**INFORMATION BULLETIN** 

EVERY SECOND COUNTS
PREPARE SMART FOR
JEE & NEET



# ALLEN

**DISTANCE LEARNING PROGRAMME** 

Academic Session: 2025-26

# **MAJOR TEST SERIES**

Target: JEE (Main) | JEE (Main + Adv.) | NEET (UG) 2026



320+ Test Centers in All India



Full Syllabus Tests



All India Open Test With ALLEN Classroom Students



Multiple Types of Analysis for Each Test

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## Salient Features



It is a series of specially designed test papers covering all concepts of Engineering / Medical Entrance Examination Syllabus.



Tests are based on the latest pattern of Engineering / Medical Entrance Examinations & questions included in this are worthy to be asked in Actual Entrance Exams.



The questions included in test papers are thought provoking and challenging which helps in preparing your mind for Engineering / Medical Entrance Examination.



These tests will provide you an opportunity to get yourself familiarize with the type of questions you are likely to face in Actual Entrance Examinations.



These test papers provide a sound examination temperament which not only increases the student's scoring ability, also helps the student to overcome his/her weaknesses.



These tests are also helpful to increase the student's problem solving speed and develop enough confidence to face the real examination.



ALLEN aims to provide a **real-time feel** to the students by giving them the exact simulation of the **Computer Based Test** for JEE (Main) and JEE (Main + Advanced).



All India Open Tests gives you an opportunity to appear in test with all ALLEN classroom students along with students from all over the country which will help you to estimate all India Rank in the real targeted exam.

#### ALLEN NEET(UG) 2025 Re-Revised Result Certified by





# **NEET (UG) RESULT 2025**

### **ALLEN THE CLEAR LEADER**

10 in Top 25 AIR | 39 in Top 100 AIR



MRINAL KISHORE JHA Classroom Course



KESHAV MITTAL Classroom Course



JHA BHAVYA CHIRAG



AARAV AGRAWAL

Classroom Course Distance Learning



AASHI SINGH Classroom Course



TANAY Classroom Course



MANVENDRA SINGH RAJPUROHIT

Classroom Course





AIR-1 in last 16 years in pre-medical entrance



Years of Legacy & Trust of more than 35 Lac Students

# NEET (UG) RESULT: 2024







Building a better working world

# **JEE (ADVANCED) RESULT 2025**

## **ALLEN THE CLEAR LEADER**

4 in Top 10 AIR | 46 in Top 100 AIR



RAJIT GUPTA Classroom Course



SAKSHAM JINDAL Classroom Course



AKSHAT KUMAR CHAURASIA Classroom Course



BHAIYA
Classroom Course



Vedansh Garg Classroom Course



Ritwik Khandelwal Classroom Course



Aagam Jignesh Shah Classroom Course



Mohan S. Adusumalli Classroom Course

### **TOTAL STUDENTS QUALIFIED 9689**

CCP:7351 | DLP:2338

## JEE (ADV.) RESULT: 2024

45 in Top 100 | 80 in Top 200 | 195 in Top 500

















# **JEE (MAIN) RESULT 2025**

## **LEARNERS TO LEADERS NURTURED BY ALLEN**

11 in Top 25 AIR | 33 in Top 100 AIR | 20 State Toppers



**OM PRAKASH BEHERA** 3 year Classroom Course







**MOHAMMAD ANAS** 6 year Classroom Course



**OVERALL 100%ILE** 

**ARCHISMAN NANDY** 

LAKSHYA SHARMA 6 year Classroom Course

**OVERALL 100%ILE** 



### FEE STRUCTURE (ONLY FOR NEW STUDENTS)

#### **NEET (UG)**

Course Name	Description	Course	Tuition		Total	Total Papers	Paper Details	
Course Name	Description*	Code	Fee	GST	Amount	(approx)	Pen Paper	CBT/Online CBT
Major Test Series for NEET (UG)	Pen Paper	366101	₹2966/-	₹534/-	₹3500/-	12	12	NA
Major Test Series for NEET (UG) + Recorded Video Lecture	Pen Paper	366141	₹4238/-	₹762/-	₹5000/-	12	12	NA
Major Test Series for NEET (UG) + NEET/AIPMT Past 10 Yr. Papers with Hints/ Sol.	Pen Paper	366125	₹3390/-	₹610/-	₹4000/-	12	12	NA
Major Test Series for NEET (UG) + NEET/AIPMT Past 10 Yr. Papers with Hints/Sol. + Recorded Video Lecture	Pen Paper	366133	₹4662/-	₹838/-	₹5500/-	12	12	NA

#### JEE (MAIN + ADVANCED)

Course Name	December 1	Course Tuitio			Total	Total Papers	Paper Details	
Course Name	Description*	Code	Fee	GST	Amount	(approx)		CBT/Online CBT
Major Test Series for JEE (Main + Adv.)	Pen Paper & CBT	166103	₹3390/-	₹610/-	₹4000/-	20	5	15
Major Test Series for JEE (Main + Adv.) +	Pen Paper & CBT	166141	₹5084/-	₹916/-	₹6000/-	20	5	15
Recorded Video Lecture								

#### **JEE (MAIN)**

Course Name	Description* Co		Tuition Fee	GST	Total Amount	Total Papers (approx)	Paper Pen Paper	Details  CBT/Online CBT
Major Test Series for JEE (Main)	Pen Paper & CBT	266104	₹2628/-	₹472/-	₹3100/-	10	5	5

#### Note:

- 1. If the number of students are less /minimum at the CBT Center or due to the non-availability of computer labs; the test will be available on your ALLEN App/Web (allen.in) in ONLINE CBT mode (attempt test paper from home in online mode) as per the schedule.
- 2. Number of test papers may differ according to the dates of Main Exams declared by the exam governing body.
- 3. NEET (UG) test papers available in Hindi/English/Gujarati medium.
- 4. JEE (Main)/ JEE (Main + Adv.) test papers available in Hindi/English medium.
- 5. For **Computer Based Test (CBT)** mode exam, **No hard copy** paper will be given. However question paper & answer key will be available in PDF format on **ALLEN App/Web (allen.in)**
- 6. If the Students are unable to attempt the exam on the pre-scheduled Test Dates due to late registration or absence can avail their missed exams as Practice Tests on the **ALLEN App/Web (allen.in)** and will also get the All India Predicted Rank (PR) among the pool of students after the declaration of AIR for the particular test.
- 7. \*Under any unforeseen circumstances, if it is not possible to conduct a test in **Computer Based Test / Pen Paper** mode at center then the test will be available on your ALLEN App/Web (allen.in) in **ONLINE CBT** mode (attempt test paper from home in online mode) as per the schedule.
- 8. For the latest updates regarding Test Schedule & Syllabus, Kindly visit the DLP website (dlp.allen.ac.in) regularly.
- 9. The center address of the offline (pen-paper) exam test center and CBT exam center will be different, Please refer to the admit card for the correct & updated address.
- 10. ALLEN reserves the right to change/modify the DLP exam center address in unforeseen circumstances, without any prior intimation. However, prior intimation of such a change shall be given.

For Major Test Series Registration visit our website: dlp.allen.ac.in

### **SCHEDULE FOR MAJOR TEST SERIES**

#### **NEET (UG) TARGET - 2026**

Test No.	Date	Day	Test Type	Syllabus Covered	Test Timings	Test Mode
1	18/01/2026	Sunday	NEET (UG)	SECTION TEST-1 : (11 <sup>th</sup> Class Syllabus)	1 PM - 4 PM	PEN PAPER
2	01/02/2026	Sunday	NEET (UG)	SECTION TEST-2 : (12 <sup>th</sup> Class Syllabus)	1 PM - 4 PM	PEN PAPER
3	15/02/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
4	01/03/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
5	08/03/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
6	15/03/2026	Sunday	NEET (UG)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER
7	22/03/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
8	29/03/2026	Sunday	NEET (UG) (ALL INDIA OPEN TEST)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER
9	05/04/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
10	12/04/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
11	19/04/2026	Sunday	NEET (UG) (ALL INDIA OPEN TEST)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER
12	26/04/2026	Sunday	NEET (UG)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER

#### JEE (MAIN + ADVANCED) TARGET - 2026

Test No.	Date	Day	Test Type	Syllabus Covered	Test Timings	Test Mode
1	04/01/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	9 AM - 12 NOON	CBT
2	11/01/2026	Sunday	JEE (MAIN) (ALL INDIA OPEN TEST)	FULL SYLLABUS	9 AM - 12 NOON	CBT
3	18/01/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
4	01/02/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
5	15/02/2026	Sunday	JEE (ADVANCED)	FULL SYLLABUS	9 AM - 12 NOON	CBT
			(2 PAPERS)		2 PM - 5 PM	
6	01/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
7	08/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	9 AM - 12 NOON	CBT
			JEE (ADVANCED)		2 PM - 5 PM	
8	15/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER
9	22/03/2026	Sunday	JEE (MAIN) (ALL INDIA OPEN TEST)	FULL SYLLABUS	9 AM - 12 NOON	CBT
10	29/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER
11	19/04/2026	Sunday	JEE (ADVANCED)	FULL SYLLABUS	9 AM - 12 NOON	CBT
			(2 PAPERS)		2 PM - 5 PM	
12	26/04/2026	Sunday	JEE (ADVANCED)	FULL SYLLABUS	9 AM - 12 NOON	CBT
			(2 PAPERS)		2 PM - 5 PM	
13	03/05/2026	Sunday	JEE (ADVANCED) (ALL INDIA OPEN TEST)	FULL SYLLABUS	9 AM - 12 NOON	CBT
			(2 PAPERS)		2:30 PM - 5:30 PM	
14	10/05/2026	Sunday	JEE (ADVANCED) (ALL INDIA OPEN TEST)	FULL SYLLABUS	9 AM - 12 NOON	CBT
			(2 PAPERS)		2:30 PM - 5:30 PM	

#### JEE (MAIN) TARGET - 2026

Test No.	Date	Day	Test Type	Syllabus Covered	Test Timings	Test Mode
1	04/01/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	9 AM - 12 NOON	CBT
2	11/01/2026	Sunday	JEE (MAIN) (ALL INDIA OPEN TEST)	FULL SYLLABUS	9 AM - 12 NOON	CBT
3	18/01/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
4	01/02/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
5	15/02/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	9 AM - 12 NOON	CBT
6	01/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	1 PM - 4 PM	PEN PAPER
7	08/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	9 AM - 12 NOON	CBT
8	15/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER
9	22/03/2026	Sunday	JEE (MAIN) (ALL INDIA OPEN TEST)	FULL SYLLABUS	9 AM - 12 NOON	CBT
10	29/03/2026	Sunday	JEE (MAIN)	FULL SYLLABUS	2 PM - 5 PM	PEN PAPER

IMPORTANT: 1. If the number of students are less /minimum at the CBT Center or due to the non-availability of computer labs; the test will be available on your ALLEN App/Web (allen.in) in ONLINE CBT mode (attempt test paper from home in online mode) as per the schedule. | 2. DLP question paper & answer key will be available after completion the exam on ALLEN App/Web(allen.in) in PDF format (downloadable & printable format). | 3. Number of tests, dates, timings, syllabus & pattern may differ according to the notification/dates of Main Exams declared by the exam governing body. | 4. ALL INDIA OPEN TEST: AIOT provides vast exposure, ranking and analysis on the national level to compete with ALLEN'S current year Classroom students. | 5. Students are advised to keep visiting the official website dlp.allen.ac.in for the latest updates.

# HOW TO APPLY

#### Online Method to Apply for DLP Major Test Series

Apply ONLINE through our website **dlp.allen.ac.in** and pay your course fee through any of the following mode:

#### a) Online Payment Mode

Course fee can be paid through our secure payment gateway using your Visa Card (Credit Card / Debit Card) or Master Card (Credit Card Only) /UPI or Net Banking of any bank.

#### b) DD Mode

Course Fee can be paid through Demand Draft / Pay-Order in the favor of "ALLEN CAREER INSTITUTE PVT. LTD., KOTA" from Nationalized Bank, payable at Kota (Raj.).

To complete the admission process, take a print of Application Form from "Control Panel" of website and send it along with the Demand Draft / Pay-Order of requisite amount through Post / Courier at the specified address. Student must write his/her Application Form No., Name, Mobile No. on the back side of Demand Draft.

#### c) Cash Deposit in HDFC Bank

Course Fee can be paid through cash at any branch of HDFC Bank after applying through our website. For using this facility generate Bank Fee Challan through the link given on our website and deposit the requisite course fee at your nearest HDFC Bank branch through this challan.

# d) Through RTGS / NEFT (In case student have ALLEN Form number).

- Fee can be deposited by filling the following details in RTGS form of any bank other than HDFC BANK.
- For details contact our admission counsellor at: 0744-2750275, 3510275, 8951395055

#### e) Through Credit / Debit Card at office premises

Fee can also be deposited at any Study Center/Information Center office by swiping a Credit Card / Debit Card. ( No Extra Charges ).

#### How to Print MAJOR Test Series Admit Card

Admit Card for the MAJOR Test Series Students, can be downloaded and printed from student login on our **website** (**dlp.allen.ac.in**). Download link for the Admit card will be available only after completing the admission procedure as defined in Mode a/b/c/d/e of How to Pay Fee.

#### **About MAJOR Test Series**

- a) Question paper & Answer key will be available on ALLEN
   App/Web (allen.in) after completion of each test.
- b) All India Rank wise Result with detailed marks will be available on our **ALLEN App/Web (allen.in).**
- c) Student not present in the test will be marked absent; however they can collect Test Papers at the time of next scheduled test. No marks will be awarded to absent students.
- d) In case of cancellation of test under unforeseen circumstances, student will be marked absent; however they can collect Test Papers on the next scheduled test.

#### Change in Test Center\*

Kindly visit Student Login (User Control Panel) Section of DLP to apply.

\*For Test Center change kindly apply (ONLINE only) 7 days prior to next test date.

#### **IMPORTANT NOTE:**

For MAJORTEST SERIES - In case we don't have a test center in your city, you can opt test centre as POSTAL to receive Offline Test Papers at Home. ALLEN will deliver Test Papers & Solutions at home by post which has to be self evaluated by the student himself. It is purely an option to receive question paper at home.

Please note if the **declaration** (upload photograph and signature in student control panel) is not completed within 15 days of the Online registration, the admission process will not be completed and the services may be suspended till it is received.



Scan the code to pay course fee

### Steps for Online Registration

- **Step 1**: Visit www.dlp.allen.ac.in & Click on Apply Online Link
- **Step 2**:Click on the New Applicant option & Fill your required details & click on Submit button.
- **Step 3**: You will receive an Activation link on your email id & Mobile Verification code on your Registered Mobile Number, Click on the Activation Link and put Mobile Verification Code in required field.
- **Step 4**: After Successful verification, login to your Student Account and upload your formal Photograph & Signatures (Student & Parent).
- **Step 5**: Pay your Fees & take a Print out of your ALLEN Application Form
- on the Activation Link and put Mobile Verification Code in Step 6: Send your Application Form to our Corporate Office Kota required field. with Supportive documents.



# **All India Test Centers**



S.N.	City	Center Address	Code
1	AGARTALA	Modern Higher Secondary School, Molaynagar Datta Palli, P. O. Renters Colony	4
2	AGRA	Shri Ram Krishna Inter College Khandari Road Near District Jail	1
1	AHMEDABAD	ALLEN, Office Unit 325, 3rd Floor Super Mall-2, Gate No 1, Near Gh 0 Circle SG Highway, Infocity IT Metropolis, GANDHINAGAR	5
	AHMEDABAD	ALLEN SADHYA, Opposite Sapta villa Bungalow Behind Sindhu Bhavan, Thaltej	6
	AHMEDNAGAR	A.E.S. Ashokbhau Firodia English Medium School & Jr. College Vishram Baugh	5
i	AJMER	Sh. M.P.G.D. Arya Kanya Sr.Sec.School (Chachi Ji ka School), Near Govt. College	1
'	AKOLA	Shri RLT College Of Science Civil Lines	1
3	ALIGARH	SKD Modern Inter College, Quarsi Bypass Road, Rajiv Nagar	1
)	ALWAR	Modern Mahila B.ED College Near Ram Mandir South West Block	1
0	AMBALA	Police DAV Public School. Model Town Road Police Ground. Police Line	4
1	AMBIKAPUR		7
		Dashmesh Public Sr. Sec. School, Mahatma Gandhi (MG Road) Patpariya	
12	AMRAVATI	SDF English Primary School and Junior College, Vrundavan Colony Ganediwal Layout, Behind Commissioner Office, Near Kanta Nagar Camp	1
13	AMRITSAR	ALLEN, SCO - 57 (97 ACRE Scheme) Ranjit Avenue, Ajnala Road	7
14	ANGUL	Tapovanam International School, Turanga (Sheetal Vihar)	7
5	ANANTNAG	ALLEN, Old National Highway Batengoo, Anantnag	8
6	ARAMBAGH	Pearl Rosary School, Gourhati More Near Reliance Trends	8
7	ARARIA	Araria Public School, Wasiabad Near Shivpuri Behind Araria College	8
8	ARRAH	R.K Academy School Pakariabar Chandwa, Arrah,(Arrah Buxar Main Road)	4
9	ASANSOL	Dayanand Vidyalaya (H.S.) DAV School Road, Budha	5
0	AVODUNA	Lord Buddha Foundation School Club Road (BIHAR)	8
1	AYODHYA	Maharaja Public School, Rajsadan Compound Ramghat Road	7
2	AZAMGARH	Pratibha Niketan School, Atlas Tank Sadar	7
3	BALANGIR	JITM Higher Sec. School, Centurion Campus, IDCO Land, Behind BSNL Office	5
1	BALASORE	Modern Public School, Near Indian Oil Housing Complex Meghadambaru, P.O. Kuruda	5
5	BALLARI	Vasishta PU College, Opp. KRS Function Hall Moka Road, Sanganakallu	7
) }	BALLIA	Sunbeam School, Agarsanda near Hanuman Temple	7
	BALURGHAT		
7		Fulbari High School (H.S.) Vill. Post- Fulbari, PS- GANGARAMPUR	6
3	BANDEL	Shree Digamber Jain Vidya Mandir, South Naldanga, Chinsurah, Kodalia P.OBandel, DisttHOOGHLY	9
)	BANKURA	Bankura Unnayani Institute of Engineering Subhankar Nagar, Pohabagan	5
0	BANSWARA	Tiny Tots Sr. Sec. School, Kagdi Pickup Ratlam-Banswara Road	7
1	BAREILLY	Harrow School, DD Puram Near LG Shop	1
2	BARMER	Mayur Nobels Sr. Sec. School Gandhi Nagar	1
3	BASTI	DELHI School of Excellence Haveli Khaas Near krishna Mission hospital	4
	BATHINDA	S.S.D. Girls College, Armik Singh Road Near Mela Ram Hospital	1
1			
5	BEED	Champavati English School Nagar Road	8
3	BEGUSARAI	North St. Williams Academy, Tilrath Station Road,	2
7	BELAGAVI	Prerana PU College, Hindwadi Main Road, Sarvodaya Society Omkar Nagar, Tilakwadi, BELGAUM	9
8	BENGALURU	ALLEN, Site No. 80, 2nd Block, 3rd Stage In Front off Gangamma Thimmiah Conventional Hall BASAVESHWARA NAGAR	1
9	BENGALURU	ALLEN, No.3, 5th Main, Near Baptist Hospital On road comming inside from Pacer Yamaha Showroom Corner, HEBBAL	1
0	BENGALURU	ALLEN, Jayanagar B5 Campus, 70, Pattalamma Temple Road Jayanagar 1st Block, Jayanagar 3rd Block, JAYANAGAR	1
1	BENGALURU	ALLEN, Carpus, 804, HAL 2nd stage 7th Main, 1st Cross, Domulur sub division, INDIRANAGAR	5
2	BENGALURU	ALLEN, SG PLAZA No-01 Ganagamma circle, Jalahalli Opp: Prestige welling park, JALAHALLI	5
13	BENGALURU	ALLEN, No-918 Varthur Main Road Near Apnaday Market, WHITEFIELD	5
4	BENGALURU	ALLEN, RR Nagar Campus, 2nd , 3rd, 4th Floor, #466/A Ideal homes township, 80ft Road, KANCHENAHALLI	7
5	BENGALURU	ALLEN, No. 311, 7th Main, HRBR Layout 2nd Block, Opp. to Cavalier Hospital, BANASWADI	1
-6	BENGALURU	ALLEN, No. 71, Bilekahalli, Panduranga Nagar, Near Adigas Restaurant, BANNERGHATTA ROAD	1
7	BENGALURU	ALLEN, No.530 C / 531 A, Sector 3, 9th Main Opp. Purva Vantage, Next to Boot Camp, HSR LAYOUT	1
8	BENGALURU	ALLEN, Ground Floor, Purva Reviera Commercial Complex 3rd Gate, MARATHAHALLI	1
9	BENGALURU	ALLEN, 40/D Marilingiah Building-1 2nd Cross, Yelahanka New Town, Khb Colony, YELAHANKA	8
0	BERHAMPORE	Berhampore B.Ed. College, 3/15 Girjapara Lane, Saidabad Near Armenian Church, MURSHIDABAD	5
1	BETTIAH	Notre Dame Public School, KR School Road, Bel Bag Bengali Colony, Baswaria	7
2	BHAGALPUR	Navlok English Academy, Choti-Khanjarpur, S.M. College Road	1
}	BHARATPUR	Baba Sugreev Vidyapeeth Senior Secondary School Circular Road, Agrasen Nagar	1
	BHILAI	Sai College, Street 69, Sector-6	1
<del>1</del> 5	BHILWARA	ALLEN, Gulab Infinity Campus 1st & 2nd Floor, above S.B.I, SEVA SADAN ROAD	1
) }		Jansewa Vidya Vihar High School, Nai Anaj Mandi Near Auto Market	4
	BHIWANI	, , ,	
	BHIND	IPS Academy Bye Pass Road Keeratpura	8
3	BHOPAL	St. Johns Hr. Sec. School ELC, Govindpura, B.H.E.L.	1
)	BHOPAL	ALLEN, Plot No. 9 & 10 , ISBT Commercial Campus Hoshangabad Road, Habibganj, ISBT CAMPUS	6
)	BHUBANESWAR	ALLEN, Koustuv Technical Campus, Plot No.1, Sector-B, Gate No6 Chandaka Industrial Complex, Chandrasekharpur Police Station Line, Patia	5
1	BHUBANESWAR	ALLEN, Old Town Campus, Plot No.: 2529/2530, Rath Road, Old Town	6
2	BIHAR SHARIF	Career Public School Banchi Road	5
3	BIJNOR	Rainbow Public Hr. Sec. School Geeta Nagari, Civil Lines	8
4	BIKANER	H.S.Rampuria Vidyaniketan Near Cine Magic Road No. 05, Industrial Area	1
i	BILASPUR	Nalini Prabha Dev Prasad Roy (N. D. R.) College Jorapara (Arvind Nagar), Sarkanda	1
3	B0KAR0	A.R.S. Public School, BSL LH, Station Road, Bokaro Steel City	1
'	BOLPUR	Bolpur NNB High School Nichupatty, Bolpur Dist. Birbhum	6
3	BRAHMAPUR	St. Xavier High School Meenakshi Nagar, Bendalia	8
)	BULDANA	ALLEN, Sahakar Vidya Mandir School, Chikhali Road Vidya Nagari	5
0	BURDWAN	Bardhaman Bidyarthi Bhaban Giris' High School, 101a Link Road, Perbirhata	6
ນ 1			
	BUXAR	Sri Ram Janki Saraswati Vidya Niketan Ashram, Naya Bazar	8
2	CHANDIGARH	ALLEN Career Institute SIDDH SCO-354-355, Sector 34-A	1
3	CHANDRAPUR	St. Francis TSK high School, Danao Wadi Binba Ward, Near Binba Gate	2
4	CHENNAI	New No : 80, Old No : 419, Kilpauk Garden Road, ANNA NAGAR (E)	5
5	CHENNAI	ALLEN Career Institute, H.O. No. 346 & 347 Next to Kasi Theatre, Jafferkhanpettai, ASHOK NAGAR	5
5 6	CHENNAI	ALLEN Career Institute, S.M.J. Tower, Door No.16, IT Expressway, Beside Novotel Old Mahabalipuram Road, SHOLINGANALLUR	5
7	CHENNAI	ALLEN, Pathima Markaz, Plot Nos. 14 & 19 And 15 & 18 Madipakkam Velachery Main Road, Ram Nagar, MADIPAKKAM	5
В	CHENNAI	ALLEN, Old Door No - 29, New Door No. : 147, Plot No - 236, Bharathamatha Street, East TAMBARAM	6
9	CHENNAI	Aditya Vidyashram, Gurugram Campus, No 9, Poonamalle-Avadi Road Veeraraghavapuram Adjacent to S.A. Engineering College, AVADI	7
	CHHAPRA	New A.N.D. High School, Bhikhari Chowk, Moti Nagar Bara Telpa, Chhapra, Saran	8



S.N.	City	Center Address	Code
81	CHHATARPUR	Care English School Mahoba Road, Bus Stand	867
82	CHHINDWARA	Sunrays Public Higher Secondary School, Ward No. 47, Vip Road, Near Vriddhashram, Priyadarshini Colony, Teacher's Colony	827
83	CHHATRAPATI SAMBHAJINAGAR	Dr. Sow. IBP Mahila Kala Mahavidvalava Manikchand Pahade (M.P.) Law College Campus. Nirala Bazar. Samarth Nagar Road	108
84	CHITTORGARH	Caliber Academy Sr. Sec. School, Station Main Road, Adarsh Nagar Griha Nirman Samiti, Railway Colony	650
	COIMBATORE	ALLEN, 35, 7th Street Tatabad, Gandhipuram	636
86	CONTAI	Mount Litera Zee School, Manja Road, Gimageria, Dharmadasbar	662
87 88	COOCH BEHAR CHURU	Aurobindo Patha Bhavan, (English Medium) Bangachatra Road, Bakultala Indian Public Sr. Sec. School (Indian Teacher Training College), Near Nature Park Roadways Bus Stand Circle	663 891
89	CUTTACK	Saraswati Junior Science College Link Road Arunodaya Market	575
90	DALTONGANJ	Orient Public School Panki Road, Pokhra Khurd, Palmu, MEDININAGAR	825
	DARBHANGA	Mount Summer School, Saidnagar Opp. Indian Oil Petrol Pump, Laheriasarai	123
	DEHRADUN	ALLEN, 59, Rajpur Road Opposite Secretariat, RAJPUR ROAD	605
	DEHRADUN DEOGHAR	ALLEN, Cubic Plaza, 8/1-1, Sangam Vihar, GMS Road, Near Balliwala Flyover, SANGAM VIHAR  Red Rose School, Castair's Town B	612 626
	DEORIA	Hely Angels Public School C.C. Road Near Sugar Mill, Uma Nagar	729
	DHANBAD	Global School of India, Global Square, Amarpur, Govindpur	126
	DHOLPUR	Shivam Adarsh Vidhya Mandir Sr Sec School, Dholpur	659
	DHAMTARI DHULE	Sarvodaya Hr. Sec. School, Housing Board Colony Hatkeshar Road	735 421
	DIAMOND HARBOUR	Scholars point , 57/B, Suyog Nagar Near Din Bandhu Boarding ,Behind Mamta Hospital, Wadi-Bhokar Road, Deopur  VSSU International School, Ashok Nilay Campus, Ullon, Ramlochanpur	665
	DIBRUGARH	Gyan Vigyan Academy, P. N. Road Chiring Chapori	760
	DUMKA	The Herald School, Dangal Para Dumka	906
	DURGAPUR	Purv International School Nachan Road, Kamalpur	203
	ETAWAH FARIDKOT	J.S.K.G. Polytechnic College, Takha House, New Colony, Chogurjee Kachehari Road  Little Angels High School, Old Cantt Road Dogar Basti	902 830
	FARIDABAD	Shraddha Mandir School, Maharshi Dayanand Road, Near Chandiwala Bagh Bharat Colony, Sector 87	127
	FARRUKHABAD	Saraswati Vidya Mandir Inter College, Jai Narayan Verma Road, Sainik Colony, Fatehgarh	710
	FIROZABAD	S.R. Gyaneshwari Inter College, Lalpur Bamba Road, In Front of Lalpur Sabji Mandi New Bypass Road, Nalkoop Colony, Asfabad	895
	FAZILKA	Dav College Of Education Mahavir Colony	831
	FIROZPUR GANGAPUR	Dasmesh Public School, Dasmesh Nagar, Near Anil Baghi Hospital	775
	GAYA	KDRS Sr. Sec. School, Tajpur Road Mahu Kala Jain Shishu Niketan, Sidhiya Ghat River Side	658 128
	GHAZIABAD	Ghaziaba Public School, II-C, Basant Road, Pocket E Nehru Nagar II, Nehru Nagar	567
114	GHAZIPUR	Gaurishankar Public School Tulsi Sagar	733
115	GIRIDIH	Subhash Public School, New Officers Colony Mohlichawen, Koldiha	746
116	GONDA	St. Xavier's Senior Secondary School Near Rajendra Nath Lahiri School, Lucknow Road, Pant Nagar	848
117 118	GONDIA GOPALGANJ	Shri Rajasthan Kanya Vidyalaya, Near Motwani Chamber Krishnapura Ward  Gyananda International School, Chhawahi Khas	207 778
	GOA (PANAJI)	Kasturba Matoshri High School, Rua Jose Falcao, Near Immaculate Conception Church, Altinho, Panaji	582
	GORAKHPUR	Islamia Girls Inter College, Zahidabad, Gorakhnath Mandir	129
	GUNA	Shri Gurukul Hr. Sec. School, Saraswati Vihar Colony, Near Nazol, Bhargava and Soni Colony	828
	GURDASPUR	Sukhjinder Memorial Public School, G.t. Road Babri	776
	GURUGRAM GUWAHATI	ALLEN, 4th Floor, M2K Corporate Park, Mayfield Garden, Sector 51  Aryabhatta Junior Science college Wallford Bus stop, G.S Road , Ganeshguri Guwahati	865 130
	GWALIOR	Kiddy's Corner School Naya Bazar, GANESH COLONY	131
	GWALIOR	ALLEN, Plot No-4626, Konark Tower City Centre, Behind Athena Building, CITY CENTER CAMPUS	647
	HAJIPUR	R.S. Public School, Radhika Kunj, Near Gandhi Ashram Park Hajipur, Vaishali (dist.)	854
	HALDIA HAMIRPUR	Bhavan's Netaji Subhash Chandra Bose Vidyaniketan Azad Hind Nagar, Haldia Township Hamirpur Public School, Ram Nagar Ward No-10	764 479
	HALDWANI	Doon Convent Senior Secondary School, Gaujajali Uttar, Bareilly Road, Haldwani, Nainital	748
	HANAMKONDA	MEDICON Junior College, H.No: 2-5-727, Opp. DIG Bungalow, Adhalath, Subedari, WARANGAL	588
132	HANUMANGARH JN.	Guru Harkishan Sr. Sec. Public School Near Rajiv Gandhi Stadium	132
	HARIDWAR	Saraswati Vidya Mandir Inter College, Sector-2, Bhel Township Near Gurudwara	624
	HATHRAS HAZARIBAGH	Doon Public School Agra Road  AISECT University, Infront Of Gandhi Maidan Matwari	861 762
	HISAR	ALLEN, Plot No.13-14 Dabra Road, Near Sector-13	606
	HOWRAH	Mariya's Day School , 11/6 Grand Trunk Road (South)	528
138	HYDERABAD	ALLEN, Dilsukhnagar, Near Chaitanya Puri Metro Station Beside Neerus, Dilsuknagar, DILSUKNAGAR CAMPUS	907
	HYDERABAD	ALLEN, Madhapur Vamsiram's Jyothi Ridge, 46, Kavuri Hills Rd Guttala Begumpet, Kavuri Hills, Jubilee Hills, MADHAPUR CAMPUS	876
	HYDERABAD	ALLEN, Kukatpally, Kkr Commercial Complex, 6th Floor Kukatpally, Y Junction, Pragathi Nagar, Moosapet, KUKATPALLY CAMPUS  ALLEN, Royal Castle, Floor No -2,3,4, Patny Centre Sarojini Devi Road, Oppsite - Hotel Tajmahal, Secunderabad, SECUNDERABAD CAMPUS	878 879
	HYDERABAD HYDERABAD	ALLEN, Miyapur, Ground Floor & First Floor Relience Digital Building,miyapur X Road, Mumbai Hwy, Opp. Ks Bakers, MIYAPUR CAMPUS	880
	HUBBALLI	ALLEN, 1st & 3rd Floor, Kalburgi Central, CTS No. 4614B/2B/1 Sundar Nagar Main Road, Maiyan Timmasagar Area, VIDYA NAGAR	769
144	INDORE	Sanjyogita Ganj Higher Sec. School, Jagdale 8/1 Ushaganj Jaora Compound	133
	INDORE	ALLEN, Plot No.990, Sudama Nagar Main Road Smrati Dwar, NEAR PHOOTI KOTHI SQUARE	414
146 147	JABALPUR JAGDALPUR	Central Academy School Kanchan Vihar, Vijay Nagar, Near Bank of Maharashtra  Nirmal Hr. Sec. School, Gyan Vigyan Academy Lalbagh	134 767
147	JAIPUR	Tagore Public School, SHASTRI NAGAR	135
	JAIPUR	Toggier table Consolo, What Water Tank Gopalpura Bypass, MAHESH NAGAR	704
150	JAJPUR	Apex English Medium School, At-Laliteswar Nagar (Baidyarajpur) Po-Debidwar, Jajpur	897
151	JALANDHAR	Police DAV Public School, Grand Trunk Road, PAP Chowk	471
152	JALGAON	St. Joseph's Convent Senior Secondary School and Junior College Suyog Colony, Near M.J. College	202
153 154	JALPAIGURI JAMMU	Saint Paul's School, HP2C+CHV, Netaji Subhash Chandra Bose Road, Paharpur  Model academy, B.C Road, Jammu Flyover Central Railway Colony, Old Heritage City	666 508
	JAMNAGAR	M.S. English School, 5- Krishnanagar	761
	JAMSHEDPUR	Golmuhri Utkal Samaj School, Near Aakash Deep Plaza, Golmuhri	136
157	JAUNPUR	Dr. Rizvi Learners' Academy, Mandi Naseeb khan Station Road	701
158	JEHANABAD	Delhi Public School, Near Ram Mandir, Algana Road	836
159	JHANSI	Maharani Laxmibai Inter College, Gate No 03 Anna Ji Marg, Bahar Khanderao Gate	137



S.N.	City	Center Address	Code
160	JHARGRAM	Jhargram Kumud Kumari Institution, Raghunathpur	857
161	JHARSUGUDA	DAV Public School, Jharsuguda Pragati Marg	649
162 163	JHUNJHUNU JODHPUR	ALLEN, Star Tower, Ajadi Colony, Near Gudha Phatak, Gudha Road  Maulana Abdul Kalam Azad Sr.Sec.School Kamla Nehru Nagar, Pal Link Road	627 139
164	JORHAT	Inducina Auduu Naciali Azad Si. Set. Scition Inducina Ind	698
165	KANCHIPURAM	Kanchi Global Matric Hr. Sec. School, No. 41, Krishnan Street Pillaiyarpalayam	908
166	KANPUR	Sharda Public School,1090 M-Block, Kakadev, Near Gopala Tower	505
	KARNAL	Pratap Public School Dyal Singh College Road	714
	KATHUA	Jammu Sanskriti School, NH-1A, Behind Bharat College of Education Hatli Morh, Taranagar	711
	KATIHAR	AVM Public School, Power House Road Near Mahila College	834
	KATNI KATWA	Saraswati Shri Vishnu Ved Hr. Sec. School Opp. Govt. Tilak College Khirahni Holy Angels' School, Ghosh Hat Katwa, Purba Bardhman	772 862
172	KHALILABAD	Gateway Academy, Nedula Chauraha, Vikas Bhawan Road, Khalilabad, SANT KABIR NAGAR DISTRICT	900
	KHANAPARA	ALLEN, Baridua 9th Mile Adj. DPS Khanapara, Ri Bhoi	859
	KHANDWA	Scholars Den School Deendayal Puram, Anand Nagar	829
175	KHARGONE	Priyadarshini High Secondary School Khargone Balwant Market, Tilak Path	801
	KHARAGPUR	Xavier Public School, Kharida - Ajabpur Road, Kharida Bidhanpally	205
	KISHANGANJ	Crescent Public Senior Secondary School CPS Road, Sir Syed Nagar	727
	KODERMA	Sacred Heart School, Near Sankat Mochan Mandir, Maharana Pratap Chowk, Ranchi-Patna Road Jhumri Telaiya	773
179 180	KOLHAPUR KOLKATA (NORTH)	Chhatrapati Shahu Institute of Business Education and Research (CSIBER) Vidya Nagar, University Road  St. Andrews Public School, F/1 Jyangra Raghunathpur, VIP Road	786 785
	KOLKATA (NOTTTI)	Sc. Printerwor Lauric School, 1/1 yangila Laurichinanian, mindel Bagmari Manicktala Govt. Sponsored Higher Secondary School 1, Bagmari Lane, KANKURGACHI	141
182	KOLKATA	Beharati Vidya Mandir, Dangapara, Rahara, KHARDAHA	667
	KOLKATA	St. Paul's K.G. & Day School, 16/1A, Ramkanto Bose Street, SHYAMBAZAR	669
184	KOLKATA	Swami Vivekananda Institute of Science & Technology, Dakshin Gobindapur, Sonarpur, KAMALGAZI	572
185	KOLKATA	Monalisa English School, Madhyamgram Station Road Basu Nagar, MADHYAMGRAM	571
	KOLKATA (SOUTH)	Khalsa Girls High School 73 Paddapukur Road	501
	KOLKATA	Nabapalli Satyabharati Baniniketan Girls High School (h.s.) P.o. Nabapally, P.s. BARASAT	660
	KORBA KOTA	SMIF Vidyapeeth, 1st Floor, Shivam Mart, Kharmora	723
	KOTA	St John's Senior Secondary School, Near Hotal Meenal Bundi Road, KUNADI  Modi Public School (Modi College) DADABARI	692 491
191	KOTA	ALLEN (Srajit - 4 ) One Biz Square, A-12 (Road No.1) INDRAPRASTHA INDUSTRIAL AREA	696
	KOTA	ALLEN SUPATH, Nava Nohra, Baran Road	708
193	KRISHNA NAGAR	Global Institute Of Management & Technology Palpara More, Nh-12, Krishna Nagar, Nadia	833
194	KURUKSHETRA	B.R International School Salarpur Road ,Near New Grain Market	478
	LATUR	Shri Shivaji Madhyamik Vidhyalaya Saraswati Colony	175
	LUCKNOW	Children Academy College, 20 A Mall Avenue	913
	LUDHIANA	Guru Nanak International Public School, Block-I Bhai Randhir Singh Nagar (B.R.S Nagar)	673
	MADHEPURA	Holy Cross Girls School, Shashtri Nagar Ward No19	197
	MADHUBANI MADURAI	Apex Tutorial Kalpna Vihar R.K.College, Main gate Sapta,(Near vodafone tower)  ALLEN, Madurai Campus,Laxmi Tower, 81 B, PT Rajan Rd, Bibikulam, PT RAJAN ROAD CAMPUS	199 809
	MAHASAMUND	Good Shepherd School, Ayodhya Nagar, Tumgaon Road	841
	MAHENDRAGARH	NRB College of Education, SH 17, Opp. New Civil Court, Namaul Road, Mohlla Khatikan	643
	MALDA	Ramakrishna Mission Vivekananda Vidya Mandir, R. K. Mission Road, P.o. & Dist. Malda	502
204	MANDSAUR	ST. Kabir Public School, Kothari Colony, Sanjeet Naka Mandsaur	642
	MANGALORE	Vikas Group of Institutions, Airport Road, Mary Hill	909
	MATHURA	Srijee Baba Saraswati Vidhya Mandir Goverdhan Road	456
	MAU	Ram Swaroop Bharti Inter College, Shiv Jee Math Bhiti	788
	MEERUT	Vidhya Mandir Inter College K-Block, Main Road, Shastri Nagar	144
	MIDNAPORE MIRZAPUR	Nirmal Hriday Ashram School , Church Road S.N. Public School, Mussaffarganj Mirzapur Near Navin Cinema	530 774
_	MIRAJ	Vasantraodada Patil Institute of Management, Studies and Research NR. Bharti Hospital, Sangli-Miraj Road, Wanlesswadi	424
	MOGA	National Convent Senior Secondary School, Near Main Bus Stand, Amritsar Road	832
	MOHALI	Allen, Mohali, Plot No578, Sec-66 Near Bestech Square Mall, Mohali	552
214	MOHANIA	CBSE Competitive School, Ratiram Gola Stuwar Ganj, Mohania, Distt. Kaimur	749
	MORADABAD	Saraswati Vidya Mandir Inter College, Near Railway Crossing Gulabbari	700
	MORENA	Glorious Public Higher Secondary School, 47 Gandhi Colony, Gopal Pura	866
	MOTIHARI	M. S. Memorial Public School Balganga	198
	MUMBAI MUMBAI	ALLEN, Ground, 1st & 2nd Floor, Plot No 278,0pp. Vanita Vikas School, Near Railway Station, Station Road GHATKOPAR(E) Chhabildas C.B.S.E. English Medium School Opposite Vanmali Hall, Shrikrishna Batata Wada, Chhabildas Road, DADAR (WEST)	450 459
	MUNGER	Vidya Sanskar School, Sanjeevani Gali, Shastri Nagar	730
	MURSHIDABAD	Lalbagh Singhi High School, Moti Jhil Bypass Road	893
	MUZAFFARNAGAR	E. D. Public School Patel Nagar, Muzaffarnagar	146
	MUZAFFARPUR	Vidyayan International School, Sanjay Cinema Road, Brahmpura, Thana Chowk	147
	MYSURU	B.M. Arcade, No-2923, 1st Main, 5th Cross Saraswathipuram, Opp. SVC Bank	517
	NAGAON	Nagaon International School L. K. Road, North, Haibargaon	581
	NAGPUR	Navapratibha Mahavidyalaya, Umred Road Mirchi Bazar, Ayurvedic Layout, Sakkardara	148
	NANDED NARNAUL	ALLEN Career Institute, Plot No-1 Gopal Krishna Education Centre, Yeshwant College Road, Shyam Nagar  C.L. Public School, Singhana Road, Huda Sector-1	149 150
	NASHIK	C.L. Public School, Singhana Road, Huda Sector-1     ALLEN, 4th Floor, Business Square, Opposite Abhudaya Co-operative Bank, Old Commissioner office road, Canada Corner	632
	NAVI MUMBAI	ALLEN, 1st Floor, Ashoka Residency Plot No. 3, Sector- 12, KHARGHAR	172
	NEEMUCH	ZELLI, 1ST 1001, SINDA HEADING TO J. SECUP. Z. KIPHICHAHI Childrens Well Academy, Anand Parisar Near Mehnot Nagar	638
	NEW DELHI	G.L.T. Saraswati Bal Mandir Senior Secondary School Ring Road, NEHRU NAGAR	858
233	NEW DELHI	Laxmi Public School, X-20, Institutional Area, KARKARDOOMA	429
	NEW DELHI	Mount Abu Public School, Sector-5, Pocket B-8, ROHINI	430
	NEW DELHI	Harcourt Butler Senior Secondry School, Mandir Marg Near Shri Laxmi Narayan Temple (Birla Mandir), GOLE MARKET-CENTRAL DELHI	860
	NEW DELHI	Holy Convent Sen. Sec. School, Uttam Nagar Near Ranhaulla Bridge, VIKAS NAGAR	712
	NEW DELHI	New Delhi Public School, Block A, 238 Budella, VIKASPURI Lord Mahauira School, BS 1B, Nord Prohippoutra Market, Scatar 20, Noida Dist, Courtem Buddha Nagar	771
	NOIDA PALANPUR	Lord Mahavira School, PS 1B, Near Brahmaputra Market, Sector-29, Noida Dist. Gautam Buddha Nagar  ALLEN, 3rd Floor, Chaudhary Complex, Palanpur-abu Highway Above Croma/Pantaloons	576 896
203	I ALAINI UII	Pateria, ord i 1001, Ordaniary Outhples, I didipliar and highway Above Ordinari distalouts	050



S.N.	City	Center Address	Code
	PALI PANCHKULA	Vande Mataram Shikshan Sansthan, Jai Nagar Ramdev Road ALLEN Panchkula (Campus), SCO-275, Sector-14	460 480
	PANIPAT	Arta Senior Secondry School, Opp. Civil Hospital Grand Trunk Road	765
	PATHANKOT	Vidya Mandir Public Senior Secondary School, Shivaji Nagar, Street No. 2, Dhangu Road	152
	PATIALA PATNA	Apollo Public School, Urban Estate Phase-I	535 522
	PATNA	Raza High School +2 Opposite Patna College, ANIBESENT ROAD  B.D.Public School, BUDDHA COLONY	153
	PATNA	Central School, Indira Nagar, Road- No. 3, Postal Park Near Old Bus Stand	739
	PATNA	Raza International Girls School, Bailey Rd, RPS More Shri Krishna Puram, Near Danapur	740
	PATNA PATNA	ALLEN, Ashiana Digha, Vau's Spring Complex Block A Ashiana Digha Near Old, ASHIANA DIGHA CAMPUS  Lohia Nagar Mount Carmel High School, Lohia Nagar, Branch- Boys' Wing - D/s-16, Gayatri Mandir Road, KANKARBAGH	817 910
	PLASSEY	Plassey Teachers Training Institute (B.Ed.), Mira Bazar (NH 34, Infront of Express Dhaba) Nemaichandpur, P.O Plassey, Nadia District	890
_	PONDICHERRY	ALLEN, 372 Bharathi Street	545
	PRATAPGARH PRAYAGRAJ	River Dale Public School, New Mal Godam Road Bear Bhangwa Chungi  Vashisth Vastsalya Public School, 7/5,Elgin Road, Infront of Vatsalya Hospital,Civil Lines (Allahabad)	741 105
	PUNE	ALLEN, Kohinoor B-Zone Shivaji Nagar, CTS, No. 1565 At F.P. 81, TPS-1, Opp., Shivaji Nagar Metro Station, Bhamburda, Taluka, SHIVAJI NAGAR	813
	PURNIA	Purnia Sr. Secondary School Rambagh Sadar	155
	PURULIA	BSS Central Public School, Will Cox Road Chakdah, Belguma	668
	RAEBARELI RAIGANJ	Veena Pani Inter College, Jaitupur Raod Malik Mau Sudarshanpur Dwarikaprasad Uchcha Vidyachakra Sudarshanpur, Raiganj, Uttar Dinajpur	898 781
	RAIGARH	Uttam Memorial College, Beside Patelpali Krishi Upaj Mandi Sarangarh Road	654
	RAIPUR	Deshbandhu Hr. Sec. School Station Road, Ganj	656
	RAJKOT RAJNANDGAON	ALLEN, Yuvraj Complex, Opp. Sayaji Hotel B/h Crystal Mall, Kalawad Road  Royal Kids Convent Lalbagh Ge Road	484 823
	RAJOURI	Panorama Public Higher Secondry School, Ward No. 04 Near Police Lines Jawahar Nagar	899
265	RAMPURHAT	Rampurhat High School, Dackbunglowpara Rampurhat, Dist.—Birbhum	894
	RANCHI RATLAM	St. Xavier's School, DORANDA Sun shine public Hr. Sec. School 52 T. I. T Road	157 614
	RAWATBHATA	Shradhalaya Public School ( Shradhalaya Campus ) Plot No. 1, Block –B, Shree Ganesh Nagar	158
269	REWA	Saraswati Higher Secondary School Jail Marg	648
	REWARI	Allen Career, Sector 4, Rajesh Pilot Chowk, Rewari Bypass Road, DELHI NCR-REWARI CAMPUS	875
	ROHTAK ROORKEE	Allen, Kundu Plaza, Gali Number 2 Opp. Chhotu Ram Stadium, Vasant Vihar  Sarvagya Public School, Ajad Nagar Chowk Panyala Road, Near Shiv Mandir	722 623
	ROURKELA	Despika English Medium School Sector 5	455
	SAGAR	Gyanveer Institute of Management and Science Rajghat Road,tili	766
	SAHARANPUR SAHARSA	Lotus Valley School 716, New Avas Vikas Colony  Benevolent Global Public School, Ward No. 31 Near Tiwari Tola Saharsa Basti	625 645
	SAMASTIPUR	Techno Mission School, Mohanpur Near Bullet Agency	523
	SAMBALPUR	St. Xavier's School Singhpali, Kainsir Rd	592
	SATNA	Shri Rama Krishna College Near BJP Office Bharhut Nagar	161
	SERAMPORE (RISHRA) SHIMLA - LAUREATE	Holy Home, 24, 27 & 28B T.C. Goswami Street, Serampore, Dist. Hooghly  JCB Public Sr. Sec School Sector 3 New Shimla	671 476
	SHIVPURI	Eminent Public H.S. School, Gandhi Colony	840
-	SIKAR	ALLEN Sanskar, Near Piprali Circle, Jhunjhunu Bypass, Piprali Rd, Samrathpura	557
	SILCHAR SILIGURI	Pranabananda Vidhya Mandir, Shib Bari Road P.O- Tarapur, Silchar, Assam  ALLEN Career Institute, Tradium Complex Checkpost, Sevoke Road	569 634
	SINGUR	ALLEN Carest institute, maintim complex oriexpost, sevore notari Educare International School, Ratanpur Singur, Hooghly	670
	SIRSA	Sawan Public School Sector 19-20, Huda	837
	SITAMARHI SITAPUR	The Janki Vidya Niketan, Sitanagar near P.W.D.I.B Dumra Rd. Chak Rajopatti	615 843
-	SIWAN	R.D.M. Junior High School In Front of C.B. Lawn, Anand Nagar Sainik Model School, Makhdoom Sarai	728
	SONBHADRA	Ambedkar Career Point Ambedkar Nagar, Khedia (Shakti Nagar) Sonbhadra, SHAKTINAGAR	163
_	SONIPAT	J.P. Jain Sr. Sec. School Devru Road, Shiv Colony	824
	SOLAPUR SRIGANGANAGAR	D.B.F. Dayanand College Of Arts & Science, Maharshi Dayanand Saraswati Chowk (Dav Chowk) Raviwar Peth  SGN Khalsa Sr.Sec.School Teen Puli	524 164
	SRINAGAR	ALLEN, Ex. Central University Campus, Wanbal NOWGAM	602
	SRINAGAR	ALLEN, Urban Avenue, Lal Bazar Near GD Goenka School, Batoshah Colony, Lane No. 4	597
	SRINAGAR SULTANPUR	ALLEN, Opp. Solar Residency,near Modern Hospital Rajbagh, RAJBAGH  Saraswati Vidya Mandir, Gyan Kunj, Vivekanand Nagar	705
-	SUPAUL	Rajnikant Public School, Veena Road Ward No 28, Nagar Parishad	734
300	SURAT	ALLEN, Vibrant Mall, Madhuvan Circle Adajan Village Road, Near SMC Garden	409
	SURI TAMLUK	Sree Sree Ramkrishna Vidyapith, Tagore Satyananda Rd, Malipara Sri Bhumi, Pally, Suri, Dist. Birbhum	892 573
	TEZPUR	Tamluk Path Bhawan, Dharinda Ward No-20 Dimension Academy Senior Secondary School, Paroa (Bhittar) Centre Main Road, Harigaon, Patiachubri	903
304	THANE (W)	Joshi-Bedekar College of Arts & Commerce, Thana College Campus Near Cidco Bus Stand Depo, THANE (WEST)	166
	THRISSUR	Victory Institute of Technology, College Road Near Catholic Centre, Keeramkulangara	783
	TIRUPATI UDAIPUR	ALLEN, Pranam Tower Campus, Tirupati (Head Office) Plot No. 21, Near Pranam Towers, New Balaji Colony  Central Public Sr. Sec. School New Bhupalpura, Kharakua	596 167
	UDGIR	Poste Podar Learn School, Poste Educational Campus Nalegaon Road, Malkapur, Udgir, Distt - Latur	640
	UDHAMPUR	Happy Model Higher Secondary School, Mahatma Gandhi Marg, National Highway 1A, Ward No. 1, Shiv Nagar	745
	UJJAIN VADODARA	Model Higher Secondary School, Near Do Talab Sanwer Road  ALLEN, Sattva, Plot No. 37-38, Preetvan Society, Gulabvadi, Near Old Padra Road Akota, Opp. Mansi Flats	755
	VAPI	Sardar Vallabhbhai Patel, High School Gita Nagar	653
313	VARANASI	Mahamana Madan Mohan Inter College Durga Kund Sankat Mochan	168
	VIJAYAWADA	Allen, Edupugallu Center Gosala Bandar Road	494
	VISAKHAPATNAM WARDHA	Alliance College of Hotel Management, 54-11-40/1/1, Dr. V.S. Krishna College Road Near SBI Bank, Maddilapalem  Priyadarshini Mahila Mahavidyalaya Nalwadi, Dhuniwale Chowk	515 763
317	YAMUNA NAGAR	D.A.V. Police Public School Police Line Ambala Road Jagadhri	169
318	YAVATMAL	Dr. Nandurkar Vidhyalaya Palaswadi Camp, Medical Road	847
319	POSTAL	To get test paper at home.	99

#### **PHYSICS**

Basic Maths Used In Physics, Unit & Dimension, Vectors, Geometrical Optics, Kinematics -1D, 2D, Electrostatics, Newton Laws of Motion, Friction, Gravitation, Circular Motion, Current Electricity, Work, Power, Energy, Capacitance, Center of Mass, Momentum & Collison, Magnetic Effect Of Current, Rotational, Dynamics, Electromagnetic Induction (EMI), Elasticity, Thermal Expansion, Calorimetry & Heat Transfer, Alternating Current, KTG, Thermodynamics, Wave of String, Sound Wave, EM Waves, Wave Optics, Fluid Mechanics, Simple Harmonic Motion, Modern Physics, Error In Measurments & Instruments, Semiconductor

#### **CHEMISTRY**

Mole Concept & Eudiometry, Concentration Terms Solid State, Liquid Solution, Quantum Number & Electronic Configuration, Periodic Table & Periodic Properties, Chemical Kinetics, Chemical Bonding, Thermodynamics - 01, Thermochemistry, Thermodynamics -02, Redox & Equivalent Concepts, Coordination Chemistry, Metallurgy, Nomenclature & Common Names, Electronic Displacement Effects, Halogen Derivatives, Alcohol & Ether, Hydrocarbon, Electronic Displacement Effects, Acidic Strength & Basic Strength, Carbonyl Compound, Oxidation, Reduction, Aldol & Similar Name Reactions, Ideal Gas, Real Gas, Ionic Equilibrium, Electrochemistry, Atomic Structure, Surface Chemistry, Salt Analysis, Heating Effect, Reactions of Salt Analysis, Chemical Equilibrium, s - Block Element & d - Block Compounds, p -Block Element, Hydrogen And Its Compounds, f - Block Element, Environmental Chemistry, Isomerism, Purification & Characteristics Of Organic Compounds, Carboxylic Acids & Its Derivative, Alphatic Amines, Aromatic Compounds, Biomolecules, Polymer And Practical Organic Chemistry, Separation Techniques, Chemistry In Every Day Life

#### **MATHEMATICS**

Sets, Numbers & Intervals, Fundamental of Algebra, Quadratic Equations, Function, Inverse Trigonometric Function, Logarithms, Sequence & Series, Limit, Continutity & Differentiability, Trigonometric Ratio & Identities, Method of Differentiation, Application of Derivative, Trigonometric Equation, Fundamental of Geometry, Indefinite Integration, Straight Line, Determinant, Definite Integration, Circle, Area Under The Curve, Differential Equation, Parabola, Ellipse, Hyperbola, Matrices, Permutation & Combination, Binomial Theorem, Vectors, Complex Number, 3-Dimensional Geometry, Relation, Statistics, Probability

#### **PHYSICS**

Basic Maths Used In Physics, Unit & Dimension, Vectors, Geometrical Optics, Kinematics - 1D, 2D, Electrostatics, Newton Laws of Motion, Friction, Gravitation, Circular Motion, Current Electricity, Work, Power, Energy, Capacitance, Center of Mass (Momentum & Collison), Magnetic Effect Of Current, Rotational Motion, Electromagnetic Induction (EMI), Elasticity, Thermal Expansion, Calorimetry & Heat Transfer, Alternating Current, KTG, Thermodynamics, Sound Wave, EM Waves, Wave Optics, Fluid Mechanics, Simple Harmonic Motion, Modern Physics, Error In Measurments & Instruments, Semiconductor

#### **CHEMISTRY**

Mole Concept & Eudiometry, Concentration Terms, Liquid Solution, Quantum Number & Electronic Configuration, Periodic Table & Periodic Properties, Chemical Kinetics, Chemical Bonding, Thermodynamics - 01, Thermochemistry, Thermodynamics - 02, Redox & Equivalent Concepts, Coordination Chemistry, Nomenclature & Common Names, Electronic Displacement Effects, Halogen Derivatives, Alcohol & Ether, Hydrocarbon, Electronic Displacement Effects, Acidic Strength & Basic Strength, Carbonyl Compound, Oxidation, Reduction, Aldol & Similar Name Reactions, Ionic Equilibrium, Electrochemistry, Atomic Structure, Salt Analysis, Heating Effect, Reactions of Salt Analysis, Chemical Equilibrium, d - Block Compounds, p -Block Element, f - Block Element, Isomerism, Purification & Characteristics Of Organic Compounds, Carboxylic Acids & Its Derivative, Alphatic Amines, Aromatic Compounds, Biomolecules, Practical Organic Chemistry, Separation **Techniques** 

#### **MATHEMATICS**

Sets, Numbers & Intervals, Fundamental of Algebra, Quadratic Equations, Function, Inverse Trigonometric Function, Logarithms, Sequence & Series, Limit, Continutity & Differentiability, Trigonometric Ratio & Identities, Method of Differentiation, Application Of Derivative, Trigonometric Equation, Fundamental Of Geometry, Indefinite Integration, Straight Line, Determinant, Definite Integration, Circle, Area Under The Curve, Differential Equation, Parabola, Ellipse, Hyperbola, Matrices, Permutation & Combination, Binomial Theorem, Vectors, Complex Number, 3-Dimensional Geometry, Relation, Statistics, Probability



#### PHYSICS

#### Section-1 (Class 11th Syllabus) PHYSICS

Section-1 (Class 11th Syllabus)

## BASIC MATHEMATICS USED IN PHYSICS & VECTORS, ALGEBRA:

Quadratic Equation ( Roots of quadratic equation, Solution by Factorization and by Shridharacharya Formula, Properties of roots (real, equal, imaginary etc), Application of Quadratic equation in physics), Binomial Theorem and binomial approximation, Logarithm and Exponents ( Laws of logarithms and exponents with applications / examples), Series ( Arithmetic Progression and its general term and Sum, Sum of first n Natural numbers, Geometrical Progression and its general term and Sum, Sum of infinite GP), Componendo & Dividendo rule.

**TRIGONOMETRY:** Angle & its measurement (Sexagesimal and Circular system), Trigonometric-ratios, Trigonometric identities, Four Quadrants & ASTC rule, T-ratios for general angles, Addition/ subtraction Formulae, Small angle Approximation, Ranges of T-functions.

**CO-ORDINATE GEOMETRY:** Define Origin, Axis or Axes, Coordinates of a point in a plane or space (2D or 3D), Distance Formula, Slope of a line and its interpretation, Graphs of commonly used functions (Straight line, Parabola, Circle, Ellipse, Hyperbola Including rectangular hyperbola, Sinusoidal functions (sine and cosine functions), Exponential functions.

**CALCULUS:** Differential calculus (Average rate of change and Instantaneous rate of change, Differentiation of commonly used functions, Rules of differentiation including Product and Quotient rules, Application of derivatives: Increasing and Decreasing nature, Maxima and Minima with geometrical/graphical explanation), Integral calculus (Integration is the reverse process of differentiation, Indefinite and Definite Integration, Integration of commonly used functions, Rules of Integration, Application of Integral calculus: Area under a curve and Average value of a continuous function in an interval).

**VECTORS:** Definition of scalar and vector quantities, Graphical representation of vectors, Notation of Vectors, Angle between two vectors, Types of Vectors (Unit vector, Null vector, Equal vectors and equality of vectors, opposite and Negative of a vector, Parallel and anti-parallel vectors, Co-planar vectors, axial vectors), Position and displacement vectors, Addition/subtraction of two vectors (Triangle law, Parallelogram law), Addition of many vectors (Polygon law),Unit vectors and their significance (Representation of vector in terms of unit vector in plane and in space), Resolution of a Vector into components i.e. Cartesian Components in two and three dimensions and Direction Cosines, Multiplication or

Division of a Vector by a Scalar (i.e. Real number), Scalar (Dot) product of two Vectors and component of a vector in the direction of another vector , Vector (Cross) product of two Vectors with its geometrical interpretation and Right hand rule for direction.

#### **UNIT AND MEASUREMENTS:**

Classification of Physical Quantities according to their dependency i.e. Fundamental (or Base) and Derived quantities, Need for measurement (Units of measurement), Systems of units (FPS, CGS, MKS, SI system of units and Supplementary units, fundamental and derived units, Some idea about Practical and Improper units), Standards of Length, mass and time measurements, Dimensions of physical quantities, Dimensional Formulae of important physical quantities, Dimensional analysis and its applications & its limitations, SI prefixes and general guidelines for using Symbols of SI units, Errors in measurement (Systematic, Random and Least count Errors), Absolute Error, Relative Error, Percentage Error and Combination of Errors, Significant figures and its rules for Arithmetic operations (i.e. addition, subtraction, multiplication and division), Rounding off the uncertain digits.

## KINEMATICS (Motion along a straight line and Motion in a Plane)

Motion and Rest with introduction of frame of reference, Variables of Translatory Motion (Position/ Displacement / Path length(Distance), Velocity/ Speed / Average Velocity / Average Speed, Acceleration / Average Acceleration), Relation among various variables of motion and their applications to variable acceleration, Equations of Motion with constant acceleration (scalar and vector forms), Motion along a straight line, velocity-time and position-time graphs for uniformly accelerated motion (graphical treatment), Motion under gravity, Free-fall, Motion in a plane with constant acceleration, Projectile Motion – Ground to Ground projection, Projection from a height (Horizontal projection), Relative Motion in one-dimensions, Relative Velocity in two dimensions (Rain-Man problem, River-Boat Problem & wind based questions)

#### **NEWTON'S LAWS OF MOTION AND FRICTION:**

Intuitive concept of force , Basic or Fundamental forces in nature , The law of Inertia, Newton's first law of motion ,Momentum and Newton's second law of motion; impulse , Newton's third law of motion , Common forces in mechanics-Weight, Normal reaction, Friction, Contact force, Tension in string , Free Body diagram, Equilibrium of concurrent forces-Lami's theorem, Motion of bodies in contact or connected by strings, Pulley systems , Frame of Reference-Inertial and Non Inertial Frames. Pseudo Force and its applications , Cause of Friction, Static and Kinetic friction , Laws of friction, Limiting Static and Kinetic friction coefficients, Angle of Friction, Angle of Repose , Rolling friction.



#### WORK, ENERGY & POWER:

Work done by a constant force (use of dot product) and variable force (use of definite integration i.e. area under the curve) , Kinetic energy , Work-energy theorem for a Constant and a Variable force, Concept of potential energy, conservative forces and non-conservative forces. Gravitational Potential Energy , Potential energy versus position graph and stable, unstable & neutral equilibrium , Spring force and Elastic Potential energy of a spring, Conservation of mechanical energy (kinetic and potential energies) , Power (Instantaneous and Average power).

#### **CENTRE OF MASS & COLLISIONS:**

Impulse of a force and Impulse-Momentum theorem, Idea about Impulsive forces, Law of conservation of linear momentum and its applications, Elastic and inelastic collisions in one and two dimensions (Head-on and Oblique collisions), Coefficient of restitution and line of impact, Expression of loss in Kinetic energy in inelastic collision, Centre of mass of discrete system: two-particle system and n-particle system, Centre of mass of continuous system: General formula, Centre of mass of symmetrical rigid bodies; centre of mass of uniform rod, Centre of mass of composite and truncated bodies.

#### **CIRCULAR MOTION:**

Kinematics of circular motion (Variables of motion (Angular Displacement, Angular Velocity, Angular acceleration), Relations among Angular Variables for constant angular acceleration , General relation among angular variables ) , Dynamics of uniform circular motion. Centripetal force, examples of circular motion (vehicle on level circular road, vehicle on banked road) , Dynamics of non-uniform circular motion (Motion in a vertical circle)

#### **ROTATIONAL MOTION**

Kinematics of Rotational Motion about a fixed axis: Comparison of linear and rotational motions, Moment of inertia, radius of gyration and its significance. Values of M.I. for simple geometrical objects (Ring, Rod and Disc with derivation and others with no derivation). Statement of parallel and perpendicular axes theorems and their applications, Moment of a force-torque, Equilibrium of rigid bodies, Angular momentum, Relation between torque and Angular momentum, Conservation of angular momentum with some examples, Pure Rolling or rolling motion on a smooth/rough horizontal surface. Expression for Rotational Kinetic Energy, Rolling motion on an inclined plane, Expression for acceleration and minimum friction coefficient.

#### **THERMAL PHYSICS:**

**Temperature and Thermal Expansion:** (Temperature, Temperature scales, Brief idea about thermometers, Thermal expansion; thermal expansion of solids, liquids, and gases.

Anomalous expansion)

**Calorimetry :** (Heat, Heat capacity, Specific heat capacity, Molar heat capacity, Water Equivalent, Heat of transformation – latent heat, Principle of Calorimetry, Heating curve, Phase diagram)

**Heat transfer Conduction:** (Process, Steady State, Law of Conduction, Thermal conductivity, Thermal resistance, Series and Parallel combinations of rods, Growth of ice on ponds), Convection: Process, Idea about Natural and Forced Convection, Radiation: Qualitative ideas of Black Body Radiation, Ideal Black Body, Absorptive Power, Emissive Power, Spectral Emissive Power, Kirchhoff's Law and its applications, Stefan's Law, Newton's law of cooling, Wien's displacement law and Green House effect, Solar constant.

**Thermodynamics:** Thermal equilibrium and definition of temperature (Zeroth law of Thermodynamics). Heat, work and internal energy. First law of thermodynamics. Cyclic, Isochoric, Isobaric, Isothermal and Adiabatic processes, Second law of the thermodynamics: Reversible and irreversible processes.

**Kinetic theory of gases:** Gas Laws, Equation of state of a perfect gas, Brief idea of van der Waals' equation and Critical temperature, Assumptions, Concept of pressure. Different types of speeds of gas molecules, Maxwell's velocity distribution curve, Kinetic energy and temperature; Degrees of freedom, Law of equipartition of energy (statement only) and application to specific heat capacities of gases; Concept of mean free path.

#### **GRAVITATION:**

The universal law of gravitation(Newton's law of Gravitation), Gravitational Field and its Intensity, Brief idea about Inertial and Gravitational mass, Acceleration due to gravity and its variation with altitude and depth. Idea about variation in g due to Shape and Rotation of earth, Gravitational potential energy and gravitational potential, Kepler's laws of planetary motion (The law of orbits, Areas and Periods), Motion of Planets and Satellites in Circular orbits, Orbital velocity of a satellite, Total Energy and Binding Energy of a satellite, Escape velocity and escape energy.

#### PROPERTIES OF MATTER AND FLUID MECHANICS:

Elastic behavior, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity, Poisson's ratio; elastic energy. Pressure, Pascal's law, Archimedes' Principle and Buoyancy. Floatation and Translatory equilibrium, Variation of Pressure with Depth, Atmospheric pressure and Gauge Pressure, Hydraulic Machines, Streamline and turbulent flow, Critical velocity and Reynolds's number, Principle of Continuity, Bernoulli's theorem and its applications. Speed of Efflux: Torricelli's law, Venturi-meter, Dynamic lift, Viscosity, Newton's law of viscous force, Stokes' law, terminal velocity, Surface energy and surface tension,







angle of contact, excess of pressure, application of surface tension ideas to drops, bubbles and capillary rise. Detergent and surface tension

#### **OSCILLATIONS (SHM):**

Periodic (harmonic) motion and Oscillatory motion, Periodic motion-period, frequency, displacement as a function of time, Periodic functions, Simple harmonic motion (SHM) and its equation; Velocity, Acceleration and Phase, Oscillations of a spring-restoring force and force constant. Equivalent spring constant of Series and parallel combinations, Energy in SHM –Kinetic and Potential energies, Simple pendulum-derivation of expression for its time period, Superposition of two SHMs of Same Frequency in the same direction.

#### **WAVE MOTION:**

Wave motion, Mechanical Waves, Longitudinal and transverse waves, Equation of Plane Progressive waves, Velocity of Transverse mechanical waves, Intensity of waves , Sound waves: Audible, Infrasonic and Ultrasonic waves , Speed of sound waves: Newton's formula and Laplace correction, Effect of temperature, Pressure and Humidity on speed of Sound waves , Some idea about description of sound waves as Displacement and Pressure waves, Characteristics of sound waves: Pitch, Loudness and Quality, Reflection and transmission of waves & Echo , Principle of superposition of waves, Interference and Beats, Stationary waves, Standing waves in strings and organ pipes, fundamental mode and harmonics. Resonance tube.

#### **EXPERIMENTAL SKILLS:**

Familiarity with the basic approach and observations of the experiments and activities:

- I. Vernier calipers-its use to measure the internal and external diameter and depth of a vessel.
- 2. Screw gauge-its use to determine thickness/ diameter of thin sheet/wire.
- 3. Simple Pendulum-dissipation of energy by plotting a graph between the square of amplitude and time.
- 4. Metre Scale the mass of a given object by the principle of moments.
- 5. Young's modulus of elasticity of the material of a metallic wire.
- 6. Surface tension of water by capillary rise and effect of detergents.
- 7. Co-efficient of Viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
- 8. Speed of sound in air at room temperature using a resonance tube.
- 9. Specific heat capacity of a given (i) solid and (ii) liquid by method of mixtures.

#### Section-2 (Class 12th Syllabus)

#### **ELECTROSTATICS:**

Electric charges and their basic properties, Conductors and Insulators, Method of charging: Charging by Friction, Charging by Induction and Charging by Conduction, Gold-leaf Electroscope, Coulomb's law-force, between two point charges, force, between multiple charges and Superposition principle, Equilibrium of charge systems and SHM, Electric field Intensity, electric field due to a point charge and a system of charges. Electric field due to an arc, Electric field on an axial point of Ring, Electric field lines and their properties, Electric flux, statement of Gauss's theorem and its applications to find field due to [Infinitely long straight wire, Uniformly charged infinite plane sheet, Uniformly charged thin spherical shell (field inside and outside)], Electric potential, Potential difference, Electric potential due to (A point charge, A system of charges, Ring(on an axial point), Conducting and non conducting sphere), Electrical potential energy of a system of two/more than two point charges, Equipotential surfaces, Relation between Field and Potential, Motion of charged particle in Electric Field, Electric dipole and dipole moment(Electric Potential due to a dipole, Electric field due to a dipole, Torque on a dipole in a uniform electric field, Electrical potential energy of electric diploes in an electrostatic field, Work done in rotating a dipole)

#### **CURRENT ELECTRICITY:**

Electric current, flow of electric charges in a metallic conductor, drift velocity and mobility, relaxation time and their relation with electric current and current density, Ohm's law, electrical resistance, V-I characteristics (liner and non-linear), Electrical resistivity and conductivity, Series and parallel combinations of resistors, Temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's laws (KCL and KVL) and simple applications, Wheatstone bridge, Meter Bridge, Moving coil galvanometer and its, Current sensitivity and voltage sensitivity, Conversion to ammeter and voltmeter, Electrical energy and power. Applications to Electric Bulbs and Heaters.

#### **CAPACITOR:**

Concept of Capacity, Capacitors and capacitance, Capacity of an Isolated Spherical Capacitor, Sharing of Charges, Capacitance of a parallel plate capacitor with and without dielectric medium between the plates, Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, Combination of capacitors in series and in parallel, Work done by Battery in charging of a capacitor. Energy stored in a capacitor, Charging and discharging of a Capacitor.



#### **MAGNETIC EFFECT OF CURRENT AND MAGNETISM:**

Concept of magnetic field, Oersted's experiment, Biot-Savart law and its application to current carrying circular loop and straight wire, Ampere's law and its applications to (Infinitely long straight wire, Straight and toroidal solenoids), Circular motion of a moving charged particle in uniform magnetic field, Force on a moving charge in uniform magnetic and electric fields (Lorentz force)(Velocity Selector), Force on a currentcarrying conductor in a uniform magnetic field, Force between two parallel current-carrying conductors-definition of ampere, Torque experienced by a current loop in a magnetic field, Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron, Bar Magnet(Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis, Torque on a magnetic dipole (bar magnet) in a uniform magnetic field, Bar magnet as an equivalent solenoid, Magnetic field lines), Magnetic properties of Materials(Diamagnetism with examples, Para magnetism with examples, Ferromagnetism with examples and brief analysis of magnetic Hysteresis.

#### **ELECTROMAGNETIC INDUCTION:**

Magnetic Flux, Electromagnetic induction(Faraday's Experiments), Faraday's law, Induced emf, induced, current and induced charge, Lenz's Law and its applications, Static, Dynamic and Rotational Emf, Induced Electric Field and its properties, Eddy currents, Self Induction(Coefficient of self induction (L), Growth and Decay of Current in L-R circuits), Mutual Induction(Coefficient of Mutual induction (M), Coefficient of Coupling (K)], AC generator, Transformer.

#### **ALTERNATING CURRENT:**

Alternating current and Voltage, Measurement of AC, Comparison between AC and DC, Peak, Average and RMS value of alternating current/ voltage, Circuit elements in ac circuits (Resistive Circuit, Capacitive Circuit, Inductive Circuit), RC, RL circuits and their Reactance & impedance in series and parallel combination, LCR series circuit, Resonance, Quality Factor, Power in AC circuits, Wattles Current, Power Factor.

#### **ELECTROMAGNETIC WAVES:**

Need for displacement current, Electromagnetic waves and their characteristics (qualitative ideas only), Transverse nature of electromagnetic waves, Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, x-rays, gamma rays) including elementary facts about their uses.

#### **RAY OPTICS AND OPTICAL INSTRUMENTS:**

Reflection of light(Laws of Reflection, Reflection at Plane Surface (Plane Mirror): Formation of Image, Deviation, Rotation of mirror, Number of images, velocity of image, Minimum length of mirror to see full image of a man, Field of view,

Reflection at Spherical Surface(Curved Mirror: Rules of image tracing, Image formation in concave and convex mirrors, Focal length of spherical mirrors, Relation between u,v and f (i.e. Mirror Equation for Para-axial rays), Sign convention, Magnification),Refraction of light at Plane Surface(Snell's law, Total internal reflection and its applications (Mirage, Looming, Diamond, prism and optical fibers),Optical Path, Lateral and normal shift],Refraction at spherical surfaces(single and double surface),Lenses( Thin lens formula, Lens-maker's formula, Magnification, Power of a lens, Combination of thin lenses in contact), Refraction and dispersion of light through a prism, combinations of prisms, Some Natural Phenomena due to Sunlight(Rainbow-dispersion of sun light and TIR) using lenses, Microscopes and telescopes (reflecting and refracting) and their magnifying powers)

#### **WAVEOPTICS:**

Wave front and Huygens' Principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygens' Principle, Coherent and incoherent sources, LASER(only qualitative idea), Superposition of Light Waves: Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light, Diffraction due to a single slit, width of central maximum, Polarisation, Polarisation by Scattering and Reflection, plane polarized light, Brewster's law, uses of plane polarized light and Polaroid's.

#### MODERN PHYSICS - I (Dual Nature of Radiation and Matter)

: Photoelectric effect(Hertz observation, Hallwach's and Lenard's observations, Einstein's photoelectric equationparticle nature of light (photon), Matter waves (Wave nature of particles, de Broglie relation,

**MODERN PHYSICS - II (Nuclei):** Nuclei (Composition and size of nucleus, Atomic masses, Isotopes, isobars, isotones and isodiapheres, Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, Nuclear fission and fusion, Nuclear reactor, Nuclear Force and its properties.

**MODERN PHYSICS - III (Atoms) :** Atoms(Alpha- particle scattering experiments; Rutherford's model of atom,Bohr model, energy levels, hydrogen spectrum),X-rays and their elementary idea.

#### **SEMICONDUCTOR AND DIGITAL ELECTRONICS:**

Classification of Metals, Conductors and Semi-conductors on the basis of(Conductivity, Intrinsic Semi-conductor,Extrinsic Semi-conductor (n-type and p-type),p-n Junction: p-n junction formation, Barrier potential, Semiconductor diode: I-V characteristics in forward and reverse bias, Application of Junction Diode as a Rectifier and Filter(only qualitative idea), Special purpose p-n junction diodes and their I-V characteristics (LED, Photodiode, Solar cell, Zener diode), Junction Breakdown: Zener and Avalanche breakdown, Zener diode as a voltage regulator, Digital Electronics and Logic gates(Law of Boolean algebra and De Morgan's Theorem, Basic Logic gates(OR gate, AND gate, NOT gate)(Combination of gates(NAND gate, NOR gate) Brief Idea about Ics)

#### **EXPERIMENTAL SKILLS:**

Familiarity with the basic approach and observations of the experiments and activities:

- 10. The resistivity of the material of a given wire using a metre bridge.
- 11. The resistance of a given wire using Ohm 's law.
- 12. Resistance and figure of merit of a galvanometer by half deflection method.
- 13. The focal length of;
  - (I) Convex mirror
  - (ii) Concave mirror, and
  - (iii) Convex lens, using the parallax method.
- 14. The plot of the angle of deviation vs angle of incidence for a triangular prism.
- 15. Refractive index of a glass slab using a travelling microscope.
- 16. Characteristic curves of a p-n junction diode in forward and reverse bias.
- 17. Characteristic curves of a Zener diode and finding reverse break down voltage.
- 18. Identification of Diode. LED,. Resistor. A capacitor from a mixed collection of such items.

#### **CHEMISTRY**

#### Section-1 (Class 11th Syllabus)

**SOME BASIC CONCEPTS OF CHEMISTRY:** Matter and its nature, Dalton's atomic theory: Concept of atom, molecule, element and compound: Laws of chemical combination; Atomic and molecular masses, mole concept, molar mass, percentage composition, empirical and molecular formulae: Chemical equations and stoichiometry.

**ATOMIC STRUCTURE**: Nature of electromagnetic radiation, photoelectric effect; Spectrum of the hydrogen atom. Bohr model of a hydrogen atom - its postulates, derivation of the relations for the energy of the electron and radii of the different orbits, limitations of Bohr's model; Dual nature of matter, de Broglie's relationship. Heisenberg uncertainty principle. Elementary ideas of quantum mechanics, quantum mechanics, the quantum mechanical model of the atom, its important features. Concept of atomic orbitals as one-electron wave functions: Variation of  $\Psi$  and  $\Psi^2$  with r for 1s and 2s orbitals: various quantum numbers (principle, angular momentum and magnetic quantum numbers) and their significance; shapes of s, p, and d - orbitals, electron spin and spin quantum number: Rules for filling electrons in orbitals - Aufbau principle. Pauli's exclusion principle and Hund's rule, electronic configuration of elements, extra stability of half-filled and completely filled orbitals.

**CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES:** Modern periodic law and present form of the periodic table. s, p, d and f block elements - periodic trends in properties of elements atomic and ionic radii. ionization enthalpy, electron gain enthalpy, valence, oxidation states and chemical reactivity.

**CHEMICAL BONDING AND MOLECULAR STRUCTURE:** Kossel - Lewis approach to chemical bond formation, the concept of ionic and covalent bonds.

**lonic Bonding:** Formation of ionic bonds, factors affecting the formation of ionic bonds; calculation of lattice enthalpy.

**Covalent Bonding :** Concept of electronegativity. Fajan's rule, dipole moment : Valence Shell Electron Pair Repulsion (VSEPR) theory and shapes of simple molecules.

**Quantum mechanical approach to covalent bonding:** Valence bond theory - its important features, the concept of hybridization involving s, p, and d orbitals; Resonance.

**Molecular orbital Theory:** Its important features, LCAOs, types of molecular orbitals (bonding, anti bonding), sigma and pi-bonds, molecular orbital electronic configurations of homonuclear diatomic molecules, the concept of bond order, bond length, and bond energy. Elementary idea of metallic bonding. Hydrogen bonding and is applications.

CHEMICAL THERMODYNAMICS: Fundamentals of thermodynamics: System and surroundings, extensive and



intensive properties, state functions, types of processes.

**The first law of thermodynamics:** Concept of work, heat internal energy and enthalpy, heat capacity, molar heat capacity; Hess's law of constant heat summation; Enthalpies of bond dissociation, combustion, formation, atomization, sublimation, phase transition, hydration, ionization, and solution.

**The second law of thermodynamics:** Spontaneity of processes; DS of the universe and DG of the system as criteria for spontaneity. DG° (Standard Gibbs energy change) and equilibrium constant.

**EQUILIBRIUM:** Meaning of equilibrium, the concept of dynamic equilibrium.

**Equilibria involving physical processes:** Solid-liquid, liquid gas and solid-gas equilibria, Henry's law. General characteristics of equilibrium involving physical processes.

**Equilibrium involving chemical processes:** Law of chemical equilibrium, equilibrium constants (Kp and Kc) and their significance, the significance of DG and DG° in chemical equilibrium, factors affecting equilibrium concentration, pressure, temperature, the effect of catalyst; Le Chatelier's principle.

**lonic equilibrium:** Weak and strong electrolytes, ionization of electrolytes, various concepts of acids and bases (Arrhenius. Bronsted - Lowry and Lewis) and their ionization, acid-base equilibria (including multistage ionization) and ionization constants, ionization of water. pH scale, common ion effect, hydrolysis of salts and pH of their solutions, the solubility of sparingly soluble salts and solubility products, buffer solutions.

**REDOX REACTIONS:** Electronic concept of oxidation and reduction, redox reactions, oxidation number, balancing of redox reactions.

**SOME BASIC PRINCIPLES OF ORGANIC CHEMISTRY: Tetravalency of carbon:** Shapes of simple molecules - hybridization (s and p): Classification of organic compounds based on functional groups: and those containing halogens, oxygen. nitrogen. and sulphur; Homologous series: Isomerism-structural and stereoisomerism.

#### Nomenclature (Trivial and IUPAC)

Covalent bond fission - Homolytic and heterolytic: free radicals, carbocations and carbanions; Stability of carbocations and free radicals, electiophiles, and nucleophiles.

**Electronic displacement in a covalent bond :** Inductive effect, electromeric effect, resonance and hyperconjugation.

**Common types of organic reactions :** Substitution, addition, elimination and rearrangement.

**Purification and Characterisation Of Organic Compounds Purification :** Crystallization, sublimation, distillation, differential extraction and chromatography - principles and their applications.

**Qualitative analysis -** Detection of nitrogen, sulphur, phosphorus and halogens.

 $\label{thm:continuous} Quantitative \ analysis \ (basic \ principles \ only) \ - \ Estimation \ of \ carbon, hydrogen, nitrogen, halogens, sulphur, phosphorus.$ 

Calculations of empirical formulae and molecular formulae : Numerical problems in organic quantitative analysis.

**HYDROCARBONS:** Classification, isomerism, IUPAC nomenclature, general methods of preparation, properties, and reactions.

**Alkanes -** Conformations: Sawhorse and Newman projections (of ethane): Mechanism of halogenation of alkanes.

**Alkenes** - Geometrical isomerism: Mechanism of electrophilic addition: addition of hydrogen, halogens, water, hydrogen halides (Markownikoffs and peroxide effect): Ozonolysis and polymerization.

**Alkynes -** Acidic character: Addition of hydrogen, halogens, water and hydrogen halides. Polymerization.

**Aromatic hydrocarbons -** Nomenclature, benzene - structure and aromaticity: Mechanism of electrophilic substitution: halogenation, nitration.

**Friedel -** Craft's alkylation and acylation, directive influence of the functional group in mono-substituted benzene.

#### Section-2 (Class 12th Syllabus)

**CHEMICAL KINETICS:** Rate of a chemical reaction, factors affecting the rate of reactions: concentration, temperature, pressure, and catalyst; elementary and complex reactions, order and molecularity of reactions, rate law, rate constant and its units, differential and integral forms of zero and first-order reactions, their characteristics and half-lives, the effect of temperature on the rate of reactions. Arrhenius theory, activation energy and its calculation, collision theory of bimolecular gaseous reactions (no derivation).

**SOLUTIONS:** Different methods for expressing the concentration of solution - molality, molarity, mole fraction, percentage (by volume and mass both), the vapour pressure of solutions and Raoult's law - Ideal and non-ideal solutions, vapour pressure - composition, plots for ideal and non-ideal solutions; colligative properties of dilute solutions - a relative lowering of vapour pressure, depression of freezing point, the elevation of boiling point and osmotic pressure; Determination of molecular mass using colligative properties; Abnormal value of molar mass, van't Hoff factor and its significance.

**ELECTROCHEMISTRY:** Electrolytic and metallic conduction, conductance in electrolytic solutions, molar conductivities and their variation with concentration: Kohlrausch's law and its applications.

**Electrochemical cells** - Electrolytic and Galvanic cells, different types of electrodes, electrode potentials including standard-electrode potential, half-cell and cell reaction, emf of a Galvanic cell and its measurement: Nernst equation and it's applications;



Relationship between cell potential and Gibbs' energy change: Dry cell and lead accumulator, Fuel cells.

#### p-BLOCK ELEMENTS:

#### **Group 13 to Group 18 Elements**

**General Introduction:** Electronic configuration and general trends in physical and chemical properties of elements across the periods and down the groups; unique behaviour of the first element in each group.

**CO-ORDINATION COMPOUNDS:** Introduction to co-ordination compounds. Werner's theory; ligands, coordination number, denticity. chelation; IUPAC nomenclature of mononuclear co-ordination compounds, isomerism; Bonding-Valence bond approach and basic ideas of Crystal field theory, colour and magnetic properties; importance of co-ordination compounds (in qualitative analysis, extraction of metals and in biological systems).

#### dandf Block Elements: Transition Elements

General introduction, electronic configuration, occurrence and characteristics, general trends in properties of the first-row transition elements - physical properties, ionization enthalpy, oxidation states, atomic radii, colour, catalytic behaviour, magnetic properties, complex formation, interstitial compounds, alloy formation; Preparation, properties, and uses of  $K_2Cr_2O_7$ , and  $KMnO_4$ .

#### **Inner Transition Element:**

**Lanthanoids -** Electronic configuration, oxidation states, and lanthanoid contraction.

**Actinoids -** Electronic configuration and oxidation states.

#### ORGANIC COMPOUNDS CONTAINING HALOGENS:

General methods of preparation, properties and reactions; Nature of C-X bond: Mechanisms of substitution reactions.

Uses; Environmental effects of chloroform, iodoform freons and  $\ensuremath{\mathsf{DDT}}$ 

#### **ORGANIC COMPOUNDS CONTAINING OXYGEN:**

General methods of preparation, properties, reactions, and

#### **ALCOHOLS, PHENOLS, AND ETHERS:**

**Alcohols :** Identification of primary. secondary. and tertiary alcohols: mechanism of dehydration.

**Phenols:** Acidic nature, electrophilic substitution reactions: halogenation nitration and sulphonation. Reimer - Tiemann reaction.

Ethers: Structure.

**Aldehyde and Ketones:** Nature of carbonyl group; Nucleophilic addition to >C=O group, relative reactivities of aldehydes and ketones; Important reactions such as -Nucleophilic addition reactions (addition of HCN, NH3, and its derivatives), Grignard reagent.

**Oxidation:** reduction (Wolf Kishner and Clemmensen); the acidity of a-hydrogen, aldol condensation, Cannizzaro reaction.

Haloform reaction, Chemical tests to distinguish between aldehydes and Ketones.

#### **ORGANIC COMPOUNDS CONTAINING NITROGEN:**

General methods of preparation, Properties, reactions and uses.

**Amines:** Nomenclature, classification structure, basic character, and identification of primary, secondary, and tertiary amines and their basic character.

**Diazonium Salts:** Importance in synthetic organic chemistry.

**Biomolecules :** General introduction and importance of biomolecules.

**CARBOHYDRATES** - Classification; aldoses and ketoses: monosaccharides (glucose and fructose) and constituent monosaccharides of oligosaccharides (sucrose, lactose, and maltose).

**PROTEINS** - Elementary Idea of a-amino acids, peptide bond, polypeptides, Proteins: primary, secondary, tertiary and quaternary structure (qualitative idea only), denaturation of proteins, enzymes.

**VITAMINS** - Classification and functions.

**NUCLEIC ACIDS** - Chemical constitution of DNA and RNA. Biological functions of nucleic acids.

Hormones (General introduction)

#### PRINCIPLES RELATED TO PRACTICAL CHEMISTRY:

Detection of extra elements (Nitrogen, Sulphur. halogens) in organic compounds; Detection of the following functional groups: hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketones) carboxyl, and amino groups in organic compounds.

- The chemistry involved in the preparation of the following : **Inorganic compounds :** Mohr's salt, potash alum.
  - **Organic compounds:** Acetanilide, p-nitro acetanilide, aniline yellow, iodoform.
- The chemistry involved in the titrimetric exercises -Acids, bases and the use of indicators, oxalic- acid vs KMnO<sub>4</sub>, Mohr's salt vs KMnO<sub>4</sub>.
- Chemical principles involved in the qualitative salt analysis:

Cations  $Pb^{2+}$ ,  $Cu^{2+}$ ,  $Al^{3+}$ ,  $Fe^{3+}$ ,  $Zn^{2+}$ ,  $Ni^{2+}$ ,  $Ca^{2+}$ ,  $Ba^{2+}$ ,  $Mg^{2+}$ ,  $NH_4^+$ , Anions —  $Co_3^2$ ,  $S^2$ ,  $So_4^2$ ,  $NO^3$ ,  $No^2$ , Cl, Br, l, (Insoluble salts excluded)

Chemical principles Involved in the following experiments :

- 1. Enthalpy of solution of CuSO<sub>4</sub>
- 2. Enthalpy of neutralization of strong acid and strong base.
- 3. Preparation of lyophilic and lyophobic sols.
- 4. Kinetic study of the reaction of iodide ions with hydrogen peroxide at room temperature.



#### **BIOLOGY**

#### Section-1 (Class 11th Syllabus)

**Diversity in Living World: The living world:** What is living?; Biodiversity; Need for classification; Taxonomy & Systematics; Concept of species and taxonomical hierarchy; Binomial nomenclature.

**Biological Classification:** Five kingdom classification; salient features and classification of Monera; Protista and Fungi into major groups; Lichens; Viruses and Viroids. Prokaryotic Cell (Bacteria).

**Plant Kingdom:** Salient features and classification of plants into major groups-Algae, Bryophytes, Pteridophytes, Gymnosperms (three to five salient and distinguishing features and at least two examples of each category).

**Structural Organisation in Plants:** Morphology and modifications, Tissues, Anatomy and functions of different parts of flowering plants: Root, Stem, Leaf, Inflorescence, Cymose and racemose, flower, Fruit and seed (To be dealt along with the relevant practical of the Practical Syllabus) & Families (Malvaceae, Cruciferae, leguminoceae, compositae, graminae).

**Anatomy of flowering plants:** Anatomy and function of different tissues, tissue system, internal structure of Root, Stem, Leaf, secondary Growth.

**Cell Structure and Function:** Cell theory and cell as the basic unit of life; Structure of prokaryotic and eukaryotic cell; Plant cell and animal cell; Cell envelope, cell membrane, cell wall; Cell organelles-structure and function; Endomembrane systemendoplasmic reticulum, Golgi bodies, lysosomes, vacuoles; mitochondria, ribosomes, plastids, micro bodies; Cytoskeleton, cilia, flagella, centrioles (ultra structure and function); Nucleusnuclear membrane, chromatin, nucleolus.

**Cell division:** Cell cycle, mitosis, meiosis and their significance.

**Biomolecules-structure** and function of proteins, carbohydrates, lipids, nucleic acids.

**Photosynthesis** in higher plants as a means of Autotrophic nutrition; Site of photosynthesis take place; pigments involved in Photosynthesis (Elementary idea); Photochemical and biosynthetic phases of photosynthesis; Cyclic and non cyclic and photophosphorylation; Chemiosmotic hypothesis; Photorespiration C<sub>3</sub> and C<sub>4</sub> pathways; Factors affecting photosynthesis.

**Respiration in plants:** Exchange of gases; Cellular respiration-glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); The respiratory balance sheet,

Energy relation - Number of ATP molecule generated, Amphibolic pathways; Respiratory quotient.

Enzymes- types, properties, enzyme action, classification and nomenclature of enzymes.

**Plant Growth and Development:** Seed germination; Phases of Plant growth and plant growth rate; Conditions of growth; Differentiation, dedifferentiation and redifferentiation; Sequence of developmental process in a plant cell; Growth regulators-auxin,gibberellin, cytokinin, ethylene, ABA.

**Animal Kingdom:** Salient features and classification of animals-nonchordate up to phyla level. Salient features and classification of animals-chordate up to classes level (Three to five salient features and at least two examples).

**Structural Organisation in Animals :** Animal tissues; Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect Frog.

**Breathing and Exchange of Gases:** Respiratory organs in animals (recall only); Respiratory system in humans; Mechanism of breathing and its regulation in humans-Exchange of gases, transport of gases and regulation of respiration; Respiratory volumes; Disorders related to respiration-Asthma, Emphysema, Occupational respiratory disorders.

**Body Fluids and Circulation :** Composition of blood. Composition of lymph and its function; blood groups, blood corpuscles:

Human circulatory system-Structure of human heart and blood vessels; Cardiac cycle, cardiac output. ECG. Double circulation: Regulation of cardiac activity; Disorders of circulatory system-Hypertension. Coronary artery disease, Angina pectoris, Heart failure.

**Excretory Products and their Elimination:** Modes of excretion Ammonotelism, ureotelism, uricotelism; Human excretory system structure and fuction; Urine formation, Osmoregulation; Regulation of kidney function-Reninangiotensin, Atrial Natriuretic Factor, ADH and Diabetes insipidus; Role of other organs in excretion; Disorders; Uraemia, Renal failure, Renal calculi, Nephritis; Dialysis, artificial kidney.

**Neural Control and Coordination:** Neuron and nerves; Nervous system in humans - central nervous system, peripheral nervous system and visceral nervous system; Generation and conduction of nerve impulse.

**Chemical Coordination and Integration:** Endocrine glands and hormones; Human endocrine system-Hypothalamus,





Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary Idea); Role of hormones as messengers and regulators, Hypo-and hyperactivity and related disorders (Common disorders e.g. Dwarfism, Acromegaly, Cretinism, goitre, exopthalmic goitre, diabetes, Addison's disease).

**Locomotion and Movement :** Types of movement- ciliary, flagellar, muscular; Skeletal muscle- contractile proteins and muscle contraction; Skeletal system and its functions (To be dealt with the relevant practical of Practical syllabus); Joints; Disorders of muscular and skeletal system-Myasthenia gravis, Tetany, Muscular dystrophy, Arthritis, Osteoporosis, Gout.

#### Section-2 (Class 12th Syllabus)

**Sexual Reproduction in Flowering Plants:** Flower structure; Development of male and female gametophytes; Pollination-types, agencies and examples; Out breeding devices, Pollen-Pistil interaction; Double fertilization; Post fertilization events-Development of endosperm and embryo, Development of seed and formation of fruit; Special modes-apomixis, parthenocarpy, polyembryony; Significance of seed and fruit formation.

GENETICS: Principles of Inheritance and variation: Mendelian Inheritance; Deviations from Mendelism-Incomplete dominance, Co-dominance, Multiple alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination-In humans, birds, honey bee; Linkage and crossing over; Sex linked inheritance-Haemophilia, Colour blindness; Mendelian disorders in humans-Thalassemia; Chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes, Mutation (Hardy-weinberg's principle), population genetics.

**Molecular Basis of Inheritance:** Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; Transcription, genetic code, translation; Gene expression and regulation-Lac Operon; Genome and human genome project; DNA finger printing, **protein biosynthesis.** 

**Biotechnology:** Principles and process of Biotechnology: Genetic engineering (Recombinant DNA technology).

**Biotechnology and Its Applications:** Application of Biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; Genetically modified organisms-Bt crops; Transgenic Animals; Biosafety issues-Biopiracy and patents, **Tissue culture.** 

**Microbes in human welfare:** In household food processing, industrial production, sewage treatment, energy generation and microbes as biocontrol agents and biofertilizers.

**Ecology and environment & Demography:** Organisms and environment: Population interactions-mutualism, competition, predation, parasitism; Population attributesgrowth, birth rate and death rate, age distribution.

**Ecosystem:** Patterns, components; productivity and decomposition; Energy flow; Pyramids of number, biomass, energy.

**Biodiversity and its Conservation :** Concept of Biodiversity; Patterns of Biodiversity; Importance of Biodiversity; Loss of Biodiversity; Biodiversity conservation; Hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, National parks and sanctuaries, Sacred groves.

**Human Reproduction:** Male and female reproductive systems; Microscopic anatomy of testis and ovary; Gametogenesis-spermatogenesis & oogenesis; Menstrual cycle; Fertilisation, embryo development upto blastocyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementaryidea).

**Reproductive Health:** Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control-Need and Methods, Contraception and Medical Termination of Pregnancy (MTP); Amniocentesis; Infertility and assisted reproductive technologies – IVF, ZIFT, GIFT (Elementary idea for general awareness).

**Origin And Evolution:** Origin ot life; Biological evolution and evidences for biological evolution mom Paleontology, comparative anatomy, embryology and molecular evidence; Darwin's contribution. **Neodarwinism (Gene flow. genetic drift),** Hardy weinberg's principle, Modern Synthetic theory' of Evolution, Genetic basis of adaptation, Modern synthetic theory of evolution.

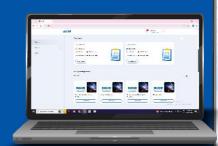
Mechanism of evolution - Variation and Natural Selection types of natural, Adaptive Radiation; **Species, Speciation,** Human evolution.

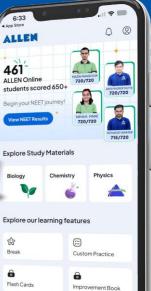
**Biology and Human Welfare : Health and Disease;** Pathogens; parasites causing human diseases (Malaria, Dengue, Chikungunya, Filariasis, Ascariasis. Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology-vaccines; Cancer, HIV and AIDS; Adolescence, drug and alcohol abuse, **Tobacco abuse.** 

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