ALLEN CAREER INSTITUTE KOTA (RAJASTHAN)

MAJOR TEST PLAN FOR LEADER & ACHIEVER : (PLAN-A)
(MLA, MAZA, MAZB, MAZC, MAZD, MAAX, MAAY, MAPA, LAKSHYA)
(Session : 2024-2025)

TEST NO.	TEST DATE	DAY	SYLLABUS
1	24/02/2025	MONDAY	SYLLABUS -1
2	01/03/2025	SATURDAY	SYLLABUS -2
3	06/03/2025	THURSDAY	SYLLABUS -3
4	11/03/2025	TUESDAY	SYLLABUS -4
5	16/03/2025	SUNDAY	SYLLABUS -5
6	21/03/2025	FRIDAY	SYLLABUS -6
7	25/03/2025	TUESDAY	SYLLABUS -1 + 2
8	29/03/2025	SATURDAY	SYLLABUS -3 + 4
9	02/04/2025	WEDNESDAY	SYLLABUS -5 + 6
10	06/04/2025	SUNDAY	FULL SYLLABUS (A.I.O.T)
11	08/04/2025	TUESDAY	SYLLABUS -1 + 2 + 3
12	11/04/2025	FRIDAY	SYLLABUS -4 + 5 + 6
13	14/04/2025	MONDAY	FULL SYLLABUS
14	17/04/2025	THURSDAY	FULL SYLLABUS
15	20/04/2025	SUNDAY	FULL SYLLABUS (A.I.O.T)
16	22/04/2025	TUESDAY	FULL SYLLABUS
17	25/04/2025	FRIDAY	FULL SYLLABUS
18	28/04/2025	MONDAY	FULL SYLLABUS
19	01/05/2025	THURSDAY	FULL SYLLABUS

SYLLABUS	PHYSICS	CHEMISTRY	BIOLOGY
SYLLABUS 1	Physics and Measurement, Kinematics, Laws of Motion, Work, Energy and Power **Experimental Skills :** * Vernier Calipers-Its use to measure the internal and external diameter and depth of a vessel. * Screw Gauge-Its use to determine thickness/ diameter of thin sheet/wire.	Some basic concepts of chemistry, Equilibrium, Chemical Thermodynamics, Redox reactions	The Living world, Biological classification, Plant kingdom, Structural organisation in animals (Animal Tissue), Animal kingdom, Cockroach, Frog
SYLLABUS 2	Center of mass and collision, Circular motion, Rotational motion, Gravitation, Properties of solids and liquids. **Experimental Skills :** * Young'S modulus of elasticity of the material of a metallic wire. * Surface tension of water by Capillary rise and effect of detergents, * Co-efficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.	Atomic structure, Classification of elements and periodicity in properties, Chemical bonding & Molecular structure	**Cell :** The unit of life, Cell cycle and cell division, Biomolecules, Enzyme, Excretory products and their elimination (Excretory System) Breathing and exchange of gases (Respiratory System) Body fluids and circulation (Circulatory System)
SYLLABUS 3	Thermodynamics, Kinetic theory of gases, Oscillations and Waves **Experimental Skills :** * Simple pendulum-dissipation of energy by plotting a graph between the square of amplitude and time. * Metre scale - the mass of a given object by the principle of moments. * Speed of sound in air at room temperature using a resonance tube, * Specific heat capacity of a given (I) Solid and (II) Liquid by method of mixtures.	Some basic principles of organic chemistry, Hydrocarbons, Purification and characterisation of organic compounds.	Photosynthesis in higher plants, Plant growth and development, Respiration in plants, Neural control and co-ordination (Nervous System), Chemical co-ordination and integration (Endocrine System), Locomotion and movement (Muscles, Skeletal System)
SYLLABUS 4	Electrostatics & Capacitor, Current Electricity, **Experimental Skills :** * The resistivity of the material of a given wire using a metre bridge. * The resistance of a given wire using Ohm'S Law. * Resistance and figure of merit of a Galvanometer by Half Deflection Method.	Chemical Kinetics, Solutions, Electrochemistry, Principles related to Pratical Chemistry :- The chemistry involved in the titrimetric exercises-Acids, Bases and the use of indicators, oxalic acid vs $KMnO_4$, Mohr's salt vs $KMnO_4$. Chemical principles involved in the following experiments. 1. Enthalpy of solution of $CuSO_4$. 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.	Sexual reproduction in flowering plants, Morphology of flowering plants, Anatomy of flowering plants, Human reproduction, Reproductive health
SYLLABUS 5	Magnetic effects of current and magnetism, Electromagnetic induction and Alternating currents, Electromagnetic waves	p-block elements, d & f-block elements, Coordination compounds. **Principles Related to Pratical Chemistry :-** 1. The chemistry involved in the preparation of inorganic compound; Mohr's salt, potash alum. 2. Chemical principles involved in the qualitative salt analysis. 3. Cation – Pb^{2+}, Cu^{+2}, Al^{3+}, Fe^{3+}, Zn^{+2}, Ni^{2+} Ca^{2+}, Ba^{2+}, Mg^{2+}, NH^{4+} 4. Anions – CO_3^{2-}, S^{2-}, SO_4^{2-}, NO^{2-}, Cl^-, Br^-, I^- (Insoluble Salt Excluded)	Principles of inheritance and variation, Molecular basis of inheritance, Microbes in human welfare, **Biotechnology :** Principles and processes, Biotechnology and its applications
SYLLABUS 6	Optics, Dual nature of matter and radiation, Atoms and nuclei, Electronic devices **Experimental Skills :** * The focal length of ; (I) Convex mirror (II) Concave mirror (III) Convex lens, Using the parallax method. * The plot of the angle of deviation Vs angle of incidence for a triangular prism. * Refractive index of a glass slab using a travelling microscope. * Characteristic curves of a P-N junction diode in forward and reverse bias. * Characteristic curves of a zener diode and finding reverse break down voltage. * Identification of diode, Led, Resistor, A Capacitor from a mixed, Collection of such items.	Organic Compounds Containing Halogens, Organic Compounds Containing Oxygen, Organic Compounds Containing Nitrogen, Biomolecules **Principles Related to Pratical Chemistry :-** 1. Detection of extra elements (Nitrogen, Sulphur, halogens) in organic compounds. 2. Detection of the hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketones) , carboxyl and amino Functional groups in organic compounds. 3. The chemistry involved in the preparation of Acetanilide , p-nitro, acetanilide, aniline yellow and iodoform.	Organisms and Populations, Ecosystem, Biodiversity and Conservation, Demography, Biology in human welfare : Human Health and Disease, Origin and Evolution

Note : All tests will be available in Both ONLINE & OFFLINE modes.