

## Manipal MET (Lateral Entry) Syllabus for B.Tech 2nd-Year Admission

The Manipal MET (Lateral Entry) exam is conducted by Manipal Academy of Higher Education (MAHE) for Diploma holders and B.Sc. graduates seeking direct admission into the 2nd year of B.Tech. The syllabus covers Mathematics, Logical Reasoning, and Core Engineering Subjects based on the candidate's diploma specialization.

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### Section-Wise Syllabus for Manipal MET (Lateral Entry)

The exam consists of the following sections:

- Mathematics (50 Marks)
  - Logical Reasoning (20 Marks)
  - Core Engineering Subjects (50 Marks)
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### Section 1: Mathematics (50 Marks)

This section tests fundamental mathematical concepts.

#### Mathematics Topics

- Algebra – Matrices, Determinants, Quadratic Equations
  - Differential Calculus – Limits, Derivatives, Maxima & Minima
  - Integral Calculus – Definite & Indefinite Integrals, Area under Curves
  - Vector Algebra – Dot & Cross Product, Applications
  - Probability & Statistics – Permutations, Combinations, Probability Theorems
  - Coordinate Geometry – Equations of Straight Lines, Circles, Parabola
  - Trigonometry – Identities, Heights & Distances
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### Section 2: Logical Reasoning (20 Marks)

This section evaluates logical and analytical thinking skills.

#### Topics Covered

- Number Series – Missing Numbers, Sequences
- Coding-Decoding – Letter & Number-Based Puzzles
- Blood Relations – Family Tree Questions
- Syllogisms – Logical Deductions, Venn Diagrams

- ✔ Seating Arrangement – Circular & Linear Arrangements
  - ✔ Logical Puzzles – Statement & Conclusion Problems
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### Section 3: Core Engineering Subjects (50 Marks)

This section consists of branch-specific diploma subjects.

#### Mechanical Engineering

- ✔ Thermodynamics – Laws of Thermodynamics, Heat Transfer
- ✔ Strength of Materials – Stress, Strain, Bending Moment
- ✔ Manufacturing Processes – Casting, Welding, Machining
- ✔ Fluid Mechanics – Bernoulli's Theorem, Pipe Flow

#### Electrical & Electronics Engineering

- ✔ Circuit Theory – AC/DC Circuits, Kirchhoff's Laws
- ✔ Electrical Machines – Transformers, Induction Motors
- ✔ Power Systems – Transmission & Distribution Basics
- ✔ Digital Electronics – Logic Gates, Boolean Algebra

#### Civil Engineering

- ✔ Structural Analysis – Bending & Shear Force Diagrams
- ✔ Strength of Materials – Stress, Strain, Elasticity
- ✔ Surveying – Leveling, Contouring, GPS Basics
- ✔ Fluid Mechanics – Properties of Fluids, Pipe Flow

#### Computer Science & IT

- ✔ Programming – Basics of C, C++, Java
  - ✔ Data Structures – Arrays, Linked Lists, Trees
  - ✔ Computer Networks – OSI Model, TCP/IP Model
  - ✔ Operating Systems – Memory & Process Management
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### Manipal MET (Lateral Entry) Exam Pattern

Subject	Marks
Mathematics	50 Marks
Logical Reasoning	20 Marks

Subject	Marks
Core Engineering Subjects	50 Marks
Total	120 Marks

 Exam Duration: 2 Hours

 Marking Scheme: +4 for Correct Answer, No Negative Marking

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 Preparation Tips for Manipal MET (Lateral Entry)

 Strengthen Core Engineering Concepts: Diploma/B.Sc. subjects carry the highest weightage.

 Master Mathematics & Logical Reasoning: Helps in scoring high marks.

 Solve Previous Year Papers: Get familiar with the exam pattern.

 Attempt Mock Tests: Improve speed and accuracy.