

SANT TUKARAM NATIONAL MODEL JUNIOR COLLEGE, LATUR

(Affiliated to Central Board of Secondary Education, New Delhi. Affiliation No. - 1130272)

PCB SCREENING TEST SYLLABUS 2026

Date: 23-12-2025

Section 'A' (80 Marks)

I) English (20 Marks)

Sr.No.	Syllabus	Weightage	No. of Question	Total Marks
1	Tenses	4	1	$1 \times 4 = 4$
2	Subject – Verb Concord	4	1	$1 \times 4 = 4$
3	Determiners	4	1	$1 \times 4 = 4$
4	Reported Speech	4	1	$1 \times 4 = 4$
5	Degrees Of Comparison	4	1	$1 \times 4 = 4$

II) Mental Ability (20 Marks)

Sr.No.	Syllabus	Weightage	No. of Question	Total Marks
1	Number Series	4	1	$1 \times 4 = 4$
2	Coding & Decoding	4	1	$1 \times 4 = 4$
3	Blood Relations	4	1	$1 \times 4 = 4$
4	Day & Date	4	1	$1 \times 4 = 4$
5	Directions	4	1	$1 \times 4 = 4$

III) Basic Mathematics (40 Marks)

Sr.No.	Syllabus	Weightage	No. of Question	Total Marks
1	Algebraic Identities	8	2	$2 \times 4 = 8$
2	Introduction to Trigonometry	8	2	$2 \times 4 = 8$
3	Logarithms	8	2	$2 \times 4 = 8$
	i) Definition			
	ii) Properties of Logarithms			
4	Speed, Time & Work	8	2	$2 \times 4 = 8$
5	Mensuration	8	2	$2 \times 4 = 8$

Section 'B' (160 Marks)

Physics

Sr.No.	Syllabus	Weightage	No. of Question	Total Marks
1	Motion Distance and displacement Uniform and non-uniform motion along a straight line Speed, Velocity & acceleration Distance-time and velocity-time graphs for uniform motion and uniformly accelerated motion Elementary idea of uniform circular motion.	20	5	$5 \times 4 = 20$
2	Force And Laws Of Motion Force And Motion Balanced And Unbalanced Forces Types Of Inertia Newton's Laws Of Motion Principle Of Conservation of momentum Force and Acceleration	16	4	$4 \times 4 = 16$
3	Gravitation Universal Law Of Gravitation Acceleration Due To Gravity Mass And Weight Free Fall Thrust and Pressure Archimedes' Principle Buoyancy.	20	5	$5 \times 4 = 20$
4	Work & Energy Work done by a Force, Method To Calculate Work Kinetic Energy & Potential Energy Power & Energy Law of conservation of energy	16	4	$4 \times 4 = 16$
5	Sound Nature of sound and its propagation in various media Speed of sound Characteristics of sound Range of hearing in humans; Ultrasound, reflection of sound & echo.	16	4	$4 \times 4 = 16$

6	Electricity	20	5	$5 \times 4 = 20$
	Electric current			
	Potential difference and electric current			
	Ohm's law			
	Resistance, Resistivity & Factors on which the resistance of a conductor depends			
	Series combination of resistors, parallel combination of resistors and its applications in daily life			
	Heating effect of electric current and its applications in daily life			
7	Electric power, Interrelation between P, V, I and R			
	Magnetic Effect of Current		4	$4 \times 4 = 16$
	Magnetic field, field lines			
	Field due to a current carrying conductor			
	Field due to current carrying coil or solenoid			
	Force on current carrying conductor			
	Fleming's Left Hand Rule			
8	Domestic electric circuits			
	Light And Optical Instrument	20	5	$5 \times 4 = 20$
	Reflection of light by curved surfaces			
	Images formed by spherical mirrors			
	Centre of curvature, principal axis, principal focus, focal length			
	Mirror formula & magnification			
	Refraction; Laws of refraction, refractive index			
	Refraction of light by spherical lens			
	Image formed by spherical lenses			
	Lens formula & Magnification			
9	Power of a lens			
	Human Eye & The Colourful World	16	4	$4 \times 4 = 16$
	Functioning of a lens in human eye			
	Defects of vision and their corrections			
	Applications of spherical mirrors and lenses			
	Refraction of light through a prism			
	Dispersion of light			
	Scattering of light & applications in daily life			

Section 'C' (160 Marks)

Chemistry

Sr.No.	Syllabus	Weightage	No. of Question	Total Marks
1	Pollution Of Air and Water	8	2	$2 \times 4 = 8$
	Air Pollution			
	Green House Effect			
	Water Pollution			
	Soil Pollution			
	Prevention And Control of Pollution			
2	Inside The Atom	8	2	$2 \times 4 = 8$
	Types Of Substances			
	Dalton Theory, Various Atomic Models			
	Bohr's Atomic Model			
	Sub-Atomic Particles			
	Atomic Number, Mass Number, Isotopes, Isobars			
	Electronic Configuration of Elements			
	Nuclear Reactor			
3	Composition Of Matter	8	2	$2 \times 4 = 8$
	Characteristics Of States of Matter			
	Types Of Elements, Types of Compounds, Types of Mixture			
	Types Of Solutions- True and Colloidal Solution, Cross Rule for Writing Formulae			
4	Metals And Non-Metals	24	6	$6 \times 4 = 24$
	Physical And Chemical Properties of Metals			
	Physical And Chemical Properties of Nonmetals			
	Various Concepts of Metallurgy			
	Reactivity Series of Metals			
	Ionic Compounds			
	Corrosion and its prevention.			
5	Chemical Change and Chemical Bond	16	4	$4 \times 4 = 16$
	Natural Chemical Changes			
	Chemical Bond			
	Ionic Bond, Covalent Bond			
6	Measurement Of Matter	8	2	$2 \times 4 = 8$
	Laws of Chemical Combination			
	Atom - Shape, Mass, Valency			
	Molecular Mass, Atomic Mass, Formula Mass			
	Radicals, Ions			

7	Acids Bases and Salts	24	6	6 x 4 = 24
	Indicator and its types			
	Arrhenius Theory of Acids and Bases			
	Concentration of an Acid or a Base			
	PH of Solution			
	PH of an Acid and a Base			
	Salts, Types of Salts, Hydrolysis, Degree of Hydrolysis			
8	Carbon and its compounds	24	6	6 x 4 = 24
	Carbon Occurrence, Properties and Allotropes			
	Hydrocarbons			
	Valency, Catenation of Carbon Formation of Double and Triple Bond			
	Isomerism Including Single, Double and Triple Bond			
	Homologous Series of Alkane, Alkene, Alkyne and Relation with Molecular mass.			
	Nomenclature of Simple Compounds Having Functional Groups including Double Bond and Triple Bond			
	Hydrocarbon, Method of Preparation, Chemical Properties and Uses of Alkane, Alkene and Alkyne.			
	Preparation, Properties (Physical and Chemical)and Uses of Alcohol (Ethanol) And Carboxylic Acid (Acetic Acid)			
9	Substances In Common Use	16	4	4 x 4 = 16
	Important Salts in Day-to-Day Life-NaCl, NaHCO ₃ , CaOCl ₂ , Na ₂ CO ₃ , Soap			
	Radioactive Substances			
	Some Chemical Substances in Day-to-Day Life			
	Food Colors & Essence			
	Dyes, Artificial Colours,			
	Deodorants, Teflon			
	Powder Coating, Anodizing			
	Ceramics, Porcelain, Bone China			
10	Chemical Reactions and Equations	24	6	6 x 4 = 24
	Chemical Reactions			
	Balancing A Chemical Equation			
	Rules of Writing Chemical Reaction			
	Types of Chemical Reaction			

Section 'D' (320 Marks)

Biology

Sr.No.	Syllabus	Weightage	No. of Question	Total Marks
1	Fundamental Unit Of Life What Are Living Organism? What Is Cell Made Up? Structure And Difference Between Animal And Plant Cell. Cell Theory. Plasma Membrane And Cell Membrane. Cell Wall, Nucleus, Cytoplasm, Cell Organelles, Endoplasmic Reticulum. (Er), Golgi Apparatus, Lysosomes, Mitochondria, Plastid, Vacuoles. Prokaryotic eukaryotic cell	40	10	10 × 4 = 40
2	Cell Cycle And Cell Division Cell Cycles Phases In Brief. Mitosis And Its Phases Meiosis And Its Phases Significance,	20	5	5 × 4 = 20
3	Tissue Animal Tissue Types Of Epithelial Tissue, Connective Tissue and its types, Muscular Tissue and its types, Nervous Tissue. Plant Tissue Meristematic Tissue, Permanent Tissue, Types Of Simple And Complex Tissues.	48	12	12 × 4 = 48
4	Life Processes In Living Organism Transportation In Plants- Transportation Of Water, Food And Other Substances, Transportation In Animals- Structure and working of human heart Blood vessels, Blood, Lymph Double circulation Blood pressure Respiration : Aerobic And anaerobic Respiration Energy From Different Food Components. Nutrition - In Plants And Animals, Modes of nutrition Photosynthesis, Experiments to study factors affecting photosynthesis Nutrition in Animals and its different types	72	18	18 × 4 = 72

<p>Nutrition in human, Dental caries</p> <p>Excretion In Plants And Human Beings, Dialysis.</p> <p>Coordination-</p> <p>Co-Ordination In Plants And Human.</p> <p>Nervous Control - Types Of Neurons, Human Nervous System</p> <p>Reflex Action,</p> <p>Chemical-Control and co ordination in plants and animals</p> <p>Important hormones in plants and animals</p> <p>Movements in plants</p> <p>Reproduction</p> <p>Asexual Reproduction- Binary Fission, Multiple Fission, Budding, Fragmentation, Regeneration, Vegetative Propagation, Spore Formation, Tissue culture.</p> <p>Sexual Reproduction- Gametes Formation, Fertilisation, Sexual Reproduction In Plants.</p> <p>Sexual Reproduction In Human Being- Male And Female Reproductive System, Menstrual Cycle, Gametes Formation, Fertilisation,</p> <p>Reproductive Health</p> <p>Plant Growth, Structure Of Seed, Type Of Germination, Germination of Seed.</p> <p>Pollination- Self Pollination , Cross Pollination, Agents of Pollination.</p>			
<p>5</p> <p>Heredity And Variation</p> <p>Inheritance - Heredity, Hereditary Changes.</p> <p>Important Terms To Understand Mendel's Work</p> <p>Genes , Alleles , Homozygous , Recessive, Dominant, Mendels Crossing Technique .</p> <p>Mendels Laws Of Inheritance</p> <p>Law Of Dominance , Law Of Segregation, Law Of Independent Assortment , Back Cross, Test Cross, Multiple Alleles -Abo Blood Group,</p> <p>How traits get expressed?</p> <p>Sex determination.</p>	<p>44</p>	<p>11</p>	<p>$11 \times 4 = 44$</p>
<p>6</p> <p>Health And Disease / Why Do We Fall Ill ?</p> <p>Health, Immunity</p> <p>Disease And Its Causes-Acute And Chronic Disease, Causes Of Disease,</p> <p>Infectious And Non Infectious Diseases</p> <p>Disease Causing Agents, Means Of Spread</p>	<p>28</p>	<p>7</p>	<p>$7 \times 4 = 28$</p>

	Treatment And Prevention (T.B., Typhoid, Hepatitis, Rabies, Polio, Aids, diarrhoea.)			
7	Energy Flow In An Ecosystem	28	7	$7 \times 4 = 28$
	Food Chain And Food Web,			
	Energy Pyramid.			
	Energy Flow and Its Importance.			
	Producers Consumers And Decomposer.			
8	Environmental Management	12	3	$3 \times 4 = 12$
	Solid Waste Management-Biodegradable Waste, Non Biodegradable Wastes			
	Necessity Of Solid Waste Management,			
	Seven Principles Of Solid Waste Management			
	Period Required For Degradation Of Waste.			
9	Improvement in food resources	28	7	$7 \times 4 = 28$
	Significance, Crop variety improvement, Crop Production Management, Crop Protection Management.			
	Animal husbandry Practices: Cattle farming, Poultry Farming, Fish Farming, Apiculture			