



# HOW TO GET 25/25 IN MATHS?

## PREPARATION TRICKS

### TNPSC APTITUDE (ARITHMETIC) SYLLABUS (SSLC STANDARD)

#### 1 SIMPLIFICATION →

- BODMAS rule ✓
- Fractions ✓
- Decimal fractions ✓
- Surds and indices ✓
- Square roots & Cube roots ✓
- Simplifying complex expressions ✓

$$(a + b)^2$$

$$\sqrt{x + y}$$

$\sqrt{2 + \sqrt{2 + \sqrt{2 + \dots}}}$

#### 2 PERCENTAGE

- ✓ Percentage increase/decrease
- ✓ Successive percentage
- ✓ Population growth → Trick %
- ✓ Profit & loss using percentages
- Discount



#### 3 HCF (HIGHEST COMMON FACTOR)

- Prime factorization ✓
- Division method ✓
- Application problems ✓

HCF

#### 4 LCM (LOWEST COMMON MULTIPLE)

- ✓ Prime factorization method
- ✓ Division method
- ✓ Word problems



#### 5 RATIO AND PROPORTION

- Direct proportion ✓
- Inverse proportion ✓
- Partnership ✓
- Mixture and allegation ✓
- Variation ✓

$$a : b$$

$$c : d$$

#### 6 SIMPLE INTEREST (SI)

- Principal, Rate, Time ✓
- ✓ Interest calculations
- ✓ Amount calculations



$S.I = \frac{P \times R \times T}{100}$

$A = P + I$

#### 7 COMPOUND INTEREST (CI)

- Annual compounding
- Difference between SI and CI
- Growth and depreciation



#### 8 AREA (MENSURATION)

- Square
- Rectangle
- Triangle
- Circle
- Parallelogram
- Rhombus
- Trapezium



#### 9 VOLUME








- Cube
- Cuboid
- Cylinder
- Cone
- Sphere
- Hemisphere










#### 10 TIME AND WORK






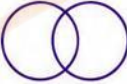




- Individual work ✓
- Combined work ✓
- Efficiency ✓
- Work and wages ✓
- Pipes and cisterns



ADDITIONAL ARITHMETIC TOPICS (FREQUENTLY ASKED IN TNPSC)	
 <p><b>✓ NUMBER SYSTEM</b>                      Natural numbers, Whole numbers, Integers, Prime numbers, Divisibility rules</p> <p><i>AP, GP, SC</i></p>	 <p><b>AVERAGE</b>                      Simple average, Weighted average</p>
 <p><b>✓ PROFIT AND LOSS</b>                      Cost price, Selling price, Marked price, Discount</p>	 <p><b>TIME, SPEED AND DISTANCE</b>                      Relative speed, Trains, Boats and streams</p>
 <p><b>✓ AGES</b>                      Present age, Past/Future age</p>	 <p><b>PARTNERSHIP</b>                      Profit sharing, Investment ratio</p>
 <p><b>DATA INTERPRETATION</b>                      Tables, Bar graphs, Pie charts</p>	

## TNPSC REASONING & MENTAL ABILITY SYLLABUS (SSLC STANDARD)

<p><b>1 LOGICAL REASONING</b></p> <ul style="list-style-type: none"> <li>Statement and conclusion</li> <li>Cause and effect</li> <li>Assertion and reason</li> <li>Logical sequence</li> </ul> 	<p><b>2 NUMBER SERIES</b></p> <ul style="list-style-type: none"> <li>Missing numbers</li> <li>Next number prediction</li> <li>Pattern recognition</li> </ul> <p>2, 4, 8, 16, ?</p> 	<p><b>3 ALPHA-NUMERIC REASONING</b></p> <ul style="list-style-type: none"> <li>Letter series</li> <li>Number-letter combinations</li> <li>Coding based on alphabets</li> </ul> <p>A B C 1 2 3</p>	<p><b>4 CODING-DECODING</b></p> <ul style="list-style-type: none"> <li>Letter coding ✓</li> <li>Number coding ✓</li> <li>Symbol coding ✓</li> </ul>  <p>CAT = DBU DOG = ?</p>
<p><b>5 ANALOGY</b></p> <ul style="list-style-type: none"> <li>Number analogy</li> <li>Alphabet analogy</li> <li>Word analogy</li> </ul>  <p>A : B :: C : D</p>	<p><b>6 CLASSIFICATION (ODD ONE OUT)</b></p> <ul style="list-style-type: none"> <li>Number classification</li> <li>Letter classification</li> <li>Figure classification</li> </ul>  <p>2, 3, 5, 8, 11</p>	<p><b>7 BLOOD RELATIONS</b></p> <ul style="list-style-type: none"> <li>Family tree</li> <li>Coded relations</li> <li>Generation-based questions</li> </ul> 	<p><b>8 DIRECTION SENSE TEST</b></p> <ul style="list-style-type: none"> <li>North, South, East, West</li> <li>Distance travelled</li> <li>Final direction</li> </ul> 

<p><b>9 RANKING AND ORDER</b></p> <ul style="list-style-type: none"> <li>Position from top/bottom</li> <li>Rank determination</li> </ul> 	<p><b>10 SEATING ARRANGEMENT</b></p> <ul style="list-style-type: none"> <li>Linear arrangement</li> <li>Circular arrangement</li> </ul> 	<p><b>11 PUZZLE TEST</b></p> <ul style="list-style-type: none"> <li>Floor puzzle ✓</li> <li>Box puzzle ✓</li> <li>Scheduling puzzle ✓</li> <li>Family puzzle ✓</li> </ul> 	<p><b>12 VISUAL REASONING</b></p> <ul style="list-style-type: none"> <li>Mirror image ✓</li> <li>Water image ✓</li> <li>Embedded figures ✓</li> <li>Figure completion ✓</li> </ul> 
<p><b>13 DICE</b> (4-5)</p> <ul style="list-style-type: none"> <li>Open dice ✓</li> <li>Folded dice ✓</li> <li>Opposite faces</li> </ul> 	<p><b>14 VENN DIAGRAM</b></p> <ul style="list-style-type: none"> <li>Set relationships</li> <li>Logical classification</li> </ul> 	<p><b>15 SYLLOGISM</b></p> <ul style="list-style-type: none"> <li>All, Some, No statements</li> <li>Conclusion-based questions</li> </ul> <p><math>A \rightarrow B</math> Some A are B</p>	<p><b>16 MATHEMATICAL OPERATIONS</b></p> <ul style="list-style-type: none"> <li>Symbol replacement</li> <li>Operator substitution</li> </ul> <p><math>+</math> <math>-</math> <math>\times</math> <math>\div</math></p>
<p><b>17 CALENDAR</b></p> <ul style="list-style-type: none"> <li>Day finding</li> <li>Odd days</li> <li>Leap year</li> </ul> 	<p><b>18 CLOCK</b></p> <ul style="list-style-type: none"> <li>Angle between hands</li> <li>Time calculations</li> </ul> 	<p><b>19 NON-VERBAL REASONING</b></p> <ul style="list-style-type: none"> <li>Figure series ✓</li> <li>Pattern completion ✓</li> <li>Image analysis ✓</li> </ul> 	<p><b>20 DECISION MAKING</b></p> <ul style="list-style-type: none"> <li>Situation-based reasoning</li> <li>Best course of action</li> </ul> 

**TNPSC PREPARATION ORDER (MOST IMPORTANT FIRST)**

1 $\frac{(a+b)^2}{\sqrt{x+y}}$ Simplification	2 % Percentage ✓	3 $\frac{a:b}{c:d}$ Ratio & Proportion ✓	4 Time & Work	5 SI & CI	6 $\Sigma$ Average	7 Profit & Loss	8 Time-Speed-Distance
9 1 2 3 4 5 6 7 8 9 Number Series	10 Coding-Decoding	11 Analogy	12 Blood Relations	13 Direction Sense	14 Puzzle	15 Dice	16 Visual Reasoning

*area, volume*



# TNPSC SYLLABUS HIGH-WEIGHTAGE TOPICS & PREPARATION ORDER




**(SSLC STANDARD)**

SLIDE 3 OF 3

## HIGH-WEIGHTAGE TNPSC TOPICS

**ARITHMETIC**




- Simplification ✓
- Percentage ✓
- Ratio & Proportion
- Time & Work
- SI & CI

**AVERAGE & PROFIT**



- Average
- Profit & Loss
- Discount
- Partnership

**MEASUREMENT**



- Area (All Figures)
- Volume (All Solids)

**NUMBER SYSTEM**

**123**

- Divisibility Rules
- Prime Numbers
- HCF & LCM

**TIME & DISTANCE**




- Speed
- Time
- Distance
- Relative Speed
- Trains
- Boats & Streams

**AGES & TIME**




- Ages
- Calendar
- Clock

**DATA INTERPRETATION**



- Tables
- Bar Graphs
- Pie Charts

**REASONING**



- Number Series ✓
- Coding-Decoding
- Analogy
- Blood Relations
- Direction Sense
- Puzzle
- Dice
- Visual Reasoning

