parts of the eye, image formation and mechanism of vision, accommodation, binocular vision.                                                                                                                                       |
|                                                                   | Z-11    | Ear - organ of hearing and balance (external ear, middle ear, inner ear), role of the ear in hearing and balance.                                                                                                                                                                               |
|                                                                   | Z-12    | Chemical coordination, endocrine system, location of endocrine glands, hormones secreted and their functions, effects of hormones on body growth, effects of hormones on physiological functions of the body, effects of hormones on behavior change, consequences of uncontrolled hormone use. |
| <b>Chapter- 09</b><br>Continuation of human life                  | Z-16    | Family planning and contraceptive methods, IVF method, reproductive system problems, reproductive hormone imbalances.                                                                                                                                                                           |
|                                                                   | Z-17    | Problems during fetal development, sexually transmitted diseases.                                                                                                                                                                                                                               |



দেশব্যাপী **উদ্ভাস-উন্মেষ** এর  
শাখাসমূহের বিস্তারিত ঠিকানা  
দেখতে **QR** কোডটি স্ক্যান করো

**উদ্ভাস-উন্মেষ** এর  
**App** ডাউনলোড করতে  
**QR** কোডটি স্ক্যান করো

