

Entrance test syllabus for courses offered through Design Your Degree (DYD) mode.

1. Basic Mathematics (10Q)

Number Systems: Natural, Whole, Integers, Rational & Irrational. **Arithmetic:** Fractions, Decimals, Percentages, Ratio & Proportion. **Algebra:** Linear equations in one/two variables, Simple polynomials. **Geometry:** Lines & angles, Triangles, Quadrilaterals, Circles. **Measurement & Data:** Area & perimeter of 2D shapes; surface area & volume of cubes, cylinders, cones and other 3D shapes, Simple bar charts, pie-charts; Mean, Median, Mode. **Time & Work;** Time, Speed & Distance.

2. General Science (10Q)

Physics: Motion & Force (Newton's laws), Work, Energy & Power, Light (reflection, refraction) and Sound (wave characteristics), Electricity & Magnetism (Ohm's law, basic circuits). **Chemistry:** Matter & Its States, Acids, Bases & Salts (pH, indicators), Metals & Non-metals (properties, uses), Chemical Reactions (types: combination, decomposition, displacement, etc.). **Biology:** Life Processes (nutrition, respiration, excretion, reproduction), Human Body Systems (circulatory, digestive, nervous), Plant Biology (photosynthesis, transpiration), Environment & Ecosystems; Microorganisms & Health

3. Indian History (5Q)

Ancient India: Indus Valley Civilization; Vedic Period, Rise of Jainism & Buddhism, Mauryan & Gupta Empires (administration, culture). **Medieval India:** Delhi Sultanate; The Mughal Empire (key rulers, art & architecture), Bhakti & Sufi Movements; Regional Kingdoms **Modern India:** European Arrival; British East India Company, Social & Religious Reform Movements, Freedom Struggle: 1857 Revolt to Independence (key events, personalities)

4. Civics & Geography (5Q)

Civics: Indian Constitution: Features, Preamble, Fundamental Rights & Duties, Organs of Government (Legislature, Executive, Judiciary), Panchayati Raj & Urban Local Bodies. **Geography:** Physical Features of India (mountains, plains, plateaus), Climate & Monsoons; Soil Types; Natural Vegetation, Major Rivers & Water Resources, Agriculture, Minerals & Energy Resources, Population Distribution & Demographics.

5. Social Sciences (5 Q)

Society & Social Institutions (family, caste, religion), Social Change & Development; Gender, Diversity & Inclusion, Role of Media and Technology in Society, Sustainable Development; Urbanization & Migration.

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6. English Language (5Q)

Reading Comprehension (unseen passages), Grammar: Tenses, Articles, Prepositions, Conjunctions, Vocabulary: Synonyms, Antonyms, One-word Substitution, Writing Skills: Sentence Completion, Error Detection, Short Paragraph Writing

7. General Aptitude & Logical Reasoning (15 Q)

Series Completion (number, letter), Coding-Decoding; Blood Relations; Directions, Percentages; Simple and Compound Interest; Basic Puzzles; Syllogisms; Venn Diagrams, Analogies & Classification.

8. General Knowledge & General Studies (5 Q)

Important National & International Events (upto Class 10 level), Major Scientific Discoveries & Inventions, Indian Culture, Art & Festivals, Sports, Books & Authors, Awards & Honors, Current Affairs (past 12 months, Class 10 level).