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## Index 7<sup>th</sup> Math

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### Chapter Name

- 1) **Number of Knowledge**  
All Types of numbers, Place value & Face value of numbers, To prepare the biggest & the smallest number, Numbers in ascending & descending order
- 2) **Operation on Numbers**
  - A) **Divided divisor test of divisibility**  
Numbers prime factors, Greatest common divisor (G.C.D), To find the G.C.D of the divisor by list method, To find the G.C.D by the prime factor method, G.C.D by the division method, Property of G.C.D
  - B) **Least common divisor (L.C.M)**  
L.C.M of divisor by list method, To find the L.C.M by the prime factor method, L.C.M by the another method, Property of

### Chapter Name

- L.C.M Property of G.C.D & L.C.M
- 3) **Preparation for algebra & solving the expression**  
Equality, Inequality, Using letters, Use of alphabets / letters for numbers
  - 4) **Square & square root**  
Square, Square root, Complete square numbers, Square root of perfect square by factorization, Square root of decimal fraction, Square root of the perfects square by division method, To find the square root orally & approximation of perfect square
  - 5) **Cube & cube root**

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### Chapter Name

#### 6) **Fraction**

Types of fraction, Fractions smallness - greatness, Conversion of proper fraction into mixed fraction, Conversion of integer fraction into proper fraction, Addition, Subtraction of fraction, & Multiplication of fraction Multiplication inverse, Division of fraction, Converting the daily use fraction into decimal fraction

#### 7) **Decimal Fraction**

Reading & writing of decimal fraction, The place value of decimal fraction, Equivalent value of decimal fraction, Same place decimal fraction, The addition & subtraction of decimal fraction, Multiplication of decimal fraction

#### 8) **Vulgar Fraction**

Vulgar fraction, Proper fraction, Improper fraction Mixed fraction, Conversion of mixed

### Chapter Name

fraction to improper fraction, Conversion of improper fraction to mixed fraction, Equivalent fraction

#### 9) **Indices**

1) Laws of Indices  
2) Rules for converting a negative index into a +ve index

#### 10) **Measurement**

Time measurement, Coins and notes conversion Paper Ream, Length, Mass & Capacity

#### 11) **Mathematical operation in daily routine**

Profit & Loss

#### 12) **Average**

#### 13) **Percentage**

fraction into decimal fraction Conversion of fraction into %, Conversion of decimal fraction into %, Conversion of % into decimal fraction, Conversion of decimal fraction into %

#### 14) **Simple Interest**

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### Chapter Name

Principle, Interest, Rate of interest, Period, Amount, Amount double

**15) Points, Line, Segment & Rays**

Points, Line, Line segments, Rays, Types of lines

**16) Angles and its types**

Transverse, Corresponding angle, Alternative angle, Interior angle,

**17) The Theorem of Pythagorus**

Pythagorus, Theorem of  $30^\circ$ - $60^\circ$ - $90^\circ$

**18) Square & Types of square**

Square, Name of square, Square adjacent side, Interior & Exterior Region, Types of square

**19) Circle**

Circle, Centre of circle, Radius, Diameter Chord, Central angle, Some Properties

### Chapter Name

**20) Perimeter, Surface area & Volume**

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## Index 7<sup>th</sup> Science

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### Chapter Name

- 1) Natural Resources**
  - a) Types of natural resources
  - b) Uses of natural resources
  - c) Threats to natural resources
  - d) Conservation of natural resources
  
- 2) Human Nervous System**
  - a) The nervous system
  - b) Functions of the nervous system
  - c) Nerves
  
- 3) Skeletal System**
  - a) Bones
  - b) Classification of bones
  - c) Cartilage
  - d) Functions of the skeletal system
  - e) Skull, rib cage, the spine,
  - f) Types of joints
  - g) The Skin
  - i) Functions of skin
  - j) Melanin
  
- 4) Acid, Base & Salts**

### Chapter Name

- a) Acid, Base, Salts
- b) Litmus
- c) Classification of salts
  
- 5) Sound**
  - a) Production of sound
  - b) Reflection of Sound
  - c) Laws of Reflection of sound
  - d) Transmission of sound
  - e) Intensity
  - f) Propagation of sound
  
- 6) Energy**
  - a) Energy Storage
  - b) Energy Transfer
  - c) Energy Dissipation
  - d) Renewable Energy
  - e) Types of Renewable Energy
  - f) Saving of Energy
  - g) Non Renewable Energy
  - h) Types of Non Renewable Energy
  
- 7) Heat**
  - a) Units of heat
  - b) Temperature

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### Chapter Name

- c) Thermal Equilibrium
- d) Thermometer
- e) Amount of heat
- f) Good & Bad conductor of heat
- g) Calorimeter
- h) Transformation of heat
- i) Melting & Boiling Points
- j) Expansion

### 8) Matter

- a) Three States of Matter
- b) Change in state of matter
- c) Solute, Solvent, Solution
- d) Classification of matter

### 9) Agriculture

- a) Major crops of India
- b) Food crops in Agricultural
- c) Agricultural practices
- d) Step in farming

### 10) Soil

- a) Constituent of soil
- b) Formation of soil
- c) Biological weathering of rocks

### Chapter Name

- d) Soil in natural resource
- e) Uses of soils
- f) Colored of the soil
- g) Type of soil (according to use)
- h) Constituents of soil
- i) Soil erosion & Soil conservation
- j) Social Forestry
- k) Soil pollution
- l) Soil testing

### 11) Force

- a) Effects of force
- b) Types of force
- c) Measuring Force
- d) Balanced Force
- e) Unbalanced Force

### 12) Waste Management

- a) Types of waste
  - b) Sources of waste
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## Index 7<sup>th</sup> Aptitude

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### Chapter Name

- 1) **Comprehension**
  - a) Alphabet series
  - b) Sign series
  - c) Comprehension by information
  - d) Digit & number series
- 2) **Classification**
  - a) Classification of words & alphabets
  - b) Classification of numbers
  - c) Classification of figure
- 3) **Series/sequence**
  - a) Number series
  - b) Figure series
  - c) Sign series
  - d) Alphabet series
  - e) Find the wrong term
  - f) Rhythmic arrangement of term
- 4) **Logical reasoning & figure analysis**
  - a) **Verbal**
    - i) Relationship
    - ii) Direction
    - iii) Comparison
    - iv) Analysis/Tabulation
    - v) Age
    - vi) Calender
  - b) **Non Verbal**

### Chapter Name

- i) Completing the figure
  - ii) Mirror image
  - iii) Reflection
- 5) **Analogy**
    - a) Word similarity
    - b) Letter similarity
    - c) Number similarity
    - d) Figure similarity
    - e) Relation between number and signs
    - f) Relation between alphabets and signs
  - 6) **Code Language**
    - a) Use of numbers in place of letters
    - b) Use of signs in place of numbers
    - c) Use of numbers in place of numbers
  - 7) **Puzzle Questions**
    - a) Place in row
    - b) Venn diagram
    - c) Number coding square, circle and figure
    - d) Cube
    - e) Pyramid