#### MANIPAL ACADEMY of HIGHER EDUCATION Institution of Emissions Downed to be University

# Manipal Entrance Test (MET) 2022 Syllabus

Programs	Institutes
All Master of Technology (M.Tech) Programs	Manipal Institute of Technology (MIT), Manipal
All Master of Engineering (M.E) Programs	Manipal School of Information Sciences (MSIS), Manipal

# Manipal Entrance Test (MET) 2022 Details

- Test Duration: 90 minutes
- Based on the qualifying degree, candidate is expected to select any ONE of the 8 Test disciplines listed below, during Day / Slot booking in the Online Test booking system (OTBS).
  - Once test discipline is selected during test slot booking, NO request for change of discipline will be considered under any circumstances
  - o <u>Click here</u> for the Eligibility requirements for M.Tech & M.E programs
- Total Questions: 60 questions comprising of Chosen Discipline (50 questions) & Engg Maths (10 questions)
- Max marks: 240
- Marking Scheme: + 4 awarded for correct answer, 1 deducted for wrong answer, 0 for every unattempted question
- No. of Attempts: 1
- Schedule & Mode: Refer <u>www.manipal.edu/met</u> for updates
- Candidates possessing valid GATE score will be given 10 % additional marks to the MET 2022 score and then ranked in the merit list.
  - o Additional marks will **NOT** be awarded if GATE score card is not uploaded before the last date of applications
- There will be two ranks allotted
  - $\circ$  ~ General Rank based on the overall test score
  - o Stream Rank based on the overall score amongst the chosen test discipline.

Note: The counseling process will be as per the general rank only

# Common MET 2022 Syllabus for M.Tech & M.E programs

# Test Discipline: Biotechnology (BT)

Process calculations, Thermodynamics, Transport Processes, Chemical and Biochemical reaction Engineering, Bioprocess Engineering, Biochemistry, Microbiology, Bioinformatics, Animal and Plant Biotechnology, Molecular Biology, Genetic Engineering, Immunotechnology, Downstream Processing

Engineering Maths: Linear Algebra, Differential Equations, Probability and Statistics, Numerical Methods

# Test Discipline: Chemical (CH)

Process Calculations and Thermodynamics, Fluid Mechanics and Mechanical Operations, Heat Transfer, Mass Transfer, Chemical Reaction Engineering, Instrumentation and Process Control, Plant Design and Economics, Chemical Technology, Material of Construction and Corrosion, Energy Engineering, Pollution Control and Safety.

Engg Maths: Linear Algebra, Differential Equations, Probability & Statistics, Numerical Methods, Transform Theory

#### Test Discipline: Civil (CV)

Engineering Mechanics, Strength of Materials, Design of Steel and Concrete Structures, Structural Analysis, Geotechnical Engineering, Foundation Engineering, Surveying, Transportation Engineering, Construction Planning - Organization and Management, Environmental Engineering, Fluid Mechanics, Water Resources Engineering, Concrete Technology, Engineering Materials, Estimations and Specification.

Engg Maths: Linear Algebra, Calculus, Differential Equations, Probability & Statistics, Numerical Methods

#### Test Discipline: Computer Science (CS)

Programming Languages, Data Structure, Logic Design & Circuits, Computer Organization & Architecture, Operating Systems, Database Systems, Computer Networks, Design and Analysis of algorithms, Software Engineering.

Manipal Academy of Higher Education (MAHE) www.manipal.edu



Engg Maths: Probability & Statistics, Numerical Methods, Combinatorics, Graph Theory, Mathematic & Predicate Logic

#### Test Discipline: Electrical Engineering (EE)

Electrical Circuit Analysis, Electrical Machinery, Electromagnetic Field Theory, Generation, Transmission, Distribution, Power System Analysis, Stability, Protection, Power Electronics & Drives, Analog & Digital Electronic Circuits, Signals & systems, Digital Signal Processing, Electrical & Electronic Measurements & Instrumentation, Control systems and Microcontrollers.

Engg Maths: Linear Algebra, Differential Equations, Probability & Statistics, Numerical Methods, Transform Theory

#### Test Discipline: Electronics & Communication (EC)

Electric Circuit Analysis, Analog Devices & Circuits, Digital VLSI design, Digital Logic design, Verilog HDL, Electromagnetic Waves, Analog Communication, Digital Communication, Antennas & Propagation, Microprocessor & Microcontrollers (16 / 32-bit family), Signal Processing, Linear and Digital Control System.

Engg Maths: Linear Algebra, Complex Variables, Probability & Statistics, Numerical Methods, Transform Theory

## Test Discipline: Instrumentation & Control (IC)

Network Analysis & Signals, Electronics Measurements, Transducers & Instrumentation, Linear, Modern, Nonlinear Control Theory, Signal Processing, Microcontrollers (ARM and 8051), Analog & Digital Electronics Circuits & System Design, Biomedical Equipment & Instruments, Control System Components, Process Control & Automation

Engg Maths: Linear algebra, differential equations, probability and statistics, Numerical methods, Transform methods

### Test Discipline: Mechanical Engineering (ME)

Engineering Mechanics, Strength of Materials, Design of Machine Elements, Basics of Manufacturing Science, Measurement & Metrology, Theory of Machines, Mechanical Vibrations, Thermodynamics & Heat Transfer, Material Science & Metallurgy.

Engg Maths: Linear Algebra, Calculus, Differential Equations, Probability & Statistics, Numerical Methods

Best of Luck #

Updated: 4.30 PM, Mar 11, 2022



# Eligibility Requirements for Master of Technology (MTech) and Master of Engineering (ME) Programs

- Pass in BE / BTech in a relevant branch from a recognized University, with minimum 50 % aggregate marks or equivalent
- The Bachelor's program eligibility & Choice of MET Question Paper (QP), for the MTech / ME programs are as follows

Master of Technology (M.Tech) Program Eligibility	Choice of MET 2022 Test Discipline	
Chemical Stream (2)		
M.Tech Industrial Biotechnology		
BE / BTech in Biotechnology / Biochemical Engg / Bioprocess Engg / Bioinformatics / Chemical Engg / Pharmaceutical		
Technology, or equivalent		
M.Tech Chemical Engg	BT / CH	
BE / BTech in Biochemical Engg / Bio Process Engg / Bio Technology / Chemical Engg / Petroleum Engg / Petrochemicals Engg / Polymer Technology, or equivalent		
Civil Stream (3)		
M.Tech Construction Engg & Management		
BE / BTech in Architecture / Civil Engg, or equivalent	CV	
M.Tech Environmental Engg		
BE / BTech in Biochemical Engg / Biotechnology / Civil / Chemical Engg / Ceramic Technology / Environmental /	BT / CH / CV / ME	
Mechanical / Metallurgy / Mining, or equivalent		
M.Tech Structural Engg		
BE / BTech in Civil Engg, or equivalent	CV	
Computer Stream (6)	<u> </u>	
M.Tech Computer Science & Engg		
BE / BTech in Computer Science & Engg / Computer & Communication Engg / Electronics & Communication Engg /		
Electronics & Telecommunication Engg / Information Technology, or equivalent	CS / EC	
M.Tech Computer Science & Information Security		
BE / BTech in Computer Science & Engg / Computer & Communication Engg / Electronics & Communication Engg /		
Electronics & Telecommunication Engg / Information Technology, or equivalent		
M.Tech Computer Networking & Engg		
BE / BTech in Artificial Intelligence & Machine Learning / Biomedical Engg / Computer Science & Engg / Computer &		
Communication Engg / Cyber Security / Data Science & Engg / Electrical & Electronics Engg / Electronics &	CS / EC / EE / IC	
Communication Engg / Information Technology / Instrumentation Engg, or equivalent		
M.Tech Data Science & Engineering		
BE / BTech in Computer Science & Engg / Computer & Communication Engg / Electrical & Electronics / Electronics &	CS / EC / EE	
Communication / Information Technology, or equivalent		
M.Tech Machine Intelligence and Decision Science		
BE / BTech in Artificial Intelligence & Machine Learning / Biomedical Engg / Computer Science & Engg / Computer &		
Communication Engg / Cyber Security / Data Science & Engg / Electrical & Electronics Engg / Electronics &		
Communication Engg / Information Technology / Instrumentation Engg, or equivalent	- CS / EE / EC / IC	
M.Tech Software Engg		
BE / BTech in Artificial Intelligence & Machine Learning / Biomedical Engg / Computer Science & Engg / Computer &		
Communication Engg / Cyber Security / Data Science & Engg / Electrical & Electronics Engg / Electronics &		
Communication Engg / Information Technology / Instrumentation Engg, or equivalent		
Electrical Stream (9)		
M.Tech Biomedical Engg	BT / CH / CS / EC / FF / IC / MF	
BE / BTech in Biomedical Engg / Biotechnology / Chemical Engg / Computer Science & Engg / Computer &		
Communication Engg / Electrical & Electronics Engg / Electronics & Communication Engg / Engineering Physics /		
Information Technology / Instrumentation & Control Engg / Mechanical Engg / Medical Electronics / Metallurgy &		
Materials Science / Pharmaceutical Technology, or equivalent		



Master of Technology (M.Tech) Program Eligibility	Choice of MET 2022
	Test Discipline
M.Tech Control Systems	
BE / BTech in Aeronautical Engg / Aerospace Engg / Applied Electronics & Instrumentation Engg / Automobile Engg /	CH / EC / EE / IC /
Biomedical Engg / Chemical Engg / Electrical & Electronics Engg / Electronics & Communication Engg / Electronics & Lastrumentation Engg / Instrumentation & Control Engg / Machatanias Engg / Machatanias ( Debation &	ME
Instrumentation Engg / Instrumentation & Control Engg / Mechatronics Engg / Medical Electronics / Robotics &	
Automation Engg, or equivalent	
MTech Digital Electronics & Communication Engg	EC, EE
BE / BTech in Electrical & Electronics Engg / Electronics & Communication Engg, or equivalent	
M.Tech Electric Vehicle Technology	
BE / BTech in Automobile Engg / Electrical & Electronics Engg / Electronics & Communication Engg / Industrial	EC / EE / IC / ME
Production Engg / Instrumentation & Control Engg / Manufacturing Engg / Mechanical Engg / Mechatronics Engg, or	
equivalent	
M.Tech Internet of Things	
BE / BTech in Artificial Intelligence & Machine Learning / Biomedical Engg / Computer Science & Engg / Computer &	
Communication Engg / Cyber Security / Data Science / Electrical & Computer Engg / Electrical & Electronics Engg /	CS / EC / EE / IC / ME
Electronics & Computer Engg / Electronics & Communication Engg / Electronics & Instrumentation / Instrumentation	
& Control Engineering / Information Technology / Mechatronics Engg, or equivalent	
M.Tech Medical Informatics	
BE / BTech in Biomedical Engineering / Biotechnology / Computer Science & Engg / Computer & Communication Engg	CS / EC / EE / ME
/ Electrical & Electronics Engg / Electronics & Communication Engg / Information Technology / Instrumentation &	
Control Engg / Mechatronics / Medical Electronics, or equivalent	
M.Tech Microelectronics	
BE / BTech in Electrical & Electronics Engg / Electronics & Communication Engg / Instrumentation & Control Engg, or	
equivalent	EC / EE / IC
M.Tech Power Electronics & Drives	
BE / BTech in Electrical & Electronics Engg / Electronics & Communication Engg / Electronics & Instrumentation Engg,	
or equivalent	
M.Tech Wireless & Mobile Communications	
BE / BTech in Applied Electronics Engg / Biomedical Engg / Computer Science & Engg / Computer & Communication	CS / EC / EE / ME
Engg / Electrical & Computer Engg / Electronics & Communication Engg / Electronics & Computer Engg / Electronics	
& Instrumentation Engg / Information and Communication Technology Engg / Mechatronics Engg, or equivalent	
Management (1)	
M.Tech Engineering Management	BT / CH / CS / CV /
BE / BTech in any branch of Engg	EC / EE / IC / ME
Mechanical (8)	
M.Tech Applied Computational Fluid Dynamics	
BE / BTech in Aeronautical Engg / Automobile Engg / Chemical Engg / Civil Engg / Industrial Production Engg /	CH / CV / ME
Manufacturing Engg / Mechanical Engg / Mechatronics Engg, or equivalent	
M.Tech Automobile Engg	
BE / BTech in Automobile Engg / Automobile Maintenance Engg / Automotive Technology / Industrial Production	ME
Engg / Manufacturing Engg / Material Science & Technology / Mechanical Engg / Mechanical & Smart Manufacturing	
/ Mechatronics Engg / Tool Engg, or equivalent	
M.Tech Avionics	/ /
BE / BTech in Aeronautical Engg / Computer Science & Engg / Computer & Communication Engg / Electrical &	CS / EC / EE / IC
Electronics Engg / Electronics & Communication Engg / Instrumentation & Control Engg / Mechanical Engg /	/ ME
Mechatronics Engg, or equivalent	
M.Tech Computer Aided Analysis & Design	
BE / BTech in Aeronautical Engg stream / Automobile Engg / Industrial Engg / Marine Engineering / Mechanical Engg	ME
/ Mechatronics Engg / Material and Metallurgy / Tool Engineering, or equivalent	



Master of Technology (M.Tech) Program Eligibility	Choice of MET 2022 Test Discipline
M.Tech Defence Technology BE / BTech in Aerospace Engg / Aeronautical Engg / Applied Electronics & Communication Engg / Applied Electronics & Instrumentation Engg / Chemical Engg / Computer Science & Engg / Computer & Communication Engg / Computer Networking / Electrical & Computer Engg / Electrical & Electronics Engineering / Electrical and Instrumentation Engg / Electronics & Communication Engg / Electronics and Computer Engineering / Instrumentation & Control Engg / Marine Engg / Marine Technology / Mechanical Engg / Mechatronics Engg / Metallurgical & Materials Engg / Military Engg / Optics and Opto-Electronics / Radio, Physics & Electronics / Software Engg / Structural Engg, or equivalent	CH / CS / CV / EC / EE / IC / ME
M.Tech Industrial Automation & Robotics BE / BTech in Aeronautical Engg stream / Automobile Engg / Electrical & Electronics Engg / Electronics & Communication Engg / Industrial & Production Engg / Instrumentation & Control Engg / Mechanical Engg / Mechatronics Engg, or equivalent	EC / EE / IC / ME
M.Tech Manufacturing Engg   BE / BTech in Aeronautical Engg / Automobile Engg / Industrial Engg / Manufacturing Engg / Marine Engineering /   Material and Metallurgy / Mechanical Engg / Mechatronics Engg / Tool Engineering, or equivalent   M.Tech Thermal Sciences & Energy Systems   BE / BTech in Aeronautical Engg / Automobile Engg / Industrial Engg / Marine Engineering / Material and Metallurgy   Vechanical Engg / Automobile Engg / Industrial Engg / Marine Engineering / Material and Metallurgy   / Mechanical Engg / Mechatronics Engg, / Tool Engineering, or equivalent	ME

Master of Engineering (ME) Program Eligibility	Choice of MET 2022
	Test Discipline
Computer Stream	
M.E Artificial Intelligence & Machine Learning	
BE / BTech in Biomedical Engg / Computer Science & Engg / Electronics & Communication Engg / Electrical &	CS / EC / EE / IC
Electronics Engg / Information Technology / Instrumentation & Control Engg / Medical Electronics or equivalent	
M.E Big Data Analytics	
BE / BTech in Biomedical Engg / Biotechnology / Computer Science & Engg / Electrical & Electronics Engg / Electronics	CH / CS / EC / EE / IC
& Communication Engg / Information Technology / Instrumentation & Control or equivalent	
M.E Cloud Computing	
BE / BTech in Biomedical / Computer Science / Electrical & Electronics / Electronics & Communication / Information	CS / EC / EE / IC / ME
Technology / Instrumentation & Control / Mechatronics / Medical Electronics or equivalent	
Electrical Stream	
M.E Embedded Systems	
BE / BTech in Biomedical Engineering / Computer Science / Electrical & Electronics / Electronics & Communication /	
Information Technology / Instrumentation & Control / Medical Electronics / Mechatronics or equivalent	
M.E VLSI Design	CS / EC / EE / IC / ME
BE / BTech in Biomedical Engineering / Computer Science / Electrical & Electronics / Electronics & Communication /	
Information Technology / Instrumentation & Control / Medical Electronics / Mechatronics / Telecommunication or	
equivalent	

# Note

If you are pursuing / completed your Bachelor's Degree with a specialization other than those listed above, please email <u>admissions@manipal.edu</u> with your BTech syllabus contents for us to check for your eligibility for the M.Tech / M.E program that you are interested in.