

## TANCET Syllabus 2014 Exam Pattern Study Material Books (For MBA,MCA)

**TANCET Syllabus 2014:** *Tamilnadu Common Entrance Test (TANCET)* has announced the Examination Pattern for taking admission into MBA/MCA/ME. For further more details about TANCET Syllabus 2014 are given below:

### For MBA:

Course Name	Duration of Test	Syllabus of Exam	
MBA	2 hours	<b>Verbal Ability:</b>	Synonyms Antonyms One Word Substitutions Idioms & Phrases Proverbs Phrasal Verbs Reading Comprehension Cloze Test Basic Grammar
		<b>Quantitative Aptitude:</b>	Algebra Arithmetic Geometry Trigonometry Permutation & Combination Statistics & Probability
		<b>Data Interpretation:</b>	Bar Graph Line Graph Pie Chart Histogram Problem Based & Percentage Problem Based on Equivalence
		<b>Logical Reasoning:</b>	Syllogism Blood Relation Analogy Coding Decoding Direction Sitting Arrangement Series Water & Mirror Images Punch lines Computer Based Problems

**For MCA:**

<b>Course Name</b>	<b>Duration of Test</b>	<b>Syllabus of Exam</b>	
MCA	2 hours	The Question Paper will be designed to test the capability of the candidates in the following areas:	Quantitative Ability Analytical Reasoning Logical Reasoning Computer Awareness

## SYLLABI FOR THE ENTRANCE TEST

### PART – I

#### ENGINEERING MATHEMATICS (Common to all Candidates)

- i) Determinants and Matrices :** Solving system of equations – Rank of the Matrix – Eigenvalues and eigenvectors – Reduction of quadratic form to canonical form.
- ii) Calculus and Differential Equations :** Partial derivatives – Jacobians – Taylor's expansion – Maxima and Minima. Linear ordinary differential equations with constant coefficients – Simultaneous first order linear equations with constant coefficients. Formation of partial differential equation (PDE) – Solution of first order PDE – Solution of linear higher order PDE with constant coefficients.
- iii) Vector Calculus :** Double and triple integrations and their applications – Gradient, Divergence, Curl and Laplacian – Green's, Gauss divergence and Stroke's theorem.
- iv) Functions of Complex Variables and Complex Integration :** Analytic functions – Conformal Mapping – Bilinear transformation – Cauchy's integral theorem and integral formula – Taylor and Laurent Series – Singularities – Residues – Residue theorem and its applications.
- v) Transforms :** Laplace Transform – Inverse transforms – Application to solution of linear ordinary differential equations with constant coefficients. Fourier integral theorem – Fourier transform pair – Sine and Cosine transforms. -transform – Inverse Z-transform – Solution of difference equations using Z-transform.
- vi) Numerical Methods :** Solution of linear system by direct and iterative methods – Interpolation and approximation – Numerical Differentiation and Integration – Solving Ordinary Differential Equations.
- vii) Applied Probability :** Probability and Random variables – Standard Discrete and Continuous distribution – Moments – Moment generating function and their properties. Two-Dimensional Random Variables – Covariance – Correlation and Regression.

### PART – II

#### BASIC ENGINEERING & SCIENCES (Common to all Candidates)

- i) Applied Mechanics :** Law of Mechanics – Lamé's theorem – Forces, Moments and Couples – Displacement, velocity and Acceleration – Friction – Moment of Inertia.
- ii) Mechanical Engineering :** Laws of thermodynamics – Open and closed systems – Equation of state – Heat and Work.
- iii) Physics :** Sound – Lattices – Ultrasonic flaw detector – X-ray radiography – Interference Fringes – Planck's quantum theory – Laser and Fibre Optics.
- iv) Material Science :** Fracture – Magnetic and Dielectric materials – Conductor and Semi conductor materials – Ceramic and Super conductor materials.
- v) Civil Engineering :** Fluid Statics and Dynamics – Boundary Layer – Pumps and Turbines – Environmental Pollution.
- vi) Electrical Engineering :** Ohm's law – Kirchoff's law – A.C. circuits – D.C. machines – Transformers – Synchronous machines – Instrumentation.
- vii) Computers :** Computer organisation – Architecture – Arrays – Pointers – User defined function – C program.
- viii) Chemistry :** Adsorption – Chromatography – Chemical kinetics – Electrochemistry – Spectroscopy – Fuels and Combustion.