

TEST SERIES (2019- 2021) SCHEDULE

DATE	DAY	SCHEDULE
SGTA-1 SYLLABUS	MAT	<p>Logarithms, Quadratic equations: i) Relation between roots and coefficients ii) Location of roots iii) Common root Sequences and Series: A.P,G.P,H.P,A.G.P Complex numbers: i) Triangle inequality ii) Geometry and locus based questions. iii) Modulus and argument based questions. Matrices and Determinants: i) Transpose of a matrix ii) Inverse of a matrix iii) Symmetric, skew symmetric, orthogonal matrix iv) Determinant of a matrix v) Solutions of simultaneous linear equations in two or three variables. Binomial theorem: Binomial expansion with positive integral index.</p>
	PHY	<p>Mechanics: Kinematics in one and two dimensions (Cartesian coordinates only), projectiles; Uniform circular motion; Relative velocity. Newton's laws of motion; Inertial and uniformly accelerated frames of reference; Static and dynamic friction; Kinetic and potential energy; Work and power; Conservation of linear momentum and mechanical energy. Systems of particles; Centre of mass and its motion; Impulse; Elastic and inelastic collisions. Rigid body, moment of inertia, parallel and perpendicular axes theorems, moment of inertia of uniform bodies with simple geometrical shapes; Angular momentum; Torque; Conservation of angular momentum; Dynamics of rigid bodies with fixed axis of rotation; Rolling without slipping of rings, cylinders and spheres; Equilibrium of rigid bodies; Collision of point masses with rigid bodies.</p>
	CHEM	<p>Stoichiometry: Balanced chemical equations, Calculations (based on mole concept) involving common oxidation reduction, neutralisation, concentration in terms of mole fraction, molarity, molality and normality. Gaseous State:Kinetic theory of gases, average, root mean square and most probable velocities and their relation with temperature; Law of partial pressures. Atomic structure:Bohr model, spectrum of hydrogen atom, quantum numbers; Broglie hypothesis; GOC:Resonance and hyperconjugation, keto-enol tautomerism; resonance effect on acidity and basicity of organic acids and bases; formation structure and stability of carbocations, carbanions and free radicals. Isomerism:Structural and geometrical isomerism, Optical isomerism of compounds containing up to two asymmetric centres, (R, S and E,Z nomenclature excluded); Conformations of ethane and butane (Newman projections) Chemical Bonding:Orbital overlap and covalent bond; hybridisation involving s, p and d orbitals only; orbital energy diagrams for homonuclear diatomic species; hydrogen bond; polarity in molecules, dipole moment (qualitative aspects only); VSEPR model and shapes of molecules (linear, angular, triangular, square planar, pyramidal, square pyramidal, trigonal bipyramidal, tetrahedral and octahedral). d-Block:Oxidation states and their stabilities, colour calculation of spin-only magnetic moment:</p>
SGTA-2 SYLLABUS	MAT	<p>PERMUTATIONS & COMBINATIONS: Linear permutations, circular permutations, Combinations, Number of divisors, Division into groups, Principle of inclusion, exclusion PROBABILITY: Conditional probability, Independent and mutually, exclusive events, Baye's theorem VECTORS: Addition of vectors, Dot product, Cross product, Scalar triple product Vector equations 3D: Direction ratios and direction cosines, Equation of straight line, Equation of plane, System of planes</p>
	PHY	<p>Law of gravitation ; Gravitational potential and field ; Acceleration due to gravity ; Motion of planets and satellites in circular orbits ; Escape velocity. Linear and angular simple harmonic motions. Hooke's law, Young's modulus. Pressure in a fluid ; Pascal's law ; Buoyancy ; Surface energy and surface tension, capillary rise, Viscosity (Poiseuille's equation excluded), Stoke's law ; Terminal velocity, Streamline flow, equation of continuity, Bernoulli's theorem and its applications. Wave motion (plane wave only), longitudinal and transverse waves, superposition of waves ; Progressive and stationary waves ; Vibration of strings and air columns ; Resonance ; Beats ; Speed of sound in gases ; Doppler effect (in sound)]. Thermal physics : Thermal expansion of solids, liquids and gases, Calorimetry, latent heat ; Heat conduction in one dimension ; Elementary concepts of convection and radiation ; Newton's law of cooling ; Ideal gas laws ; Specific heats (Cv and Cp for monoatomic and diatomic gases) ; Isothermal and adiabatic processes, bulk modulus of gases; Equivalence of heat and work, First law of thermodynamics and its applications (only for ideal gases), Black body radiation ; absorptive and emissive powers ; Kirchhoff's law , Wien's displacement law, Stefan's law.</p>
	CHEM	<p>Thermodynamics: Internal energy, work and heat, pressure-volume work ;Ethalpy Hess's law ; Heat of reaction, fusion and vapourization ;Free energy ; Criterion of spontaneity. Equilibrium: Equilibrium constant, Le Chatelier's Principle (effect of concentration, (temperature and pressure) ; Significance of and in chemical equilibrium ;solubility product, pH and buffer solutions ; Acids and bases (Bronsted and Lewis concept) ; Hydrolysis of salts. Group - 13: Boron : diborane, boric acid and borax ; Group -14: Silicones, silicates, allotropes of carbon (only diamond and graphite) Hydrocarbon: Halogenation of alkanes ; Preparation of alkanes by Wurtz reaction and decarboxylation reactions. Acid catalysed hydration of alkenes.Reactions of alkenes with KMnO4 and ozone ; Reduction of alkenes and alkynes ; Preparation of alkenes and alkynes by elimination reactions ; Electrophilic addition reactions of alkenes with X2, HX, HOX and H2O (X= halogen) ; Nuclear chemistry: Radioactivity : i)Kinetic of radioactive decay (decay series excluded), Stability of nuclei with respect to proton neutron ratio ; Benzene : Aromaticity ; Electrophilic substitution reactions : halogenation, nitration, sulphonation, Friedel-Crafts alkylation and acylation ; Effect of , m- and p-directing Alkyl and aryl halides Alkyl and Aryl halides: Alkyl halides ; rearrangement reactions of alkyl carbocation, Grignard reactions, nucleophilic substitution reactions.Haloarenes ; nucleophilic aromatic substitution in haloarenes and substituted haloarenes (excluding Benzene mechanism and Cine</p>
UTM-3 SYLLABUS	MAT	<p>CORE SYLLABUS: 1) Complete Coordinate geometry 2) Complete Trigonometry EXTRA SYLLABUS: 1) Sets & Relations</p>
	PHY	<p>CORE SYLLABUS: 1) Electrostatics 2) Gases law 3) Capacitors 4) Current Electricity 5) Electro magnetism 6) EMI & AC EXTRA SYLLABUS: 1) Classical magnetism 2) Magnetic Materials 3) Cyclotron 4) Color code of resistor</p>
	CHEM	<p>CORE SYLLABUS: 1) Chemical kinetics 2) Liquid solution 3) Surface chemistry 4) Coordination compounds 5) Metallurgy 6) Alcohol, Phenol, Ether 7) Carbonyl compounds 8) Polymers EXTRA SYLLABUS: 1) Chemistry in every day life</p>
	MAT	<p>Straight Lines: Equation of straight line in various forms, Distance of a point from a line, Image of a point w.r.t line, Lines through the point of intersection of two given lines, Angle between lines Circle : Equation of circle in various forms, Equation of tangent, normal, chord, Equation of circle through the points of inter section of two circle and those of a circle and straight line Parabola, Ellipse, Hyperbola: Equations in various forms, Equation of tangents and normal Trigonometry: Trigonometry functions: Periodicity and graphs, Formulae involving multiple and sub-multiple angles, Transformations, General solutions, Sine rule, cosine rule, Half angle formula, Area of triangle Inverse, Trigonometric functions (Principle value only)</p>

SGTA-3 SYLLABUS	PHY	<p>Electricity and magnetism: Coulomb's law ; Electric field and potential ; Electric potential energy of a system of point charges and of electrical dipoles in a uniform electrostatic field, Electric field lines, Flux of electric field ; Gauss's law and its application in simple cases, such as, to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shells. Capacitance; Parallel plate capacitor with and without dielectrics ; Capacitors in series and parallel ; Energy stored in a capacitor. Electric current ; Ohm's law ; Series and parallel arrangements of resistances and cells Kirchhoff's laws and simple application.</p> <p>Biot-Savart's law and Ampere's law ; Magnetic field near a current-carrying straight wire, along the axis of a circular coil and inside a long straight solenoid ; Force on a moving charge and on a current-carrying wire in a uniform magnetic field. Magnetic moment of a current loop ; Effect of a uniform magnetic field on a current loop; Moving coil galvanometer, voltmeter, ammeter and their conversions. Electromagnetic induction: Faraday's law, Lenz's law; Self and mutual inductance; RC, LR and LC circuits with d.c. and a.c. sources.</p>
	CHEM	<p>CHEMICAL KINETICS: Rate of chemical reactions ; Order of reactions ; Rate constant ; First order reactions Temperature dependence of rate constant (Arrhenius equation).</p> <p>SOLUTIONS: Raoult's law : Molecular weight determination from lowering of vapour pressure, elevation of boiling point and depression of freezing point.</p> <p>Surface chemistry: Elementary concepts of adsorption (excluding adsorption isotherms) ; Colloids : general properties)</p> <p>Coordination compounds : Coordination compounds; nomenclature of mononuclear coordination compounds. cis-trans and ionisation isomerisms, hybridization and geometries of mononuclear coordination compounds (linear, tetrahedral, square planar and octahedral).</p> <p>Metallurgy : Commonly occurring ores and minerals of iron, copper, tin, lead, magnesium, aluminium, zinc and silver.</p> <p>Polymers: Natural rubber, cellulose, nylon, teflon and PVC.</p> <p>Chemical principle and reactions only (industrial details excluded) ; Carbon reduction method (iron and tin) ; Self reduction method (copper and lead) ; Electrolytic reduction method (aluminium) ; Cyanide process (silver and gold).</p> <p>PHENOLS : Acidity, electrophilic substitution reactions (halogenation, nitration and sulphonation) ; Reimer - Tieman reaction, Kolbe reaction),</p> <p>Alcohol & Ether : Nucleophilic substitution reactions ; Alcohols ; esterification, dehydration and oxidation, reaction with phosphorus halides, ZnCl₂ / concentrated HCl, conversion of alcohols into aldehydes and ketones ; Ethers ; Preparation by Williamson's ; Synthesis ;</p> <p>Carbonyl : Aldehydes and Ketones ; oxidation, reduction, oxime and hydrazone formation ; aldol condensation, Perkin reaction ; Cannizzaro reaction ; haloform reaction and nucleophilic addition reactions (Grignard addition)</p>
UTM-4 SYLLABUS	MAT	<p>CORE SYLLABUS: 1) Complete Calculus</p> <p>EXTRA SYLLABUS: 1) Statistics</p>
	PHY	<p>CORE SYLLABUS: 1) Optics(Ray & Wave) 2) Modern physics</p> <p>EXTRA SYLLABUS: 1) Diffraction 2) Polarization 3) EM Waves 4) Optical instruments 5) Communication systems</p>
	CHEM	<p>CORE SYLLABUS: 1) Solid state 2) Electrochemistry 3) Group-15,16,17,18 4) Carboxylic Acids 5) Amines 6) Biomolecules 7) Qualitative Analysis</p> <p>EXTRA SYLLABUS: 1)DNA, RNA, Vitamins, Enzymes</p>

SGTA-4 SYLLABUS	MAT	Limit of a function, Continuity of a function, Even, odd function, Inverse of a function, composite function, Differentiability of a function, Intermediate value theorem, Rolle's theorem, Lagrange mean value theorem, Increasing and decreasing functions, Maximum and minimum value of a function. Indefinite integrals of standard functions , Definite integrals and their properties, Integration by parts, by substitutions Determination of areas involving simple curves, Formation and solution of differential equations, Separation of variable method, linear first order differential equations
	PHY	Optics: Reflection and refraction at plane and spherical surfaces; Total internal reflection; Deviation and dispersion of light by a prism; Thin lenses; Combinations of mirrors and thin lenses; Magnification. Wave nature of light: Huygen's principle, interference limited to Young's double-slit experiment. Modern physics: Atomic nucleus; α , β and γ radiations; Law of radioactive decay; Decay constant; Half-life and mean life; Binding energy and its calculation; Fission and fusion processes; Energy calculation in these processes. Photoelectric effect; Bohr's theory of hydrogen-like atoms; Characteristic and continuous X-rays, Moseley's law; de Broglie wavelength of matter waves.
	CHEM	Solid State: Close packed structure of solids (cubic), packing in fcc, bcc and hcp lattices, Nearest neighbours, simple ionic compounds, point defects. Electro chemistry: Nernst equation and its relation to ; Electrochemical series, emf of galvanic cells ; Faraday's laws of electrolysis ; Electrolytic conductance, specific, equivalent and molar conductivity, Kohlrausch's law. Group -15: Allotropes of phosphorus, Nitrogen : Oxides, Oxyacids and ammonia ; Phosphorus Oxyacids (phosphorus acid, phosphoric acids). Group - 16: Oxygen ; Ozone and hydrogen peroxide ; sulphuric acid and sodium thiosulphate ; Group -17: Halogens ; Oxides and oxyacids of chlorine, bleaching power ; Group -18 : Xenon fluorides Qualitative analysis: Group - I to V (only Ag ⁺ , Hg ₂ ⁺ , Cu ²⁺ , Pb ²⁺ ; Fe ³⁺ , Cr ³⁺ , Al ³⁺ , Zn ²⁺ , Mn ²⁺)Nitrate, halides (excluding fluoride), Sulphate and sulphide) Carboxylic acids & Amines: Carboxylic acids ; formation of esters, acid chloride and amides, ester hydrolysis ; Amines ; basicity of substituted anilines and aliphatic amines, preparation from nitro compounds, reaction with nitrous acid, azo of diazonium salts, carbylamine reaction) Biomolecules : Carbohydrates, Classification ; mono - and di-saccharides (glucose and sucrose) ; Oxidation, reduction, glycoside formation and hydrolysis of sucrose. Amino acids and peptides: General structure (only primary structure for peptides)
28-Jul-2021	WEDNESDAY	Preparation of UT syllabus
29-Jul-2021	THURSDAY	Preparation of UT syllabus
30-Jul-2021	FRIDAY	Preparation of UT syllabus
31-Jul-2021	SATURDAY	Preparation of UT syllabus
1-Aug-2021	SUNDAY	GTA-19(P1&P2)(Both the papers are compulsory for all the students)
2-Aug-2021	MONDAY	UTM-3 / TSEGT-1(TS EAMCET GRAND TEST) (75% UT-3 Core Syllabus +25% UT-3 Extra Syllabus)
3-Aug-2021	TUESDAY	Preparation of UT syllabus/ TSEGT-2(TS EAMCET GRAND TEST)/BITSAT-2021
4-Aug-2021	WEDNESDAY	TSEGT-3(TS EAMCET GRAND TEST)/BITSAT-2021/TS-EAMCET-2021
5-Aug-2021	THURSDAY	SEMI GRAND TEST ADVANCED(SGTA)-3 (100% SGTA-3 CORE SYLLABUS)
		TSEGT-4(TS EAMCET GRAND TEST)/BITSAT-2021/TS-EAMCET-2021
6-Aug-2021	FRIDAY	Preparation of UT syllabus/ BITSAT-2021/TS-EAMCET-2021
7-Aug-2021	SATURDAY	Preparation of UT syllabus/ BITSAT-2021
8-Aug-2021	SUNDAY	GTA-20(P1&P2)/BITSAT-2021
9-Aug-2021	MONDAY	UTM-4 (75% UT-4 Core Syllabus +25% UT-4 Extra Syllabus)
		Preparation of UT syllabus/ BITSAT-2021
10-Aug-2021	TUESDAY	Preparation of UT syllabus
11-Aug-2021	WEDNESDAY	Preparation of UT syllabus
12-Aug-2021	THURSDAY	GTA-21(P1&P2)/ SEMI GRAND TEST ADVANCED(SGTA)-4 (100% SGTA-4 CORE SYLLABUS)
13-Aug-2021	FRIDAY	SELF REVISION
14-Aug-2021	SATURDAY	SELF REVISION
15-Aug-2021	SUNDAY	GTA-22(P1&P2)(Both the papers are compulsory for all the students)
16-Aug-2021	MONDAY	GTM-59/APEGT-1(AP EAMCET GRAND TEST)/SELF REVISION
17-Aug-2021	TUESDAY	APEGT-2(AP EAMCET GRAND TEST)/SELF REVISION
18-Aug-2021	WEDNESDAY	APEGT-3(AP EAMCET GRAND TEST)/SELF REVISION

19-Aug-2021	THURSDAY	GTA-23(P1&P2)/ SEMI GRAND TEST ADVANCED(SGTA)-5(SGTA-1& SGTA-2 SYLLABUS ONLY)
		APEGT-4(AP EAMCET GRAND TEST)/AP-EAMCET-2021
20-Aug-2021	FRIDAY	APEGT-5(AP EAMCET GRAND TEST)/AP-EAMCET-2021
21-Aug-2021	SATURDAY	APEGT-6(AP EAMCET GRAND TEST)/AP-EAMCET-2021
22-Aug-2021	SUNDAY	GTA-24(P1&P2)/APEGT-7(AP EAMCET GRAND TEST)/AP-EAMCET-2021
23-Aug-2021	MONDAY	GTM-60/APEGT-8(AP EAMCET GRAND TEST)/AP-EAMCET-2021
24-Aug-2021	TUESDAY	GTM-61/APEGT-9(AP EAMCET GRAND TEST)/AP-EAMCET-2021
25-Aug-2021	WEDNESDAY	GTM-62/AP-EAMCET-2021
26-Aug-2021	THURSDAY	GTA-25(P1&P2)/ SEMI GRAND TEST ADVANCED(SGTA)-5(SGTA-3 & SGTA-4 SYLLABUS ONLY)
		GTM-63/JEE MAIN-2021_SHIFT-1(Day-1)
27-Aug-2021	FRIDAY	GTM-64/JEE MAIN-2021_SHIFT-1(Day-2)
28-Aug-2021	SATURDAY	GTM-65/SELF REVISION
29-Aug-2021	SUNDAY	GTA-26(P1&P2)(Both the papers are compulsory for all the students)
30-Aug-2021	MONDAY	GTM-66/SELF REVISION
31-Aug-2021	TUESDAY	GTM-67/JEE MAIN-2021_SHIFT-1(Day-3)
1-Sep-2021	WEDNESDAY	GTM-68/JEE MAIN-2021_SHIFT-1(Day-4)
2-Sep-2021	THURSDAY	GTA-27(P1&P2)/JEE MAIN-2021_SHIFT-4(Day-5)
OSR_N-SUPER CHAINA PHASE-IV(2019- 2021) SCHEDULE_CODE 04-08-2021 @ 4.00 PM		
3-Sep-2021	FRIDAY	SELF REVISION
4-Sep-2021	SATURDAY	SELF REVISION
5-Sep-2021	SUNDAY	GTA-28(P1&P2)(Both the papers are compulsory for all the students)
6-Sep-2021	MONDAY	SELF REVISION
7-Sep-2021	TUESDAY	SELF REVISION
8-Sep-2021	WEDNESDAY	SELF REVISION
9-Sep-2021	THURSDAY	GTA-29(P1&P2)(Both the papers are compulsory for all the students)
10-Sep-2021	FRIDAY	SELF REVISION
11-Sep-2021	SATURDAY	SELF REVISION
12-Sep-2021	SUNDAY	GTA-30(P1&P2)(Both the papers are compulsory for all the students)
13-Sep-2021	MONDAY	SELF REVISION
14-Sep-2021	TUESDAY	SELF REVISION
15-Sep-2021	WEDNESDAY	SELF REVISION
16-Sep-2021	THURSDAY	GTA-31(P1&P2)(Both the papers are compulsory for all the students)
17-Sep-2021	FRIDAY	SELF REVISION
18-Sep-2021	SATURDAY	SELF REVISION
19-Sep-2021	SUNDAY	GTA-32(P1&P2)(Both the papers are compulsory for all the students)
20-Sep-2021	MONDAY	SELF REVISION
21-Sep-2021	TUESDAY	SELF REVISION

22-Sep-2021	WEDNESDAY	SELF REVISION
23-Sep-2021	THURSDAY	GTA-33(P1&P2)(Both the papers are compulsory for all the students)
24-Sep-2021	FRIDAY	SELF REVISION
25-Sep-2021	SATURDAY	SELF REVISION
26-Sep-2021	SUNDAY	GTA-34(P1&P2)(Both the papers are compulsory for all the students)
27-Sep-2021	MONDAY	SELF REVISION
28-Sep-2021	TUESDAY	SELF REVISION
29-Sep-2021	WEDNESDAY	SELF REVISION
30-Sep-2021	THURSDAY	SELF REVISION
1-Oct-2021	FRIDAY	SELF REVISION
2-Oct-2021	SATURDAY	SELF REVISION
3-Oct-2021	SUNDAY	JEE-ADVANCED-2021